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Bibliography on COLD REGIONS SCIENCE AND TECHNOLOGY

VOLUME 43, PART 2, 1989

Geza T. Thulonyi, Editor

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Annual Conference of the Canadian Society for Civil Engineering, Calgary, Alberta, May 25-27, 1988
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Arctic Science Conference, 39th, Fairbanks, Alaska, Oct. 7-10, 1988
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Calibration of capacitive cells for measuring water in snow (1988, p 225-231, eng) 43-1343

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Winter precipitation, snowpack and atmospheric conditions in the southern Canadian Rockies (1987, p 435-454, eng) 43-1306

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Observations of ice particles in clear air (1980, p.311-315, eng) 43-3950

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Omega navigation in the shadow of Antarctica (1989, p 236-247, eng) 43-3822

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Problem of the ice-cored rock glacier (1987, p 45-53, eng) 43-3045
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Facility designs in the Arctic for the Kuparuk Pipeline System (1983, p 84-107, eng) 43-3415

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Ice in cement paste as analyzed in the low-temperature scanning electron microscope (1989, p.306-314, eng) 43-2894

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Time of the beginning of ice formation in channels with year-round service (1988, p.89-93, rus) 43-1785

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WMO solid precipitation measurement intercomparison at Sleepers River Research Watershed (1987, p.1-7, eng) 43-384

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Changes in copper, zinc and cadmium concentration in antarctic ice during the past 40,000 years (1989, p.544-546, eng) 43-1775

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Experimental and theoretical approach to the thermal conductivity of wet porous media. 2. Theory (1988, p 2319-2330, fre) 43-1381

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Morphological evidence of ancient ice caps in the low latitudes of Mars: their relation to the hydrolithosphere (1987, p.399-411, fre) 43-2075

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Development of an analytical method for the determination of explosive residues in soil. Part II. Additional development and ruggedness testing (1988, 46p., eng) 43-4594

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Cryogenic age of rocks in the cryolithozone of the USSR (1987, p.62-71, rus) 43-3371
System of standards in engineering geology (1988, p.104-108, rus) 43-598

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Density functional theory of freezing with a self-consistent effective liquid (1989, p.3131-3134, eng) 43-4620

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Porous portland cement concrete as an airport runway overlay: laboratory evaluation (1989, 20p , eng) 43-3070

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Segmented model technology for ice resistance determination (1988, p.113-124, eng) 43-616

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Determination of glacier mass balance change using thematic mapper data (1988, p.192-196, eng) 43-4130

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Behavior of bolted flanged connectors in low temperatures (1988, p.9-14, rus) 43-2432

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Prospects of using oxygen isotopes for dating layers of "warm" glaciers (1987, p.307-310, eng) 43-1086

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Effect of freezing and thawing on the stability of soil aggregates treated with organic wastes (1989, p.191-199, eng) 43-2368

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Novel transmissometry at SNOW III West (1986, p.129-139, eng) 43-4632
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Concentration effects of ice nucleating active bacteria on water nucleation temperature (1988, p.147-149, eng) 43-3818

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Diurnal fluctuations in remote precipitation gage readings (1987, p.10-19, eng) 43-3923

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Terminal velocity adjustments for plate-like crystals and graupel (1988, p.3515-3518, eng) 43-2773

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Snowmelt during rain on snow in coastal British Columbia (1983, p.55-66, eng) 43-4353

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Snowmelt and runoff during rain-on-snow in forest and adjacent clearcut (1987, p.285-311, eng) 43-1301

Beaufort environmental monitoring project, 1987-1988 final report
Beaufort environmental monitoring project, 1987-1988 final report (1989, 136p., eng) 43-3062

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Snow and avalanches in the Davos region (1988, p.28-42, ger) 43-3238
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Laboratory study of dissolved noble gas anomaly due to ice formation (1988, p.796-799, eng) 43-1552

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Double diffusive convection due to melting (1988, p 2077-2089, eng) 43-1162

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On the feasibility and value of detecting and characterizing avalanches remotely by monitoring radiated sub-audible atmospheric sound at long distances (1989, p.267-275, eng) 43-3571

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Freezing of aqueous solutions containing gases (1988, p.843-848, eng) 43-1570

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Performance assessment in geotechnical design of arctic offshore structures (1989, p.113-123, eng) 43-2617

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Air cushion platforms needed (1987, p.20, rus) 43-698

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Process of melting by rolling contact (1988, p.2273-2283, eng) 43-1379

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Willamette National Forest local flood prediction (1983, p.139-140, eng) 43-4361

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Ice model basin of the Gorky Polytechnic Institute (1982, 5p , eng) 43-3856
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Natural conditions and work intensification of river and road transportation in the Yakut ASSR (1987, p.31-54, rus) 43-1384

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Snow cover characteristics in the Kamchatka River basin according to data from traverse measurements of snow thickness and density (1988, p.30-35, rus) 43-2674

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Snow volume comparisons for atmospheric deposition monitoring (1988, p.124-135, eng) 43-4004

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Frost protection of pavements under the consideration of thermophysical qualities of materials in the Federal Republic of Germany (1989, p.771-779, eng) 43-3145

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Accuracy and repeatability of in situ snow wetness measurements using the newly developed twin-disc capacitance sensor (1987, p.142-145, eng) 43-3937
Capacitance instrument for the *in-situ* measurement of snow wetness (1984, p.172-175, eng) 43-4329
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Bering Sea Monitoring Program. Proceedings of a workshop (January 1987) and sampling design recommendations (1987, var.p., eng) 43-754

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Freeze crystallization. transportable design case history (1989, p.343-346, eng) 43-2359

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Space remote sensing workshop working group report (1987, p.333-339, eng) 43-869

Bresnahan, D.M.
Evolution of onshore facilities of the U.S. Antarctic Research Program (1988, p.287-295, eng) 43-628

Brestkin, S.V.
Analyzing disturbances of the uniformity of sea ice covers during winter, using data from aerial radar surveys (1988, p 94-103, rus) 43-808

Brezonik, P.L.
Winter and spring pH depressions in northern Wisconsin lakes caused by increases in pCO2 (1987, p 1082-1088, eng) 43-1198

Briassoulis, D.
Ultimate loads for corrugated-steel barrel-type shell structures (1989, p.1038-1049, eng) 43-4413

Briazgin, N.N.
Monitoring atmospheric precipitation and the length of snow persistence in the Arctic (1988, p.96-105, rus) 43-1176

Briggs, W.M.
Radiocarbon date list 3. Labrador and northern Quebec, Canada (1989, p.1-12, eng) 43-3426
Radiocarbon date list 5. Baffin Island, N W T, Canada (1989, p.13-85, eng) 43-3427

Brigham, L.W.
Soviet Arctic marine transportation (1988, p.20-23, eng) 43-2376

Britton, K.B.
Prediction of octanol-water partition coefficients of organophosphonates: Evaluation of structure-function relationships (1988, 24p., eng) 43-1338

Brobeck, C.
Measurement of spatial variations in electrical properties of model ice (1989, p.201-209, eng) 43-2369

Brockett, B.E.
Evaluation of several auger bits in frozen fine-grained soils, asphalt, and concrete (1988, 10p eng) 43-1024
Ice cover dis[illegible]tion in Vermont and New Hampshire Atlantic salmon [illegible]ing streams (1988, p.85-96, eng) 43-2166

Brockmann, U.H.
Nutrient regimes in the marginal ice zone of the Greenland Sea in summer (1988, p.195-204, eng) 43-455

Brodeur, D.
Role of periglacial processes in shore erosion of the upper Saint Lawrence Estuary (1987, p 411-425, fre) 43-3203
Shore erosion of rock platforms by boulder scoring (1988, p.101-115, fre) 43-317

Brodiagin, V.A.
Technological plans for mechanizing the removal of perennially frozen placer deposits with the use of the GPKS machine (1988, p.37-43, rus) 43-2781

Broecker, W.
North Atlantic deep water formation (1985, 82p., eng) 43-1152

Broecker, W.S.
Oceanic salt pump· does it contribute to the glacial-interglacial difference in the atmospheric CO2 content (1987, p.251-259, eng) 43-211

Bromwich, D.H.
Observational and modeling studies of the Terra Nova Bay confluence zone (1988, p.101-104, eng) 43-1497
Satellite analyses of antarctic katabatic wind behavior (1989, p.738-749, eng) 43-4072
Snowfall in high southern latitudes (1988, p.149-168, eng) 43-1406

Bronfenbrener, L.E.
Quasistationary model of thermal interaction between a pipeline and frozen ground (1987, p.68-73, rus) 43-1019

Brook, J.W.
Cold weather admixture (1988, p 44-49, eng) 43-352

Brookes, I.A.
Glaciation of Bonavista Peninsula, northeast Newfoundland (1989, p.2-18, eng) 43-3358

Brooks, K.N.
Rain-on-snow flood event in central Arizona (1983, p.130-138, eng) 43-4360

Brorsson, B.
Injuries from single-vehicle crashes and snow depth (1988, p.367-377, eng) 43-1451

Brorsson, I.
Freeze-thaw related stability problems for a road in a steep silt slope (1989, p 645-654, eng) 43-3135

Brotherson, D.E.
Roofer. a management tool for maintaining built-up roofs (1989, p 6-10, eng) 43-2691

Brovka, G.P.
Solution of non-linear heat conductivity problems for thermal deformations of materials (1988, p.120-122, rus) 43-555

Brower, W.A., Jr.
Climatic atlas of the Outer Continental Shelf waters and coastal regions of Alaska; Vol.I. Gulf of Alaska, Vol.II. Bering Sea, Vol.III. Chukchi-Beaufort Sea (1988, 3 vols., eng) 43-4476

Brown, C.S.
Description of the United States' contribution to the world glacier inventory (1989, p.103-108, eng) 43-3178

Brown, D.W.
Using historical data to determine flood risk from ice jams (1988, p.97-113, eng) 43-2167

Brown, J.
Arctic research in the United States, Vol.3 (1989, 72p., eng) 43-4482

Brown, P.R.A.
Use of holography for airborne cloud physics measurements (1989, p.293-306, eng) 43-4401

Brown, R.
MV *Arctic* structural performance Final report (1985, var p., eng) 43-3365
Probabilistic ice information system for Canadian waterways (1989, p.28-32, eng) 43-4255

Brown, R.A.
Observations of log longitudinal roll vortices during Arctic cold air outbreaks over open water (1988, p 177-199, eng) 43-1378

Brown, R.D.
Ice accretion on drilling platforms off the east coast of Canada (1988, p 409-421, eng) 43-636

Brown, R.H.
Search for volatiles on icy satellites I Europa (1988, p.262-271, eng) 43-1211
Solid-state greenhouses and their implications for icy satellites (1989, p 67-81, eng) 43-2325

Brown, R.L.
Evaluation of new thermomechanical constitutive theory for snow, final report (1989, 43p., eng) 43-2135
Field studies on stress waves in natural snow cover (1987, p.89-110, eng) 43-1292
Microstructurally based constitutive law for snow (1989, p.335-345, eng) 43-3578
New constitutive theory for snow based on a micromechanical approach (1987, p.87-104, eng) 43-1222
Perspective on mechanical properties of snow (1989, p 502-503, eng) 43-3595

Brown, T.
Blowing snow particle detector (1989, p.167-174, eng) 43-2365
Measurement of blowing snow properties using optical attenuation devices (1987, p.347-388, eng) 43-1303

Browne, R.P.
Assessment of trafficability and vessel manoeuvring and structural performance in a mixed old ice regime (1988, 56p. + tables, eng) 43-2149

Brugnot, G.
Avalanche zoning, dynamics and control Recent work done in France (1987, p.521-536, eng) 43-1258

Brugnot, G. *(cont.)*
Gazex: a revolution in triggering avalanches? (1989, p.17, fre) 43-3604
International seminar "Snow Management and Avalanche Control" (1988, p 47-65, fre) 43-3209
Brühl, C.
Impact of observed changes in atmospheric composition on global atmospheric chemistry and climate (1989, p.249-266, eng) 43-3691
Bruk, B.I.
Cold-resistance of spring steel 60S2KhA (1987, p.34-37, rus) 43-2452
Brukhanda, V.I.
Experience in producing a catalog of avalanche-prone areas and maps to evaluate the avalanche formation conditions in poorly studied mountain territories (1987, p 202-214, rus) 43-2520
Brun, E.
Field study on snow mechanical properties with special regard to liquid water content (1987, p.183-193, eng) 43-1229
Brundrett, E.
Automation of a water flume using microcomputer based data acquisition for snow and wind engineering (1988, p.162-175, eng) 43-4126
Brunk, K.
Glaciological map of Filchner-Ronne Ice Shelf, Antarctica (1988, p.150-155 + map, eng) 43-1958
Bruno, M.S.
Coupled circulation and ice floe movement model for partially ice-covered continental shelves (1989, p 2065-2077, eng) 43-2004
Eulerian-Lagrangian model for the prediction of ice hazards in shallow waters (1989, p.229-233, eng) 43-2631
Brushkov, A.V.
Frost shattering on the Yamal Peninsula in the Lake Tyurin-To region (1987, p 212-221, rus) 43-3385
Brusnov, A.M.
Estimate of the critical amount of precipitation and short range forecasting of avalanches of newly fallen snow (1988, p 45-49, rus) 43-2676
Bruun, P.
Generation of the foundation for the Skagen Spit, North Jutland, Denmark, by the action of ice, glacial eustacy and rise of sea level, erosion and accretion (1989, p 18-30, eng) 43-3709
Bryant, D.
Search and rescue detection experiment Phase 1—Initial preparatory work (1987, 20p. + appends., eng) 43-680
Bryce, P.W.
Modified reel method for subsea arctic pipelines (1983, p.486-499, eng) 43-3421
Bryksin, V.N.
Technique for analyzing the formation mechanisms of a daily thermal regime of a cryogenic landscape surface (1987, p.168-183, rus) 43-3382
Brzezinski, L.S.
Arctic grout pile (1989, p.731-737, eng) 43-3224
Bubnov, A.V.
Determination of the ice-forming activity of amorphous and crystalline silver particles (1988, p 295-298, eng) 43-2486
Buchanan, D.
Glacial geology of the Reckling Moraine on the east antarctic ice sheet (1987, p 61-63, eng) 43-2733
Glaciology of the east antarctic ice sheet at the Allan Hills: a preliminary interpretation (1987, p 74-75, eng) 43-2740
Buchanan, L.
Generation of a snow depletion curve for an alpine basin (1986, p.122-133, eng) 43-3911
Buck, A.D.
Evaluation of the frost resistance of concrete using critical dilation (1988, p.48-50, eng) 43-1447
Buckley, B.M.
Aspects of wind on West Gulkana Glacier, Alaska (1988, p.93-105, eng) 43-2796
Winds at Summit Lake, Alaska, during Summer, 1986 (1988, p.107-114, eng) 43-2797
Buckley, D.J.
Remote monitoring of depth of snow on ground with a micrologger (1987, p 297-214, eng) 43-1297
Buckley, R.G.
Anisotropic light radiance in and under sea ice (1989, p.305-308, eng) 43-4450
Budd, W.F.
Compacted-snow runways guidelines for their design and construction in Antarctica (1989, 68p., eng) 43-3474
Dynamics of the antarctic ice sheet (1989, p.16-22, eng) 43-3329
How can an ice core chronology be established (1989, p.177-192, eng) 43-3687
Isotropic and anisotropic flow relations for ice dynamics (1989, p.81-84, eng) 43-3338
Model studies on ice-stream surging (1989, p 132-137, eng) 43-3348
On the surging potential of polar ice streams Part 2 Ice streams and physical characteristics of the Ross Sea drainage basin, West Antarctica (1985, 81p., eng) 43-1716
Review of ice rheology for ice sheet modelling (1989, p.107-144, eng) 43-2362
Surging potential of polar ice streams· Part 1. Sliding and surging of large ice masses: a review (1985, 67p, eng) 43-880
Budgell, W.P.
Numerical study of mesoscale ocean eddy interaction with a marginal ice zone (1988, p.12,461-12,473, eng) 43-722
Budnikova, T.F.
Mathematical modeling of heat and mass processes in media with phase transformations (1988, p.7-9, rus) 43-556
Buer, S.M.
Impact of automated hydrometeorological instrumentation upon data quality for the Feather River basin, California (1984, p.139-148, eng) 43-4324
Bugakov, I.P.
Soils of pine forests in the Angara depression area (1986, p 56-63, rus) 43-1409
Bugden, G.L.
Measuring ice motion—from below (1989, p.10-14, eng) 43-2571
Bugliosi, E.F.
Hydrologic reconnaissance of the Chilkat River basin, southeast Alaska (1988, 28p., eng) 43-776
Bule, R.J.
Burntwood Trailer Court case study of construction in permafrost (1988, p 659-672, eng) 43-1331
Bulkov, M.V.
Modeling the artificial nucleation of mixed stratiform clouds allowing for crystal form transformations (1988, p 24-29, rus) 43-1083
Bulnitskii, A.B.
Oscillations in the activity of the Medvezhiy Glacier in the final stage of restoration (1988, p 63-70, rus) 43-3304
Bulskikh, A.A.
Estimating the thawing rate and parameters of the sprinkling method of preparing ice-saturated porous deposits (1988, p.73-78, rus) 43-3863
Evaluating the rate of thaw and the parameters of sprinkler preparation of ice-filled loose sediments (1989, p 351-355, eng) 43-4470
Bukin, IU.K.
"North 2005" program of the Soviet Union (1988, p 269-274, eng) 43-4248
Bulatov, L.V.
Snow cover dynamics in the vicinity of Russkaya Station (1988, p 66-68, rus) 43-2225
Bulgakov, A.B.
Analyzing the conditions for avalanche formation along the highways in the central regions of the Magadan Oblast' (1987, p.404-412, rus) 43-2549
Bull, C.
Choosing between some incompatible regional surface-mass-balance data sets in Antarctica (1989, p.7-13, eng) 43-3614
Bulleit, W.M.
Markov model for wood structural systems (1987, p.2023-2031, eng) 43-1136
Bunch, R.
Cold set concrete (1987, p 12-15, eng) 43-968
Bunding, J.T.
Atmospheric remote sensing in arctic regions (1987, p 319-326, eng) 43-867
Bundtzen, T.K.
Distribution, analysis, and recovery of placer gold from the Porcupine mining area, southeastern Alaska (1987, p 267-289, eng) 43-3084
Bungay, L.D.
Ice related flooding on Harry's River (1988, p.369-391, eng) 43-2181
Burak, J.P.
Measurement of pore pressures in freezing and thawing soils (1989, p.943-952, eng) 43-3791
Burakova, V.G.
Relationship between time of river ice breakup in Yakutia and types of atmospheric circulation in the Northern Hemisphere (a method of long range forecasting) (1988, p 21-35, rus) 43-2345
Buratti, B.
Geologic implications of spectrophotometric measurements of Europa (1988, p 437-449, eng) 43-2324
Buravoi, S.E.
Assembly for measuring thermophysical properties of electrically conducting materials at low temperatures (1988, p.92-96, rus) 43-694
Burbridge, G.H.
Water escape fissures resembling ice-wedge casts in late Quaternary subaqueous outwash near St. Lazare, Quebec, Canada (1988, p.33-40, eng) 43-3702
Burckle, L.H.
Evidence from Wright Valley for the response of the antarctic ice sheet to climate warming (1987, p 56-58, eng) 43-2731
Burge, R.E.
KRMS GEOSAT-LIMEX '87 quick look report (1988, 47p., eng) 43-707
Burgess, J.
On the thermal stratification of freshwater lakes in the Snowy Mountains, Australia, and the Larsemann Hills, Antarctica (1988, p.147-149, eng) 43-4043
Burlakov, V.M.
Regionalization of the Vilyuy reservoir, types and classification of its shores (1987, p.34-42, rus) 43-45
Burlbaw, E.J.
SNOW III WEST field experiment report. Volume 1 (1988, 170p, eng) 43-2121
Burman, G.V.
Effect of a decrease in deformation characteristics of materials on the stress-strain state of earth dams (1987, p.9-12, rus) 43-1180
Methods of assessing the condition of stress deformation of ground structures, considering the decrease of the ground deformation module during the period of operation (1987, p.4-9, rus) 43-1179
Burmeister, F.
PMT (pneumatic mattress track) vehicle system (1989, p.44-51, eng) 43-3493
Burn, C.R.
Comment on "Water movement into seasonally frozen soils" by Douglas L. Kane and Jean Stein (1985, p.1051-1054, eng) 43-4493
Development of near-surface ground ice during the Holocene at sites near Mayo, Yukon Territory, Canada (1988, p.31-38, eng) 43-4424
Evidence for recent temperature-induced water migration into permafrost from the tritium content of ground ice near Mayo, Yukon Territory, Canada (1988, p 909-915, eng) 43-1130
Observations of the "thermal offset" in near-surface mean annual ground temperatures at several sites near Mayo, Yukon Territory, Canada (1988, p.99-104, eng) 43-177
Burns, B.A.
SAR image statistics related to atmospheric drag over sea ice (1988, p.409-412, eng) 43-1515
Burton, B.
Frost upheaval of overwintering plants: a quantitative field study of the displacement process (1988, p.70-75, eng) 43-14
Busch, J.R.
Snowmelt runoff simulation using a degree-day and nonlinear multiple recession model (1986, p.134-145, eng) 43-3912
Buser, O.
Acoustic, geometric and mechanical parameters of snow (1987, p.61-71, eng) 43-1218
Avalanche forecast by the nearest neighbour method (1987, p.557-569, eng) 43-1261
On the application of rigid-porous models to impedance data for snow (1988, p 315-327, eng) 43-176
Buska, J.S.
Measurement of frost heave forces on H-piles and pipe piles (1988, 49p., eng) 43-2029
Buss, M.D.
Snowbelt county's approach to winter maintenance (1989, p 66-67, eng) 43-4079
But, N.O.
On computed wind velocities of different probabilities for construction planning in the Kola Peninsula (1989, p.70-79, eng) 43-3231
Butenev, V.P.
Survey of concretes resistant to cryogenic saline corrosives (1989, p 32-33, rus) 43-3864
Butler, D.R.
Glacial hazards in Glacier National Park, Montana (1989, p.53-71, eng) 43-3963
Periglacial patterned ground, Waterton-Glacier International Peace Park, Canada and U.S.A. (1989, p.43-57, eng) 43-4393
Teaching natural hazards: the use of snow avalanches in demonstrating and addressing geographic topics and principles (1988, p 212-225, eng) 43-4256
Butler, M.
Avalanche forecast by the nearest neighbour method (1987, p.557-569, eng) 43-1261
Butts, E.C.
Models of glacial flow (1985, 140p., eng) 43-1456
Butylkin, I.P.
Possibility of using overland air cushion vehicles in the construction of electrical networks (1988, p.24-28, rus) 43-558
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Adapting meltwater supply to meet irrigation demand in high mountain agricultural communities the example of Hopar Villages, Pakistan (1987, p.34-47, eng) 43-387
Buzin, V.A.
Calculating the highest ice-jam stage (1989, p.95-101, rus) 43-4553
Buzuev, A.IA.
Statistical models of sea ice cover as navigation medium (1988, p.120-130, rus) 43-810
Ways of improving scientifically based rapid information for ice navigation (1988, p.130-141, rus) 43-811
Bychkov, D.M.
Influence of agrometeorological conditions on space photographs of agricultural regions in winter (1988, p 58-65, rus) 43-816

Bychkova, I.A.
Remote sensing of sea surface temperature. (Satellite and airborne techniques of remote sensing of sea surface temperature based on infrared radiation) (1988, 222p., rus) 43-2858

Bydanov, S.M.
Automatic data recording for geocryological studies (1988, p.89-95, rus) 43-1606

Byrd, G.P.
Probing lake-effect snowbands using a portable radiosonde unit (1988, p.7-12, eng) 43-4112

Bystriakov, G.M.
High-humus illuvial-metamorphic soils of western Chukotka (1988, p.1-12, eng) 43-2022

Bystrov, N.V.
Effects of recurring thaws on the cold resistance of road structures (1987, p.243-252, rus) 43-3389

Cabrera, G.A.
Variations of Rio Plomo glaciers, Andes Centrales Argentinos (1989, p.143-151, eng) 43-3181

CACTS International Conference on Air Cushion Technology, Montreal, Quebec, Sep. 22-24, 1987
Proceedings (1988, 381p., eng) 43-1747

Cai, B.L.
Some dynamics studies on Urumqi Glacier No.1, Tianshan Glaciological Station, China (1989, p.70-73, eng) 43-3336

Calkin, P.E.
Glacial geologic history of the Salmon Lake area, Seward Peninsula (1988, p.91-94, eng) 43-512
Morphometric analysis of Pleistocene glacial deposits in the Kigluaik Mountains, northwestern Alaska, U.S.A. (1988, p.273-284, eng) 43-289
Rock glaciers of central Brooks Range, Alaska, U.S.A. (1987, p.65-82, eng) 43-3047

Calkins, D.J.
Deployment of floating bridges in ice-covered rivers (1988, 38p., eng) 43-1839
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River ice and salmonids (1986, p.D-4.1-D-4.26, eng) 43-2280
Water detection in the coastal plains of the Arctic National Wildlife Refuge using helicopter-borne short pulse radar (1989, 25p., eng) 43-3477

Čalogović, V.
Frost resistance of OPC-CSF mortars investigated by means of repeated cycle- and one cycle-freezing test (1989, p.267-277, eng) 43-2893

Camiso, J.C.
Passive microwave *in situ* observations of winter Weddell Sea ice (1989, p.10,891-10,905, eng) 43-4526

Cammaert, A.B.
Ice interaction with offshore structures (1988, 432p., eng) 43-1

Campbell, I.B.
Loess sources and eolian deposits in Antarctica (1988, p.33-45, eng) 43-2337

Campbell, J.E.
Winter circulation in Lake Ontario (1985, p.423-433, eng) 43-1006

Campbell, W.J.
Variations in Arctic, Antarctic, and global sea ice covers during 1978-1987 as observed with Nimbus 7 scanning multichannel microwave riometer (1988, p.10,666-10,674, eng) 43-507

Canada Mortgage and Housing Corporation
Bibliography on building in cold climates (1985, 7p., eng) 43-3506

Canadian Climate Program Workshop, Geneva Park, Ontario, Mar. 3-5, 1986
Arctic climate change impacts: summary and proposals for action (1986, 29p., eng) 43-2581
Proceedings. Climate change impacts in the Canadian Arctic (1986, 171p., eng) 43-2582

Cao, Z.
Hydrologic characteristics of the Gongba Glacier in the Mount Gongga area (1988, p.57-65, chi) 43-468

Cao, Z.T.
Runoff characteristics in the Gozha Glacier region on the south slope of the West Kunlun Mountains (1989, p.111-117, eng) 43-3449

Capitaine, P.
Ground freezing with liquid nitrogen (1988, p.273-277, eng) 43-87

Caple, G.
Ice nucleation and antifreeze activity due to biological materials (1980, p.275-280, eng) 43-3948

Carbee, D.L.
Creep and strength behavior of frozen silt in uniaxial compression (1987, 67p., eng) 43-426

Carey, K.L.
Ice engineering for civil work. baseline study (1983, 91p., eng) 43-1312

Cargill, S.M.
Application of successional theory to tundra restoration a review (1987, p.366-372, eng) 43-186

Carino, N.J.
Specifications for cold weather concreting (1988, p.50-57, eng) 43-353

Carleton, A.M.
Sea ice-atmosphere signal of the Southern Oscillation in the Weddell Sea, Antarctica (1988, p.379-388, eng) 43-2897

Carlier, A.
Contribution of chemistry to road trafficability (1988, p.61-63, ita) 43-1064

Carlson, J.
Urethane plow edges protect brick streets, smooth operator nerves, protect equipment from damage in downtown Duluth (1988, p.29, eng) 43-1850

Carmack, E.C.
NOGAP B.6; Volume 1. Beaufort Sea current measurements, March-August 1987 (1988, 42p., eng) 43-4035
Observations on ice cover and streamflow in the Yukon River near Whitehorse during 1983/84 (1987, 63p., eng) 43-423
Observations on ice cover and streamflow in the Yukon River near Whitehorse during 1985/86 (1988, 36p., eng) 43-1440

Carmona, P.
Phase transition of ice precipitated in an aqueous ionic glassy matrix (1989, p.11-20, eng) 43-2775

Carnes, B.L.
Use of mathematical models of wave propagation (1987, p.227-249, eng) 43-3296

Carrick, S.J.
Reconnaissance of surface-water resources in the Houston area, Alaska, 1985-86 (1988, 19p., eng) 43-1690

Carrier, L.
Topoclimatic zones and ice dynamics in the caves of the northern Yukon, Canada (1988, p.215-220, eng) 43-1031

Carroll, T.R.
Airborne gamma ray snow survey of a forest covered area with a deep snowpack (1988, p.149-160, eng) 43-1829
Comparison of U.S. and Canadian airborne gamma radiation snow water equivalent measurements (1983, p.27-37, eng) 43-4350
Cost-benefit analysis of airborne gamma radiation snow water equivalent data used in snowmelt flood forecasting (1986, p.1-11, eng) 43-3898
Record rain-on-snow flooding in North Dakota (1983, p.145-146, eng) 43-4363

Carsey, F.
Alaska synthetic aperture radar (SAR) facility project (1987, p.593-596, eng) 43-781
Review and status of remote sensing of sea ice (1989, p.127-138, eng) 43-3508
Use of SAR imagery and other remotely-sensed data in deriving ice information during a severe ice event on the Grand Banks (1988, p.1431-1433, eng) 43-1893

Carsey, F.D.
Remote sensing of ice covered seas (1987, p.327-332, eng) 43-868
SAR imagery of the Grand Banks pack ice pack and its relationship to surface features (1988, p.1425-1428, eng) 43-1892

Carson, L.
Checking the floe of ice: real-time processing of digital image data (1988, p.17-20, eng) 43-1573
Real-time processing of digital image data in support of the Canadian sea ice analysis and prediction programme (1988, p.1707-1711, eng) 43-1901

Carstens, T.
Development of ice drift models for the Barents Sea (1989, p.31-43, eng) 43-3710
Numerical modelling of sea spray icing on vessels (1989, p.694-704, eng) 43-3769

Carter, D.
Model tests of the Louis S. St. Laurent original bow fitted with strakes (1988, 13p. + appends., eng) 43-1974

Carter, L.D.
Arctic lowlands (1987, p.583-628, eng) 43-2415
Late Cenozoic history of the interior basins of Alaska and the Yukon. Proceedings of a cooperative workshop between earth scientists from Canada and the United States of America (1989, 114p., eng) 43-4478

Casassa, G.
Morphology, surface characteristics, and flow velocity of Solar Glacier, Patagonia (1988, p.414-421, eng) 43-2482

Cassary, G.W.
Case histories in seasonal frost areas (1988, p.160-169, eng) 43-772

Cassettari, M.
Nucleation process and solidification rate of supercooled water (1988, p.404-407, eng) 43-4378

Cassidy, W.A.
Antarctic search for meteorites during field season 1986-1987 (1987, p.52-53, eng) 43-2730
Emerging meteorite. crystalline structure of the enclosing ice (1989, p.87-91, eng) 43-3079

Castellani, A.
Airships in the Arctic past, present and future (1989, 7p., fre) 43-4026

Cate, D.
Arctic research in the United States, Vol.3 (1989, 72p., eng) 43-4482

Catt, J.A.
Soils and quaternary geology: a handbook for field scientists (1986, 267p., eng) 43-3530

Cavadias, G.
Approximate confidence intervals for verification criteria of the WMO intercomparison of snowmelt runoff models (1988, p.369-377, eng) 43-454

Cavalieri, D.J.
NASA Sea Ice and Snow Validation Program for the DMSP SSM/I: NASA DC-8 Flight report (1988, 145p., eng) 43-3970
Preliminary observations of polar sea ice with the special sensor microwave imager (1988, p.1693-1694, eng) 43-1898
Study of oceanic surface heat fluxes in the Greenland, Norwegian, and Barents seas (1989, p.6145-6157, eng) 43-3199

Cayla, J.
Various applications of hydraulic jets (Bertin & Cie) (1988, p.67-91, eng) 43-1751

Caylor, I.J.
Dual linear polarisation time series as an aid to hydrometeor identification (1988, p.241-242, eng) 43-1512

Cederwall, K.
Cracking of roof felt caused by an ice-cover (1989, p.796-807, eng) 43-3778

Cehak, K.
Road weather: state of the art in Austria (1986, 3p., eng) 43-2754

Centre de géomorphologie de Caen
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Two case histories of major frost heaving in refrigerated buildings: thermal analysis, repairs, and prevention (1988, p.535-540, eng) 43-705

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Ice scour surveys, statistics and forces (1987, p.99-118, eng) 43-445

Chateau, G.
Gravity modular concrete structure for Arctic environment (1988, p.593-604, eng) 43-648

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Nature and extent of periglacial phenomena in the Kanchenjunga area, Sikkim Himalayas (1986, p.145-152 + 6 plates, eng) 43-2831

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Snow conditions in avalanche hazard zones of the Salang Pass (1987, p.275-282, rus) 43-2530

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Typical piped water distribution system in the continuous permafrost zone of the Northwest Territories-Rankin Inlet, N.W.T. (1988, p.700-733, eng) 43-1334

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Water activity change in aqueous solutions at subfreezing temperatures (1988, p 256-258, eng) 43-1826

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Preliminary report on the Sino-Japanese Joint Glaciological Expedition to West Kunlun Mountain, 1987 (1988, p 84-89, chi) 43-471

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New transformations between crystalline and amorphous ice (1989, p 638-640, eng) 43-2585

Chen, Q.G.
Thermal performance of cooling air jacket walls for underground cold storage (1989, p.354-363, eng) 43-3580

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Earthwork for snow drift control in the highway in Tianshan Mountains and its effect (1987, p.40-42, chi) 43-481
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Current development on frost susceptibility prediction of soils in P.R. China (1989, p.481-490, eng) 43-3121
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Current development of the study on frost susceptibility of soils (1988, p.319-326, chi) 43-2875

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Force budget: III. Application to three-dimensional flow of Byrd Glacier, Antarctica (1989, p 68-80, eng) 43-4143

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Circulation analysis of two snowstorms during the SNOW-TWO program (1986, p.199-217, eng) 43-4635

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Ice problems on the Yellow River (1986, p.25-47, eng) 43-260

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Forecasts of ice condition on the Yellow River (1988, p.239-248, eng) 43-2997
Studies on ice conditions in rivers, lakes and seas in China (1988, p.279-283, chi) 43-2869

Chenault, T.
SNOW III WEST field experiment report. Volume 1 (1988, 170p., eng) 43-2121

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Review and prospects of regional geocryology in China (1988, p.296-299, chi) 43-2872
State of the art and prospects of geocryology in China (1988, p.221-227, chi) 43-2861

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Assessing landslide occurrence with snow data and other site information (1987, p.53-60, eng) 43-3927

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Proceedings (1989, 314p., eng) 43-4193

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Numerical simulations of hailstorm feeder-cloud initiation (1989, p.279-305, eng) 43-4559

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Snow retention in soil-conserving cultivation in Western Siberia (1988, 159p., rus) 43-2708

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Methods of preparing laboratory ice with specified physical properties (1988, p.77-94, rus) 43-807

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Principles of territorial distribution of biosphere reserves and global monitoring networks in the Subarctic (1987, p.33-40, eng) 43-2416

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Redistribution of water among oceans via the continental snow cover: the Northern Hemisphere (1988, p.235-238, eng) 43-2600
Using maps of the regime of glacier systems to calculate resources of glacial runoff (1988, p.129-134, rus) 43-3270

Chernykh, O.A.
Ice reserves in the south of Eastern Siberia (1987, p.15-27, rus) 43-3654

Cherry, S.M.
Cross-polar radar measurements in ice and rain (1988, p.235-236, eng) 43-1510

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Problems of design and service of machinery and structures for polar regions (1989, p.820-830, eng) 43-3780

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Analysis of the causes of variations in the annual and intra-annual rates of movement of the Fedchenko glacier (1988, p.97-110, rus) 43-2686

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Current Army environmental operational support (1986, p 241-247, eng) 43-4638

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Protonic conductivity of heavily KOH-doped ice (1988, p.373-381, eng) 43-1711

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Ice strength indexer (1987, 35p. + appends., eng) 43-683
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Strength development and durability of concretes cast and cured at 0 C (1988, p.529-536, eng) 43-2039

Chevron Beaufort test to use spray ice island
Chevron Beaufort test to use spray ice island (1989, p.23, eng) 43-4084

Chew, H.
Aluminum contamination of groundwater: spring melt in Chalk River and Turkey Lakes watersheds—preliminary results (1988, p.66-71, eng) 43-1359

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Water balance of the Sary-Tor mountain glacier basin (1988, p.203-207, rus) 43-963

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Radio echo-sounding of Erebus Glacier Tongue (1989, p.15-30, eng) 43-3884

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Single folds at the margins of dry-based glaciers as indicators of a glacial advance (1989, p.23-30, eng) 43-3330

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Damage mechanics model for uniaxial creep and cyclic loading of polycrystalline ice (1989, p.75-82, eng) 43-2612

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Failure analysis of impacting ice floes (1989, p.275-285, eng) 43-2637

Chorlton, E.
Weather monitoring equipment and its practical use in the management of highway maintenance (1986, 6p., eng) 43-2764

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Evolution of dendritic instability at the crystal-melt interface (1988, p.7-9, eng) 43-1742

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Millimeter wave snow data collection program description: Snowman I (1986, p 273-290, eng) 43-4641

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Theoretical and experimental study on solidification dynamics of a flowing fluid through a vertical cooled channel from a reservoir (1989, p.1-10, eng) 43-3282

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Proceedings of the eighth International Conference on Offshore Mechanics and Arctic Engineering, 1989. Volume 4 (1989, 476p., eng) 43-2601
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Churaev, N.V.
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Computational method for estimating sea ice motion in sequential Seasat synthetic aperture radar imagery by matched filtering (1988, p.9241-9251, eng) 43-17

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Influence of ground ice variability on settlement in thawing permafrost (1989, p.297-307, eng) 43-2111

Colloque International: Ingénierie et économie arctiques; réalités, problèmes posés, avenir, Paris, Feb. 15-17, 1989
International Colloquium: Arctic Technology and Economy; Present Situation, Problems, and Future Issues, Paris, Feb. 15-17, 1989. (Proceedings) (1989, Var. p., fre) 43-4017

Colonell, J.M.
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Ridge modelling: model scale simulation of ramming tests conducted with the USCGC *Polar Star*, Vol.1, main report; Vol.2, appendices (1988, 146p. + append's, eng) 43-1879

Comiso, J.C.
Phytoplankton standing crops within an antarctic ice edge assessed by satellite remote sensing (1988, p.12,487-12,498, eng) 43-723
Polar microwave brightness temperatures from Nimbus-7 SMMR Time series of daily and monthly maps from 1978 to 1987 (1989, 82p., eng) 43-4155

Comiso, J.C. *(cont.)*
Polynyas in the southern ocean (1988, p.90-97, eng) 43-784

Comparing chemical deicers
Comparing chemical deicers (1988, p 28-30, eng) 43-2157

Comparini, E.
On a model for quasi-steady freezing processes of saturated porous media (1988, p.41-49, eng) 43-59

Condo, A.C.
Hess Creek thermal erosion test site frozen cut slope surface treatments (1984, p.1129-1149, eng) 43-675

Conference on Pipelines in Adverse Environments, 2nd, San Diego, CA, Nov. 14-16, 1983
Proceedings (1983, 740p., eng) 43-3412

Connor, B.
Road reinforcement with geosynthetics (1988, p.17-18, eng) 43-1463

Connor, C.L.
Late Quaternary glaciolacustrine and vegetational history of the Copper River Basin, South-Central Alaska (1984, 135p., eng) 43-1814

Connor, J.J.
Ice-structure interaction (1988, p 38-44, eng) 43-3644

Consequences of deforestation on mountain streams in Switzerland
Consequences of deforestation on mountain streams in Switzerland (1988, 109p. + 3 maps, ger) 43-2146

Conway, H.
Snow-slope stability—a probabilistic approach (1988, p.170-177, eng) 43-160

Conway, H.W.
Late Quaternary surface fluctuations of Beardmore Glacier, Antarctica (1988, p.90-92, eng) 43-1619

Conway, T.J.
Airborne CO2 measurements in the Arctic during spring 1983 (1985, p.2195-2201, eng) 43-1003

Cook, H.C.
Hovercraft support in Antarctica (1989, p.249-259, eng) 43-2439

Cook, R.
Comments on the characteristics of *in situ* snow at millimeter wavelengths (1986, p.317-320, eng) 43-4645

Cook, R.B.
Winter and spring pH depressions in northern Wisconsin lakes caused by increases in pCO2 (1987, p.1082-1088, eng) 43-1198

Cook, R.F.
Effective-medium theory for fracture of fractal porous media (1988, p.47-49, eng) 43-1744

Cookson, P.
Wind tunnel modeling of snow drifting—applications to snow fences (1989, p.210-226, eng) 43-3566

Cooley, K.R.
Determining variability of snow accumulation and ablation on western rangelands (1985, p.156-159, eng) 43-4280
Diurnal fluctuations in remote precipitation gage readings (1987, p.10-19, eng) 43-3923
Evaluation of the NWSRFS model on a Montana watershed (1986, p.112-121, eng) 43-3910
Monitoring a rain-on-snow event (1983, p.19-26, eng) 43-4349
Snowpack variability on western rangelands (1988, p.1-12, eng) 43-3991

Coon, M.
Sea ice characteristics, motion and interactions (1988, p.41-44, eng) 43-3502

Coon, M.D.
Observations of ice floe stress in the Eastern Arctic (1989, p.44-53, eng) 43-3711

Cooper, A.P.R.
Investigating variations in the gravitational constant (1989, p.55-58, eng) 43-2219

Cooper, R.H.
Influence of northern pipelines on river crossing design (1983, p.49-63, eng) 43-3413

Corapcioglu, M.Y.
FORTRAN microcomputer program for heat and mass transfer in frozen soils (1989, p 709-726, eng) 43-4600
Sensitivity of a thaw simulation to model parameters (1988, p.99-106, eng) 43-66

Cordon, W.A.
Deterioration of concrete exposed to freezing and thawing (1988, p.375-418, eng) 43-3367

Cormack, R.
Thermal modeling for freezeback disposal of drilling wastes on Alaska's North Slope (1987, p.16-22, eng) 43-969

Cormeau, A.
Analysis of strength reduction caused by systems of microcracks in ice (1986, p.179-195, eng) 43-268
Numerical simulation of ice behaviour and ice structure interaction (1988, p.261-274, eng) 43-626

Cornett, R.J.
Changes in stream chemistry during snowmelt runoff in two headwater catchments (1988, p 60-73, eng) 43-4117

Cornett, S.
Beaufort Gyre ice trajectories (1987, p.11-37, eng) 43-900

Corte, A.E.
Central Andes rock glaciers: applied aspects (1987, p.289-303, eng) 43-3058
Rock glacier taxonomy (1987, p.27-39, eng) 43-3043

Cota, G.
Abundance and production of ice algae in Resolute Passage, Canadian Arctic (1988, p.251-263, eng) 43-1376

Cota, G.F.
Physical control of arctic ice algal production (1989, p.111-121, eng) 43-2403
Population dynamics of bacteria in Arctic sea ice (1989, p.63-76, eng) 43-1967

Cotterill, R.J.C.
Burntwood Trailer Court case study of construction in permafrost (1988, p 659-672, eng) 43-1331

Cotton, W.R.
Sensitivity of a simulated extratropical mesoscale convective system to longwave radiation and ice-phase microphysics (1988, p.3897-3910, eng) 43-2361

Coutard, J.P.
Analytical treatment of data from measurements of displacement in a periglacial environment (1988, p 87-117, fre) 43-2298
Study on cryogenic creep processes at various sites of the upper Ubaye River in the southern Alps (1988, p.9-28, fre) 43-2293
Study on typical thermal conditions in a rock wall (1988, p.181-220, fre) 43-2302

Coutermarsh, B.A.
Model studies of ice interaction with the U.S. Army Ribbon Bridge (1986, 18p., eng) 43-4592

Coutts, R.
Preliminary results of frost heave tests in a large cell (1989, p.379-388, eng) 43-2116

Cowan, E.A.
Rainstorm-induced event sedimentation at the tidewater front of a temperate glacier (1988, p.409-412, eng) 43-175

Cowper, D.N.B.
Development of a research plan for full scale testing, data analysis and modeling of the propulsion train of a class IV icebreaker with nozzled propellers. Final report (1989, 34p., eng) 43-3364
Modeling of ice class shafting and propeller systems. Final report (1988, 38p., eng) 43-2801

Cox, G.F.N.
Confined compressive strength of multi-year pressure ridge sea ice samples (1988, p.295-301, eng) 43-921
DOD floating ice problems (1987, p.151-154, eng) 43-853
Mechanical properties of multi-year sea ice (1987, p.121-153, eng) 43-905
Mukluk ice stress measurement program (1988, p.11-15, eng) 43-3643
Numerical simulations of the profile properties of undeformed first-year sea ice during the growth season (1988, p.12,449-12,460, eng) 43-721
Profile properties of undeformed first-year sea ice (1988, 57p., eng) 43-4595

Cragin, J.H.
Increased transmission through brass obscurant clouds during snowfall (1988, p.489-496, eng) 43-3430
Model of smoke concentration reduction due to scavenging by snow (1989, p.87-98, eng) 43-3879
Parametric study on transmission through smoke screens produced in falling snow (1989, p.99-111, eng) 43-3880
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Craig, D.
Acidification of shallow groundwaters during the spring melt period (1988, p.89-98, eng) 43-302
Aluminum contamination of groundwater: spring melt in Chalk River and Turkey Lakes watersheds—preliminary results (1988, p 66-71, eng) 43-1359

Craig, H.
Gravitational separation of gases and isotopes in polar ice caps (1988, p.1675-1678, eng) 43-1202
Isotopic composition of methane in polar ice cores (1988, p.1535-1539, eng) 43-1563

Crane, D.A.
Heavy snow failures in the Sierra Nevada Mountains of California (1987, p.146-149, eng) 43-3938

Crane, R.G.
Arctic cloudiness in spring from satellite imagery: a response (1988, p.539-540, eng) 43-2036

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Meteorite concentrations in Antarctica: sites of katabatic wind ablation? (1988, p.342-346, eng) 43-1421

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Effects of ice on water levels in the upper Niagara River (1989, p.141-150, eng) 43-2097

Cristoferi, G.
Agrometeorology (1988, 498p., eng) 43-2248

Croasdale, K.
Ice forces associated with ridge building; model tests and results compared with theoretical models (1986, p.227-245, eng) 43-271

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Evaluation of ice pressure and strain sensors in a large test basin (1986, p.213-225, eng) 43-270
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Field techniques for ice force measurements (1987, p.157-196, eng) 43-447
Limit force loads and measurements of pack ice driving forces in the Beaufort Sea (1988, p.5-11, eng) 43-3496

Crocker, G.B.
Modelling antarctic fast-ice growth (1989, p.3-8, eng) 43-4133
Modelling changes in the dielectric and scattering properties of young snow-covered sea ice at GHz frequencies (1988, p.274-282, eng) 43-1981
Observations of wind-generated waves in antarctic sea ice (1988, p.1292-1299, eng) 43-1069

Croley, T.E., II
Lumped modeling of Laurentian Great Lakes evaporation, heat storage, and energy fluxes for forecasting and simulation (1989, 48p., eng) 43-3473

Crommelin, D.J.A.
Influence of freezing and freeze-drying on the stability of liposomes dispersed in aqueous media (1988, p.129-139, eng) 43-1569

Crook, A.G.
Transition from manual to automated systems for acquiring snow data (1984, p.165-167, eng) 43-4327

Crooks, J.H.A.
Performance assessment in geotechnical design of arctic offshore structures (1989, p.113-123, eng) 43-2617

Crory, F.E.
Airfields in Arctic Alaska (1988, p.49-55, eng) 43-1724

Cross, G.M.
Radar imaging of glaciovolcanic stratigraphy, Mount Wrangell calders, Alaska: interpretation model and results (1989, p.7237-7249, eng) 43-3960

Cross, J.E.
Evaluation of the environmental impacts of snow disposal activities within the municipality of Anchorage, Alaska (1989, p.43-54 + 1 append., eng) 43-3666

Crow, S.B.
Scattering, turbulence, and refractive effects at SNOW III West (1986, p.113-127, eng) 43-4631

Cruden, D.M.
Geotechnical characteristics of an ice-thrust mudstone, Wabamun Lake area, Alberta (1989, p.227-234, eng) 43-3825

Crum, T.D.
Capabilities and problems in modeling the arctic cryosphere and clouds (1987, p.289-292, eng) 43-863
Comments on "Comparison of Northern Hemisphere snow cover datasets" (1988, p.435-442, eng) 43-3468

Crutzen, P.J.
Impact of observed changes in atmospheric composition on global atmospheric chemistry and climate (1989, p.249-266, eng) 43-3691

Cui, Z.J.
Commentaries and prospects of the study on periglacial geomorphology in China (1988, p.304-311, chi) 43-2873

Cummings, T.K.
Geosat: Navy applications of satellite altimetry growing (1988, p.39-43, eng) 43-2664

Cummins, H.Z.
Evolution of dendritic instability at the crystal-melt interface (1988, p.7-9, eng) 43-1742

Cunningham, K.I.
Helium and C(1)-C(3) hydrocarbon concentrations in permafrost ice, Marsh Creek area, Arctic National Wildlife Refuge, Alaska (1988, 18p. + tables, eng) 43-678

Curry, J.A.
Arctic cloudiness in spring from satellite imagery: some comments (1988, p.533-538, eng) 43-2035

Curtain, T.B.
Navy Arctic research (1988, p.15-19, eng) 43-220

Curtin, T.B.
Arctic program annual report 1987 (1987, 163p., eng) 43-515

Cutten, D.R.
Impact of ice-supersaturated layers on atmospheric radiance (1989, p.179-193, eng) 43-2407

Czuczwa, J.
Aliphatic and polycylic aromatic hydrocarbons in urban rain, snow and fog (1988, p.695-705, eng) 43-1071

Czurda, K.A.
Influence of freezing and thawing on the physical and chemical properties of swelling clays (1988, p.51-58, eng) 43-60

Dadachanji, N.
M.V. *Arctic* manoeuvring performance in ice. Final report (1984, 100p. + appends., eng) 43-4153
M.V. *Arctic* manoeuvring performance in ice. Summary report (1984, 16p., rus) 43-4152

Daerga, P.A.
Behaviour of concrete at low temperatures (1989, p.808-819, eng) 43-3779

Daggupaty, S.M.
On variability of atmospheric CO2 at station Alert (1985, p.2039-2044, eng) 43-987

Dagher, H.J.
General purpose computer program for the reliability analysis and design of structural line components (1987, p.223-230, eng) 43-1591

Dahe, Q.
Growth rate of crystals within the surface-snow/firn layer in Wilkes Land, East Antarctica (1988, p.121-125, eng) 43-1955

Dahl-Jensen, D.
Steady thermomechanical flow along two-dimensional flow lines in large grounded ice sheets (1989, p.10,355-10,362, eng) 43-4344
Two-dimensional thermo-mechanical modelling of flow and depth-age profiles near the ice divide in central Greenland (1989, p.31-36, eng) 43-3331

Dahlquist, M.S.
Lock rehabilitation: concrete repair and foundation investigation (1989, p.216-227, eng) 43-4408

Dai, M.
Probable avenue to the effect of polar ice on the North Pacific subtropical high (1987, p.190-195, eng) 43-3830

Dalcq, P.
Contribution of chemistry to road trafficability (1988, p 61-63, ita) 43-1064

Daley, C.
Local ice pressures measured in thick level ice in Antarctica Final report (1986, 174p, eng) 43-976
Measurement of ice forces on small vessels: Vol.1: technical report, Vol 2: appendices (1988, 51p + appends, eng) 43-1697
Strength and stability of framing for ice strengthening (1988, 37p, eng) 43-2147

Dalgleish, B.J.
Assessing the durability of concrete in freezing and thawing (1989, p.29-35, eng) 43-2334

Daly, C.
Influences of snow persistence on subalpine forest regeneration in small gaps, Colorado Front Range (1984, p 109-119, eng) 43-4321

Daly, S.F.
Airborne radar survey of a brash ice jam in the St. Clair River (1989, 17p, eng) 43-3475
Forecasting river water temperatures (1988, p.180-188, eng) 43-3031

D'Andrea, R.A.
Use of thermal inserts to reduce heaving on existing roadways (1989, p 821-830, eng) 43-3150

Daneš, P.L.R.
Polarisation of passive microwave signals as indicator of snow water equivalent (1988, p 441-442, eng) 43-1525

Daneš, Z.F.
Polarisation of passive microwave signals as indicator of snow water equivalent (1988, p.441-442, eng) 43-1525

D'Anglejan, B.
Late winter-early spring sedimentation off the Great Whale River, southeastern Hudson Bay (1988, p.930-933, eng) 43-1131

Danielewicz, B.W.
Workshop on extreme ice features, (Proceedings) (1987, 463p, eng) 43-899

Danielian, IU.S.
Dynamics of the formation of thaw halos in frozen ground with simultaneous laying of several pipelines (1987, p.145-151, rus) 43-4508
Heat calculations of complex systems of underground pipelines (recommendations) (1987, 70p, rus) 43-4491
Theoretical and experimental study on the dynamics of thaw halo formation in the frozen ground surrounding communication corridors (1987, p.113-119, rus) 43-4505
Thermal interaction between communication corridors and frozen ground (1987, p.153-159, rus) 43-4507
Thermal regime of oil and gas pipelines during their simultaneous laying in frozen ground (1988, p.95-100, rus) 43-4506

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History of the development of the cryolithozone in northern Eurasia during the late Cenozoic (1987, p.45-62, rus) 43-3370
Hypothesis on sheet glaciation of the arctic shelf and adjoining plains in the north of Eurasia (1987, p.80-88, rus) 43-4234
Origins of stratified layers of ground ice (1987, p.72-83, rus) 43-3372

Danilova, N.S.
Cryogenic age of rocks in the cryolithozone of the USSR (1987, p.62-71, rus) 43-3371

Dansgaard, W.
Past environmental long-term records from the Arctic (1989, p.287-317, eng) 43-3693

Daoud, N.
Ice-induced dynamic loads on offshore structures (1986, p.35-41, eng) 43-3217

Darling, W.G.
(Delta)D-(delta)O18 relationships and the thermal history of basal ice near the margins of two glaciers in Lyngen, north Norway (1988, p 265-268, eng) 43-1979

D'Arrigo, G.
Brillouin light scattering in low temperature water-ethanol solutions (1988, p 4469-4477, eng) 43-1029

Dasgupta, B.
Preliminary results from simulation of retaining wall displacement by frost action (1989, p.389-396, eng) 43-2119

Dash, J.G.
Surface melting (1989, p.89-100, eng) 43-4434

Dattilo, R.S.
Method for rating unsurfaced roads (1989, p.103-106, eng) 43-3484

Daugharty, D.A.
Snowpack measurements in a forested environment (1987, p.255-284, eng) 43-1306

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Flow resistance due to floating partial ice covers (1987, p.178-191, eng) 43-400
Flow resistance for partially ice-covered channels: laboratory simulation study (1988, p.131-141, eng) 43-2987

Davidovich, N.V.
Heat resources of the ablation period in the largest mountain-glacier countries of non-polar latitudes (1988, p.134-145, rus) 43-3271

Davidson, C.I.
Atmospheric transport and deposition of trace elements onto the Greenland Ice Sheet (1985, p.2065-2081, eng) 43-990
Mechanisms of wet and dry deposition of atmospheric contaminants to snow surfaces (1989, p.29-51, eng) 43-3679
Radioactive ice (1988, p.98-99, eng) 43-2587

Davies, T.
As pure as the driven snow? (1989, p.45-49, eng) 43-3287

Davies, T.D.
Geochemical studies in a remote Scottish upland catchment 2. Streamwater chemistry during snow-melt (1989, p.231-248, eng) 43-4618
Soil bacterial changes upon snowmelt: laboratory studies of the effects of early and late meltwater fractions (1987, p.269-274, eng) 43-1867

Davis, C.W.
Central power generation system for U.S. Coast Guard polar icebreakers (1989, p.82-92, eng) 43-3973

Davis, E.
Development of a methodology for reservoir site selection in glaciated terrain (1988, p.123-142, eng) 43-1326

Davis, E.M.
Use of new SSARR model automatic updating procedure (1988, p.52-57, eng) 43-3996

Davis, J.L.
Comment on "Monitoring the unfrozen water content of soil and snow using time domain reflectometry" by Jean Stein and Douglas L. Kane (1985, p.1059-1061, eng) 43-4495

Davis, R.
Micrometeorological measurements and instrumentation in support of remote sensing observations of an alpine snow cover (1984, p.161-164, eng) 43-4326

Davis, R.A., Jr.
Sea-level change and the preservation potential of wave-dominated and tide-dominated coastal sequences (1987, p.167-178, eng) 43-3404

Davis, R.E.
Dilution method for measuring liquid water in snow field tests in a subapline snowpack (1987, p 71-78, eng) 43-1290
On the objective analysis of snow microstructure (1987, p.49-59, eng) 43-1217
Snow microstructure measurements using stereology (1987, p.59-69, eng) 43-1289

Davis, T.W.
Analysis of coastal recession models: North Carolina coast (1987, p.59-68, eng) 43-3396

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Ice wharf at McMurdo Station (1988, p 601-609, eng) 43-2958

Davison, I.R.
Effect of freezing on photosynthesis of intertidal macroalgae: relative tolerance of *Chondrus crispus* and *Mastocarpus stellatus* (Rhodophyta) (1989, p.107-114, eng) 43-3823

Davos, Switzerland. Eidgenössisches Institut für Schnee- und Lawinenforschung
Snow and avalanches in the Swiss Alps, Winter 1986/87 (1988, 139p., ger) 43-3236

Davy, R.D.
Creating a new global snow depth climatology (1989, p.3-4, eng) 43-3872

Davydov, N.G.
Operation and safe driving of amphibious vehicles (1988, 318p., rus) 43-3065

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Search and rescue detection experiment Phase 1—Initial preparatory work (1987, 20p. + appends., eng) 43-680

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Changes in copper, zinc and cadmium concentration in antarctic ice during the past 40,000 years (1989, p 544-546, eng) 43-1775

De Bastiani, P.
Assessment of trafficability and vessel manoeuvring and structural performance in a mixed old ice regime (1988, 56p. + tables, eng) 43-2149

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Pingo scars and their identification (1988, p 299-322, eng) 43-332

De Heering, P.
Impact sound source useful for Arctic remote sensing (1989, p.166-172, eng) 43-3512

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Drying of frozen soils (1988, p.807-811, eng) 43-1996

De Quervain, M.
50 years of snow profiles on the Weissfluhjoch and relations to the surrounding avalanche activity (1936/37-1985/86) (1987, p.161-181, eng) 43-1228

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Melting inhibition and superheating of ice by an antifreeze glycopeptide (1989, p.505-507, eng) 43-4107

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Detection and identification of Arctic landforms: an assessment of remotely sensed data (1988, p.363-371, eng) 43-832

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Numerical modelling of glacier d'Argentière and its historic front variations (1989, p.373-389, eng) 43-3195

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Model studies on ice control structure (1988, p.53-58, eng) 43-2979

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Rheological properties of ice with the addition of surfactants (1987, p.485-489, eng) 43-1138
Viscosity of nonfreezing interlayers of aqueous electrolyte solutions between ice and silicate surface (1988, p.204-207, eng) 43-2034

Dedkov, A.P.
Contemporary glaciation in Afghanistan (1988, p.74-78, rus) 43-4228

DeFaccio, M.A.
Laser ignition of Arctic oil spills (1987, p.355-365, eng) 43-3242
Laser ignition of oil spills. Phase 1: concept development. Final report (1985, 89p. + appends, eng) 43-3243

Degiovanni, A.
Experimental and theoretical approach to the thermal conductivity of wet porous media. 1. Experiments (1988, p.2305-2317, fre) 43-1380
Experimental and theoretical approach to the thermal conductivity of wet porous media. 2. Theory (1988, p.2319-2330, fre) 43-1381

Degtiarev, B.V.
Methods and trends of searching for gas hydrate deposits in the northern West-Siberian Platform (1988, p 110-115, rus) 43-1609
Methods of experimental determination of hydrate saturation of porous media (1988, p.145-149, rus) 43-1613

Deikin, B.N.
Contribution of liquid atmospheric precipitation to the thermal and water balance of melting naleds (1987, p.5-14, rus) 43-3653
Results and goals of studying naleds in the BAM zone (1987, p.120-131, rus) 43-1437

Deix, F.
Vienna subway construction—use of brine freezing in combination with NATM under compressed air (1988, p.321-330, eng) 43-93

Del Vecchio, J.
Space remote sensing workshop: working group report (1987, p.333-339, eng) 43-869

Delaney, A.J.
Coastal subsea permafrost and bedrock observations using dc resistivity (1989, 13p., eng) 43-4386
Investigations of dielectric properties of some frozen materials using cross-borehole radiowave pulse transmissions (1989, 18p., eng) 43-3476
Water detection in the coastal plains of the Arctic National Wildlife Refuge using helicopter-borne short pulse radar (1989, 25p., eng) 43-3477

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Quality of used-snow discharged in the St-Lawrence River, in the region of the Montreal Harbor (1988, p.47-57, eng) 43-1074

DeLisle, G.
Radio echo-sounding of Erebus Glacier Tongue (1989, p.15-30, eng) 43-3884

Della Ventura, A.
Use of Landsat data for the study of Alpine glaciers; Comments on the paper by Della Ventura et al. (1987) and Reply (1988, p.1167-1174, eng) 43-337

Delmas, R.J.
Comments on "Relative contributions of tropospheric and stratospheric sources to nitrate in antarctic snow" by M R Legrand and R.J. Delmas (1988, p.233-240, eng) 43-2245
Long-term changes in the concentrations of major chemical compounds (soluble and insoluble) along deep ice cores (1989, p.319-341, eng) 43-3694

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Stratigraphic record of Quaternary sea levels: implications for more ancient strata (1987, p.223-239, eng) 43-3407

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Analysis of long-period changes in some climate-forming factors of the northern European basin (1988, p.107-117, rus) 43-2411
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Establishment of a permafrost service (1988, p.119-121, rus) 43-2413

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Photoadaptation of sea-ice microalgae in springtime: photosynthesis and carboxylating enzymes (1988, p.177-185, eng) 43-2839
Photosynthetic responses of arctic sea-ice microalgae to short-term temperature acclimation (1989, p.437-442, eng) 43-4289

Demin, IU.A.
Analyzing the process of icing of marine hydraulic structures (1987, p 88-94, rus) 43-758

Demissy, D.
Dielectric withstand and breaking capacity of SF6 circuit breakers at low temperatures (1988, p.1029-1035, eng) 43-1559

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Molecular dynamics for systems under high pressure (1989, p.441-454, eng) 43-3248

Demont, W.
Controlled river ice cover breakup, part 1 Hudson River field experiments (1986, p.281-291, eng) 43-274
Controlled river ice cover breakup; part 2. Theory and numerical model studies (1986, p 293-305, eng) 43-275
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New high-pressure phases of ice (1988, p 2284-2287, eng) 43-21

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Chemical fractionation of atmospheric aerosol as a result of snow crystal formation and growth (1988, p.213-239, eng) 43-1467

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Fracture experiments on freshwater and urea model ice (1988, 152p, eng) 43-3040
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Design study report proposed living snowfence project Interstate 35, Clarks Grove to Owatonna (1975, 22p, eng) 43-882

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DF Dickins Associates Ltd.
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Flow of Rutford Ice Stream and comparison with Carlson Inlet, Antarctica (1989, p 51-56, eng) 43-3334
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DOD Symposium and Workshop on Arctic and Arctic-Related Environmental Sciences, Laurel, MD, Jan. 28-30, 1987
Arctic and Arctic-related environmental sciences, Proceedings, Vol.1 (1987, 371p., eng) 43-847

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Eastern Snow Conference
Proceedings of the 44th annual Eastern Snow Conference, Fredericton, New Brunswick, June 3-4, 1987 (1987, 216p., eng) 43-383
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Fily, M.
Quantitative use of satellite SAR imagery of sea ice (1987, p.323-326, eng) 43-1794

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Back-barrier response to sea-level rise, eastern shore of Virginia (1987, p.145-155, eng) 43-3402

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Search and rescue detection experiment. Phase 1—Initial preparatory work (1987, 20p. + appends., eng) 43-680

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Characterization of a modified hexagonal silver iodide ice nucleus aerosol (1989, p 722-726, eng) 43-4547

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Glacier retreat in the Cordillera Real (Bolivia) since 1928 compared to that of the Eastern Alps (1987, p.143-153 + map, ger) 43-1680

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First official snow-compaction vehicle contest at Vars
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Fischer, G.
Seasonal variability of particle flux in the Weddell Sea and its relation to ice cover (1988, p.426-428, eng) 43-418

Fish, A.M.
Some peculiarities of creep behavior of frozen silt (1989, p.721-724, eng) 43-3222

Fisher, D.
Twentieth century trends in Arctic air pollution revealed by conductivity and acidity observations in snow and ice in the Canadian High Arctic (1985, p.2055-2063, eng) 43-989

Fisher, D.A.
Basal-flow conditions at the northeastern margin of the Laurentide Ice Sheet, Lancaster Sound (1988, p.1740-1750, eng) 43-2030

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Determination of bedrock topography beneath the Greenland ice sheet by three-dimensional imaging of radar sounding data (1989, p.2874-2882, eng) 43-2394

Fitzharris, B.B.
Comparison of the energy-balance and bulk-aerodynamic approaches for estimating glacier melt (1988, p.145-153, eng) 43-158

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Analysis of observed failure mechanisms for laboratory, first-year and multi-year ice (1989, p.77-124, eng) 43-2815
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Fitzsimmons, G.
U.S. National Science Foundation polar research programs (1989, p.29-32, eng) 43-3220

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Ice jam characteristics, Liard-Mackenzie rivers confluence: discussion and reply (1988, p.275-278, eng) 43-300
Some thoughts on break-up and ice jams (1988, p.225-239, eng) 43-2174

Fleming, A.H.
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Simultaneous heat and water model of a snow-residue-soil system (1988, 161p., eng) 43-1917

Fletcher, G.L.
Lethal freezing temperatures of Arctic char and other salmonids in the presence of ice (1988, p.369-378, eng) 43-1060

Fletcher, S.R.
Antarctica: environmental protection issues. Summary of a CRS research workshop (1989, 57p. + 20p. appends., eng) 43-2568

Flint, C.P.
Holocene ice fluctuations on Brabant Island, Antarctic Peninsula (1989, p.165-166, eng) 43-4187

Flohn, H.
Climate feedback mechanism involving oceanic upwelling, atmospheric CO2 and water vapour (1983, p.403-418, eng) 43-3037

Flore, J.A.
Environmental and physiological factors that influence cold hardiness and frost resistance in perennial crops (1987, p.139-150, eng) 43-2252

Föhn, P.
Snow and avalanches in the Davos region (1988, p.28-42, ger) 43-3238

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"Rutschblock" as a practical tool for slope stability evaluation (1987, p.223-228, eng) 43-1232
Stability index and various triggering mechanisms (1987, p.195-214, eng) 43-1230

Fokina, M.L.
Probability modeling of Baltic Sea ice conditions (1988, p.126-130, rus) 43-4554

Foldvik, A.
Notes on southern ocean hydrography, sea-ice and bottom water formation (1988, p.3-17, eng) 43-1094

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Application of a snowmelt and rainfall sediment yield model to New Mexico watersheds (1987, p.98-102, eng) 43-4

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Controlling the behavior of snow on slopes (1987, p.304-311, rus) 43-2533
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Optimal distribution of temperature on the working surface of a heat drill during drilling and melting (1989, p.150-153, eng) 43-2061

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Engineering geological characteristics of glacial deposits in the upper reaches of the Kaskelen River (1988, p.77-85, rus) 43-2421
Mudflow formation in the Sarkand River basin (1988, p.155-161, rus) 43-2424

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Ice-dominated shores of Lougheed Island, type examples for the Northwest Queen Elizabeth Islands, Arctic Canada (1987, p.33-48, eng) 43-3200

Ford, D.
Effects of glaciations and permafrost upon the development of karst in Canada (1987, p.507-521, eng) 43-702

Foreman, T.L.
Analysis of thermal pile design using computer modeling techniques (1984, p.1101-1112, eng) 43-673

Forhan, T.
U.S. National Science Foundation polar research programs (1989, p 29-32, eng) 43-3220

Fortmann, R.C.
Atmospheric transport and deposition of trace elements onto the Greenland Ice Sheet (1985, p.2065-2081, eng) 43-990

Foss, G.N.
Scientific ocean drilling in ice-laden regions (1988, p 674-685, eng) 43-2964

Foster, I.B.
Observations on the formation of spongy ice from fresh water (1989, p 129-133, eng) 43-4210

Foster, J.L.
Significance of the date of snow disappearance on the Arctic tundra as a possible indicator of climate change (1989, p 69-70, eng) 43-2477

Fotiev, S.M.
Classification of cryogenic strata according to distribution (1988, p.63-72, rus) 43-593

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Mathematical analysis of glacier surges (1989, p 246-263, eng) 43-2131
Sliding law for glaciers of constant viscosity in the presence of subglacial cavitation (1986, p.147-170, eng) 43-182

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Atmospheric transport of organochlorines to the Arctic Ocean (1988, p.480-493, eng) 43-2246

Fowler, D.
Sources and movement of icebergs in the south-west Ross Sea, Antarctica (1989, p 85-88, eng) 43-3339

Fox, D.G.
Glacier lakes ecosystem experiments site: an "experimental" wilderness (1987, p 161-166, eng) 43-580

France, D.M.
Pressure drop in ice-water slurries for thermal storage applications (1988, p.265-275, eng) 43-4499

Francescatti, P.
ANAS snow clearing service (1988, p.32-41, ita) 43-1062

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Micromorphological and comparative dynamic study on striated soils and other small forms of surface flow in Arctic, Alpine and Andean environments (1988, p 47-64, fre) 43-2295
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Frank, J.
Laser ignition of oil spills: telescope assembly and testing (1988, 23p., eng) 43-3246

Frank, T.D.
Mapping dominant vegetation communities in the Colorado Rocky Mountain Front Range with Landsat Thematic Mapper and digital terrain data (1988, p.1727-1734, eng) 43-2312

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Ice engineering for civil work: baseline study (1983, 91p., eng) 43-1312
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Asphalt pavement crack control at Fairbanks International Airport (1989, p.59-69, eng) 43-2089

Frankling, F.T.
Conference proceedings (1989, 257p., eng) 43-3487

Fransson, L.
Cracking of roof felt caused by an ice-cover (1989, p.796-807, eng) 43-3778
Experience from ice reinforcement tests (1985, p.281-290, swe) 43-380
Field instrument for fracture toughness testing of ice (1989, p 300-310, eng) 43-3735
Field investigation of load-curvature characteristics of reinforced ice (1987, 22p., eng) 43-1110
Horizontal compressive strength of low salinity ice from the Gulf of Bothnia (1987, 9p., eng) 43-1102
Mechanical properties of ice—laboratory testing and *in situ* testing (1987, 9p. + append., eng) 43-1101
Pendulum indentation tests on manufactured ice (1988, p.669-678, eng) 43-653
Reinforced ice (1987, 9p., eng) 43-1109
Resources and ambitions regarding winter knowledge at the University of Luleå (1985, p.35-40, swe) 43-358

Fransson, L.Å.
Proceedings. POAC 89. Vols.1 and 2 (1989, 1187p. (2 vols.), eng) 43-3708

Franzen, L.
Coloured snow episode on the Swedish west coast, January 1987: a quantitative study of airborne particles (1988, p 235-243, eng) 43-1873

Fraser, D.B.
Climate of Yukon (1987, 323p., eng) 43-3081

Frederking, R.
Adhesion strength of piles in saline ice (1986, p.89-104, eng) 43-263
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Introduction to the measurement and interpretation of dynamic ice loads on compliant structures (1989, p.167-187, eng) 43-2817
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Preliminary observations on compressive strength, deformation and Poisson's ratio of iceberg ice (1987, p 413-429, eng) 43-918
Static and dynamic ice loads on the Yamachiche Bend lightpier, 1984-86 (19'6, p.115-126, eng) 43-265

Frederking, R.M.W.
Effects of tidal jacking on ice displacement and strain in the nearshore environment (1988, p.526-536, eng) 43-2951
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Ice failure model incorporating size effects (1989, p 596-605, eng) 43-3761
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Model tests of load transmission through grounded ice rubble (1989, p 269-274, eng) 43-2636
Transfer function approach for a structure subjected to ice crushing (1989, p.420-430, eng) 43-3745

Freeman, T.L.
Making artificial snow for laboratory use (1988, 3p., eng) 43-1700

Frei, R.
Determination of ice movement to the east of the Schirmacher Ponds (Queen Maud Land) (1968, p.69-73, rus) 43-2226

Freidlin, V.S.
Calculation of snow accumulation by avalanches (1987, p 248-255, rus) 43-2526

Fremond, M.
Freezing of soil and rocks (1987, p.47-52, fre) 43-2068
Modeling of thermal soil behaviour (1989, p.895-915, eng) 43-3156

French, H.M.
Active layer processes (1988, p.151-177, eng) 43-326
Arctic climate change impacts: summary and proposals for action (1986, 29p., eng) 43-2581
Massive ground ice and ice-cored terrain near Sabine Point, Yukon Coastal Plain (1988, p.1846-1856, eng) 43-2031
Nature and origin of ground ice, Sandhills Moraine, southwest Banks Island, Western Canadian Arctic (1988, p.19-30, eng) 43-3673
Periglacial overview (1988, p.463-473, eng) 43-336
Pleistocene epigenetic and syngenetic frost fissures, Belchatów, Poland (1988, p.2017-2027, eng) 43-3674
Proceedings Climate change impacts in the Canadian Arctic (1986, 171p., eng) 43-2582
Water escape fissures resembling ice-wedge casts in late Quaternary subaqueous outwash near St Lazare, Quebec, Canada (1988, p.33-40, eng) 43-3702

Frere, D.
Measurement of ice forces on small vessels, Vol.1, technical report; Vol 2: appendices (1988, 51p. + appends., eng) 43-1697

Freundorfer, A.
Final report on continued development of an ice thickness radar system (1986, var. p., eng) 43-4159

Fridman, Sh.D.
Errors in airborne snow surveying due to the global soil pollution with Cs-137 (1987, p.82-85, rus) 43-1050
Estimating the possibility of measuring water reserves from the ionizing component of cosmic radiation (1987, p.79-82, rus) 43-1049
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Plant colonization of a volcanic island, Surtsey, Iceland (1987, p 425-431, eng) 43-191
Restoration and vegetation succession in circumpolar lands: the conference (1987, p.343-344, eng) 43-183

Friedberg, R.
Winterdrilling in the Barents Sea (1988, p 367-391, eng) 43-634

Friedheim, R.L.
Regime of the Arctic—distributional or integrative bargaining (1988, p 493-510, eng) 43-4503

Friedrich, H.
Greenland Sea convection in the winter of 1987-1988 (1989, p.3223-3227, eng) 43-2395

Fries, M.
Inspection of the Tanana River pipeline bridge (1983, p.362-374, eng) 43-3419

Friplat, J.
Microdynamic behavior of water in clay gels below the freezing point (1984, p.279-286, eng) 43-1832

Frish, M.
Helicopter-borne laser ignition of oil spills (1988, p.137-143, eng) 43-3649
Laser ignition of oil spills: telescope assembly and testing (1988, 23p., eng) 43-3246

Frish, M.B.
Laser ignition of Arctic oil spills (1987, p.355-365, eng) 43-3242
Laser ignition of oil spills. Phase 1: concept development. Final report (1985, 89p. + appends, eng) 43-3243

Fritzsche, C.
CMA in winter maintenance: Massachusetts confronts environmental issues (1989, p.78-79, eng) 43-4082

Frolich, R.M.
Flow of Rutford Ice Stream and comparison with Carlson Inlet, Antarctica (1989, p.51-56, eng) 43-3334
Relative importance of lateral and vertical shear on Rutford Ice Stream, Antarctica (1988, p.19-22, eng) 43-1938

Frolov, I.E.
Experience in real-time forecasting of the relief, level and drift of ice in Arctic seas with a 6-8 day lead (1988, p.41-45, rus) 43-802
Results of testing a numerical method of long-range forecasting of ice phenomena in the Barents and Kara seas during cold seasons (1988, p.32-40, rus) 43-801

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Frozen soil pulls water up from below (1989, p 14-15, eng) 43-3288

Frund, D.
Assemble the frost indicator (1988, p.35-40, eng) 43-2489

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Microalgae at the ice edge in the northern Weddell Sea (1988, p.166-168, eng) 43-1636

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Replacing subgrade soil by sand and gravel to prevent frost heave in canals (1988, p 400-408, chi) 43-2854

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Fire hydrant winter maintenance program for Anchorage (1989, p 179-187, eng) 43-2101

Fuglem, M.
Iceberg-structure interaction: force, energy and probability (1988, p.324-340, eng) 43-2933

Fujii, S.
Vertical structures of the atmospheric electrical potential gradient and the behavior of the precipitation charges during snowfalls near the ground surface (1988, p 473-488, eng) 43-1171

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Effect of an air layer on the thermal insulation of clothing materials (1989, p.251-256, eng) 43-4219

Fujita, M.
Measurement of thermal ice thrust exerted by expanding ice cover in Taisetsu dam reservoir in Hokkaido, Japan (1988, p 473-482, eng) 43-2946

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Ice model basin at Nagasaki Research and Development Center (1988, p 44-49, eng) 43-971

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Seasonal variations of physical and chemical conditions of Lake Saroma (1988, p 400-409, eng) 43-3012

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Changes in ultrastructure and phospholipid content of summer pine needles at freezing (1989, p.238-244, rus) 43-4158

Fukuda, A.
Dislocations in natural ice crystals (1988, p.13-25, eng) 43-1414
Generation, multiplication and motion of dislocations in ice crystals (1988, p.69-96, eng) 43-1417

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Experimental study on prevention of differential frost heave by using GEOGRID (1989, p 633-643, eng) 43-3134
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Site investigation on frost damages of roads at highland (1989, p 655-663, eng) 43-3136

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Pipe fracture by freezing in curved water pipes (3rd report, freezing behavior of 45-degree curved and straight pipes) (1988, p.984-992, jpn) 43-4485
Study on keeping of underground fire cistern from freezing (1989, p.303-308, eng) 43-4227

Fukue, M.
Mechanical and physical properties of snow (1987, p.11-32, eng) 43-1287
Snow properties in actual field conditions and stability analysis (1987, p.111-136, eng) 43-1293

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Correlation of tephra layers in antarctic ice by trace element abundances and refractive indices of glass shards (1987, p.103-118, eng) 43-3409

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De-icing heat-transfer characteristics along a circular cylinder immersed in a cold airstream with seawater spray (1989, p.120-128, eng) 43-4209
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Experimental study of ice crystal growth below water saturation in the University of Utah supercooled cloud tunnel (1987, p. 47-264, eng) 43-826
Supercooled cloud tunnel studies on the growth of snow crystals between -4 and -20 C (1988, p 841-855, eng) 43-2356

Fulton, R.E.
Advances in nonlinear analysis methods for ocean structures using parallel computers (1989, p.908-917, eng) 43-3788

Funder, S.
Palynology in a polar desert, eastern North Greenland (1988, p.195-207, eng) 43-1034

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Fertilizing effects of artificial sulfuric-acid mists on *Bistorta vivipara* plants in alpine tundra (1989, p.169-174, eng) 43-4091

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Model computation of moisture content in polythermal glaciers (1988, p.12,205-12,214, eng) 43-1068

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Influence of ice layers on the travel time of meltwater flow through a snowpack (1988, p 265-272, eng) 43-288

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Field investigation of heaving pressure and frost heaving (1989, p.491-502, eng) 43-3122

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Characteristics of basal till and the discovery of tephra layers in the West Kunlun Mountains (1989, p.177-186, eng) 43-3458
Preliminary study on water quality of lakes and rivers on the Xizang (Tibet) Plateau (1989, p.129-137, eng) 43-3452

Futterer, D.K.
Quaternary sediment patterns in the Weddell Sea: relations and environmental conditions (1988, p.551-561, eng) 43-1787

Fylling, I.J.
Floating production systems for Arctic areas—impact of icebergs on structural- and mooring system design (1988, p.523-538, eng) 43-645

Gabert, P.
Study on cryogenic creep processes at various sites of the upper Ubaye River in the southern Alps (1988, p.9-28, fre) 43-2293

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Snow loads in mountainous terrain (1989, p.8-14, eng) 43-3546

Gabrielian, G.K.
Physical geography of Transcaucasia (1986, 309p, rus) 43-3068

Gaft, S.IA.
Ways of decreasing construction terms and man-hours for electrical substations (1988, p.43-44, rus) 43-562

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Quebec City—a snow city (1988, p.50-51, eng) 43-502

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Recent approaches in the modeling of ship 'cing (1988, p 458-476, eng) 43-3017

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Pressure dependence of the elastic constants of ice Ih to 2.8 kbar by Brillouin spectroscopy (1988, p.4522-5428, eng) 43-1030

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Laboratory device for studying the effectiveness of coolant nucleants (1988, p.105-113, rus) 43-2719

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Mathematical model for freeze-thaw durability of concrete (1988, p.776-783, eng) 43-967

Galser, P.W.
Millimeter-wave backscatter measurements of various snow forms (1988, p.451-452, eng) 43-1528

Galaktionov, B.V.
Location of permafrost layers in the geological section of the West Siberian platform (1988, p.73-79, rus) 43-2412
Location of the permafrost base in the geological profile of the West-Siberian platform (1988, p.174-177, rus) 43-1906
Position of permafrost rock series in geological cross section of the Western Siberian Plate (1989, p.63-68, eng) 43-4467

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Modeling wind effects on drifting (1989, p.178-187, eng) 43-3563

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Thermal cross section for the permafrost and hydrate stability zones in the Kuparuk and Prudhoe Bay oil fields (1988, p 48-51, eng) 43-511

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Factors affecting fast-ice consolidation in southeastern Hudson Bay, Canada (1989, p.367-375, eng) 43-4562

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Design of grounding devices for the 110-220 kV substations in the Far North, in the presence of natural grounding (1988, p.13-15, rus) 43-695

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Forecasting and control of the thermal regime in mine shafts (1987, 67p., rus) 43-2284

Gallagher, C.J.
Acoustic propagation across the East Greenland marginal ice zone using the icecap model (1989, 82p., eng) 43-3366

Gallimore, R.G.
Pangaean climates: megamonsoons of the megacontinent (1989, p.3341-3357, eng) 43-2397

Galloway, J.P.
Bibliography of selected geologic and engineering-geologic literature of northern Alaska (Arctic Coastal Plain and Northern Foothills) (1988, 34p., eng) 43-1866
Geologic studies in Alaska by the U.S. Geological Survey during 1987 (1988, 215p., eng) 43-509
Late Cenozoic history of the interior basins of Alaska and the Yukon. Proceedings of a cooperative workshop between earth scientists from Canada and the United States of America (1989, 114p., eng) 43-4478

Gamalunov, N.I.
Calculating moisture transfer in frozen peat (1987, p.17-19, rus) 43-1022
Phase composition of moisture in frozen peat (1988, p.29-34, rus) 43-692

Gamaleia, A.V.
Frost shattering on the Yamal Peninsula in the Lake Tyurin-To region (1987, p.212-221, rus) 43-3385

Gamble, S.L.
Predicting snow loading on the Toronto Skydome (1989, p.118-127, eng) 43-3558

Gammelsröd, T.
Notes on southern ocean hydrography, sea-ice and bottom water formation (1988, p.3-17, eng) 43-1094

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Iceberg cutting with a hot wire (1988, p.261-278, eng) 43-1347

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Airborne CO2 measurements in the Arctic during spring 1983 (1985, p.2195-2201, eng) 43-1003

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Effect of the structure of asphaltic polymer-impregnated concrete on its frost resistance and water impermeability (1988, p 652-655, eng) 43-3831

Gancy, A.B.
Process of making calcium acetate deicing agents (1984, 10 col., eng) 43-1070

Gandahl, R.
Polystyrene foam as a frost protection measure on national roads in Sweden (1987, p.1-9, eng) 43-1386

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Investigation of frost heave of soils and its affect on pile foundations (1989, p 503-510, eng) 43-3123

Ganova, S.D.
Moisture migration characteristics in frozen, finely dispersed soils under osmotic pressure (1987, p.150-157, rus) 43-3380

Gao, P.S.
Numerical model of ice regime analysis in a canal (1988, p.261-270, eng) 43-2999

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Field observations of water migration in unsaturated freezing soils with different ground water tables (1988, p.59-64, eng) 43-61

Gao, Y.Z.
Probable avenue to the effect of polar ice on the North Pacific subtropical high (1987, p.190-195, eng) 43-3830

Garagulia, L.S.
Applications of mathematical methods in geocryology (1987, 167p., rus) 43-2410
Technique for a forecast estimate of anthropogenic changes in cryogenic conditions (as in the example of lowland territories) (1985, 224p., rus) 43-3073

Garbusov, E.M.
On modelling of ship motion in level ice (1987, 6p. + appends., eng) 43-720

Garcon, V.C.
Heat, carbon and water fluxes in a 12 box model of the world ocean (1988, p.161-177, eng) 43-2243

Gardner, C.L.
Estimating south slope irradiance in the Arctic—a comparison of experimental and modeled values (1988, p.227-240, eng) 43-1072

Gardner, G.
Marine geology (1988, p 11-27, eng) 43-2427

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Avalanche occurrence as revealed by time lapse photography Kanaskis Country, Alberta (1987, p.33-58, eng) 43-1288
Hilda Rock Glacier stream discharge and sediment load characteristics, Sunwapta Pass area, Canadian Rocky Mountains (1987, p.161-174, eng) 43-3053

Gardner, N.J.
Strength development and durability of concretes cast and cured at 0 C (1988, p 529-536, eng) 43-2039

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High-pressure Raman spectroscopic study of the ice Ih-ice IX phase transition (1988, p.467-480, eng) 43-2240

Garland, T.R.
Drilling fluids and the arctic tundra of Alaska: assessing contamination of wetlands habitat and the toxicity to aquatic invertebrates and fish (1988, p.683-697, eng) 43-19

Garmusov, E.M.
Ice model basin of the Gorky Polytechnic Institute (1982, 5p., eng) 43-3856

Garr, D.A.
Snowpack modelling using daily climatological data (1988, p 176-180, eng) 43-4127

Garrison, D.L.
Microheterotrophs in the ice edge zone: an AMERIEZ study (1988, p.169-171, eng) 43-1637

Garrity, C.
Shipborne passive microwave sea ice experiment in the East Greenland Sea May-July 1987 (1988, p.1691-1692, eng) 43-1897

Garstka, W.U.
Factors affecting snowmelt and streamflow (1987, p.253, eng) 43-585

Gasbarro, T.
Proceedings of the Alaska Forest Soil Productivity Workshop, 1987 (1988, 120p., eng) 43-1142

Gascard, J.C.
Polar Floats Program (1989, p.186-194, eng) 43-3514

Gates, W.C.B.
Protection of ground-water monitoring wells against frost heave (1989, p.241-251, eng) 43-4340

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Ice conditions along the Allegheny and Monongahela Rivers as observed on Landsat images, 1972-1985 (1988, 106p., eng) 43-421

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Mineralogy of insoluble particles in the Vostok antarctic ice core over the last climatic cycle (150 kyr) (1988, p.1471-1474, eng) 43-1483

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Laser ignition of oil spills. telescope assembly and testing (1988, 23p., eng) 43-3246
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Avalanches in Yakutia (1987, p.422-425, rus) 43-2552
Gavril'ev, P.P.
Land-reclamation research on design for the construction of improvements on permafrost (Guide for Dept. of Construction Standard 33-2.1.02-85 "Soil research for meliorative construction") (1988, 128p., rus) 43-1438
Gavrilo, V.P.
Internal friction characteristics of sea ice (1983, 8p., eng) 43-3171
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Development of A.I. Voeikov's ideas in geocryology (1987, p.229-234, rus) 43-257
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Predicting the mud shear process (1988, p.35-39, rus) 43-2419
Geasa, W.R.
Development Test II (DT II) (PQG) of snow and ice traversing equipment (SITE). Final report (1988, 65p. + appends., eng) 43-1977
Gedzelman, S.D.
Megalopolitan snowstorm of 11-12 Februar, 1983: isotopic composition of the snow (1989, p.1637-1649, eng) 43-4417
Geile, W.
Snow cover to alter terrain signatures on radar images (1988, p.455-457, eng) 43-1510
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Formalizing experts' experience in avalanche forecasting (1988, p.171-176, rus) 43-958
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Model of infiltration in frozen soil accounting for water quality (1988, p.263-271, fre) 43-294
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Looking at the Earth from space (1988, p.95-102, eng) 43-1502
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Structure and stability of the former subglacial drainage system of the Glacier de Tsanfleuron, Switzerland (1989, p.119-134, eng) 43-3085
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Some replica possibilities for electron-microscope investigations of ice crystal morphology (1988, p.1431-1436, eng) 43-2309
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Forecasting avalanche risk (1989, p.12-15, fre) 43-3603
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Microwave determination of liquid water content in snow cover (1987, p.139-148, eng) 43-1226
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Patterned ground formation and penetrative convection in porous media (1989, p.135-158, eng) 43-4423
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Snow surveys (1987, p.209-210, eng) 43-404
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Ice jam characteristics, Liard-Mackenzie rivers confluence: discussion and reply (1988, p.275-278, eng) 43-300
Ice jams and breakup problems, progress and prospects (1988, p.26-46, eng) 43-3022
Ice jams at a lake: the situation at Hay River, Northwest Territories, Canada (1988, p.157-167, eng) 43-3029
Ice regime reconnaissance, Yukon River, Yukon (1984, p.1059-1073, eng) 43-670
Probability analysis of historical ice jam flood data for a complex reach: a case study (1988, p.115-137, eng) 43-2168
Some thoughts on break-up and ice jams (1988, p.225-239, eng) 43-2174
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Current Army environmental operational support (1986, p.241-247, eng) 43-4638
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Method for rating unsurfaced roads (1989, p.103-106, eng) 43-3484
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Current status and prospects for work on preventive triggering of avalanches along railroads of the USSR (1987, p.337-339, rus) 43-2538
Current status of research on engineering protection from avalanches (1987, p.283-294, rus) 43-2531
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Effect of snow parameter variations on the thermal microwave emission of the soil-snow-air system (1988, p.84-89, rus) 43-817
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Algorithm for snow and ice detection using AVHRR data an extension to the APOLLO software package (1989, p.897-905, eng) 43-4104
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Isotopic modeling of climate oscillations: implications for a comparative study of marine and ice core records (1988, p.9365-9383, eng) 43-284
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Geologic engineering aspects of rock glaciers (1987, p.265-287, eng) 43-3057
Rock glacier bibliography (1987, p.305-344, eng) 43-3059
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Rock glaciers: a review of the knowledge base (1987, p.1-26, eng) 43-3042
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Navier-Stokes solution to the flowfield over ice accretion shapes (1988, p.710-716, eng) 43-1124
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Discriminating features of naleds of the northern Central Siberian plateau on satellite photographs (1987, p.152-161, rus) 43-3663
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Effects of end conditions on the strength and fracture of ice under compression (1988, p.99-108, eng) 43-2913
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Roof load predictions using artificial snow (1987, p.150-153, eng) 43-3939
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Aliphatic and polycylic aromatic hydrocarbons in urban rain, snow and fog (1988, p.695-705, eng) 43-1071
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Beaufort Sea cased gloryhole drilling (1989, p.451-458, eng) 43-2657
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Occurrence and potential significance of warm weather during winter in the eastern Canadian Arctic (1988, p.395-403, eng) 43-2480
Gilichinskii, D.A.
All-Union conference "Soil cryogenesis theory," 5th, Pushchino, Feb. 6-10, 1989. Abstracts (1989, 114p., rus) 43-3976
Gill, J.D.
Foundation stabilization of an on-grade structure (1984, p.1091-1099, eng) 43-672
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Methods of addressing vessel performance in snow-covered fast ice and pack ice (1988, p.21-36, eng) 43-4167
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Beaufort Sea artificial island erosion data (1988, 30p. + appends., eng) 43-1818
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Proceedings (1988, 381p., eng) 43-1747
Gillieson, D.
On the thermal stratification of freshwater lakes in the Snowy Mountains, Australia, and the Larsemann Hills, Antarctica (1988, p.147-119, eng) 43-4043
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New construction material for offshore application (1988, p.35-46, eng) 43-153
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Effects of natural convection on ice formation around an isothermally cooled horizontal cylinder (1988, p.931-937, eng) 43-3088
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Analysis of snow ground truth data (1986, p.301-310, eng) 43-4643
Bidirectional reflectance of snow surfaces in the thermal infrared (1986, p.329-342, eng) 43-4647
Ginzburg, A.I.
Transversal jets detected on satellite images in marginal ice zones (1988, p.3-10, rus) 43-588
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Choosing between some incompatible regional surface-mass-balance data sets in Antarctica (1989, p.7-13, eng) 43-3614
Giraud, G.
Skill evaluation of avalanche risk forecasting (1987, p.583-591, fre) 43-1264
Statistical model for local avalanche forecasting (1987, p.571-580, fre) 43-1262
Giry, E.
Counter-avalanche rack in France (1988, p.13-24, fre) 43-3206
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Science and politics in polar areas (1988, p.87-94, eng) 43-2900
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Excess and deficit of sulfate in polar snow (1989, p.155-160, eng) 43-2082
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Building technology in an Arctic climate—a preliminary report from the building of a Swedish research station on the Antarctic in 1988-89 (1989, p.983-990, eng) 43-3795
Glacier mass balance and oscillations in the USSR for 1958-1985. Observational data
Glacier mass balance and oscillations in the USSR for 1958-1985. Observational data (1988, p.224-240, rus) 43-966
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Capacity of ice-covered canals (1987, p.539-542, eng) 43-137
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Determination of the ice load on piles of fixed offshore structures (1989, p.518-526, eng) 43-3753
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Effects of caterpillar-tracked transportation on permafrost thawing (1988, p.36-48, rus) 43-1538
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Studies of mutual effect of thermosyphons on soil freezing rate (1988, p.29-39, rus) 43-1597
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Unusual ice crystals in central Antarctica (1988, p.97-101, rus) 43-1766
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Glacier dynamics on the northern slope of the Terskey Ala-Tau Range from lichenometric data (1988, p.113-119, rus) 43-946
Mechanical ablation of glaciers (1988, p.27-34, rus) 43-3300
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Calculating the volume of composite glaciers according to their surface area (1988, p.91-96, rus) 43-2685
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From plotting background surfaces to estimating the accuracy of glaciological maps (1988, p.145-152, rus) 43-3272
Subtropical Tibetan ice sheet (the last glaciation of the Central Asian highland) (1988, p.95-106, rus) 43-4229
Glen, J.F.
MV *Arctic* structural performance Final report (1985, var p., eng) 43-3365
R-class icebreaker testing requirements (1988, 29p. + appends., eng) 43-775
Glen, J.W.
Fish antifreeze proteins and the creep of polycrystalline ice (1988, p.291-292, eng) 43-1983
Glllott, S.
Avalanche accidents outside the Swiss Alps (1988, p.137, ger) 43-3241
Snow and avalanche conditions in the Swiss Alps (1988, p.43-104, ger) 43-3239

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Variations in Arctic, Antarctic, and global sea ice covers during 1978-1987 as observed with Nimbus 7 scanning multichannel microwave riometer (1988, p.10,666-10,674, eng) 43-507

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Snow accumulation and ablation on adjacent forested and clearcut sites in southeastern British Columbia (1986, p 101-111, eng) 43-3909
Translating snow hydrology research results into guidelines for forest managers: gaps between theory and practice (1988, p.13-22, eng) 43-3992

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Airborne gamma ray snow survey of a forest covered area with a deep snowpack (1988, p.149-160, eng) 43-1829
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Cross-polar radar measurements in ice and rain (1988, p.235-236, eng) 43-1510

Godon, A.M.
Segmented model technology for ice resistance determination (1988, p.113-124, eng) 43-616

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Digitized Green Function code for scattering by irregular inhomogeneous particles (1986, p.93-100, eng) 43-4629
Millimeter wave scattering by snow crystals and equivalent solids of revolution (1986, p.77-91, eng) 43-4628
Propagation of polarized millimeter waves through falling snow (1988, p 2445-2450, eng) 43-975
Scattering by irregular inhomogeneous particles via the digitized Green's function algorithm (1988, p 2431-2438, eng) 43-973
Scattering of millimeter waves by snow crystals and equivalent homogeneous symmetric particles (1988, p.2439-2444, eng) 43-974

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Advances in nonlinear analysis methods for ocean structures using parallel computers (1989, p.908-917, eng) 43-3788

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Radar backscatter from sea ice (1986, p.107-114, eng) 43-1479

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Heat-engineering calculation of permafrost bases of buildings and structures with the use of the corner point method (1988, p.158-161, eng) 43-3664
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Historical land clearing in the Fraser Lowland of British Columbia and Washington State: 1. Effects on soil genesis (1988, p 467-473, eng) 43-126
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Standardized models and their role in increased effectiveness in engineering and geocryological research (1988, p.3-13, rus) 43-1596

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Effects of water speed and temperature on icing in thermal siphons (1988, p 629-634, eng) 43-2001

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Excavating a pit in frozen ground by detonating slit charges (1989, p.32-33, rus) 43-3527

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Investigating variations in the gravitational constant (1989, p.55-58, eng) 43-2219

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Modeling attic humidity as a function of weather, building construction, and ventilation rates (1988, 160p., eng) 43-1921

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Global sea-level changes during the past century (1987, p.3-16, eng) 43-3392

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Air cushion platforms needed (1987, p.20, rus) 43-698

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Measurements of permafrost temperatures to evaluate the consequences of recent climate warming: Final report (1987, 21p, eng) 43-1729

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Stormflow responses to forest treatments on two Arizona mixed conifer watersheds (1987, p.189-194, eng) 43-582

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Uniaxial tension/compression tests on ice—preliminary results (1989, p.37-41, eng) 43-2607

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Thermalization distances and times for subexcitation electrons in solid water (1988, p 6871-6874, eng) 43-2847

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Giant V-plow makes windrowing easier (1988, p.74-75, eng) 43-505

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Tandem-accelerator mass-spectrometry measurements of Cl-36, I-129 and osmium isotopes in diverse natural samples (1987, p.103-119, eng) 43-773

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Emerging meteorite: crystalline structure of the enclosing ice (1989, p 87-91, eng) 43-3079
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Reflectance spectra of subarctic lichens (1988, p.481-492, eng) 43-456

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Behaviour of steel at low temperatures: state of the art (1988, p.733-748, eng) 43-658

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Pleistocene epigenetic and syngenetic frost fissures, Belchatów, Poland (1988, p.2017-2027, eng) 43-3674

Gradie, J.C.
Analysis of Voyager images of Europa: plasma bombardment (1988, p.423-436, eng) 43-2323

Gradinger, R.
Picocyanobacteria in the high Arctic (1989, p.99-101, eng) 43-4254

Graf, W.
Accumulation and ice-core studies on Filchner-Ronne Ice Shelf, Antarctica (1988, p.23-31, eng) 43-1939

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Evaluation of ice pressure and strain sensors in a large test basin (1986, p 213-225, eng) 43-270
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Experience gained operating snow pillows on a near real-time basis in the mountainous areas of Alberta (1987, p.193-206, eng) 43-1296

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Effects of temperature and species on TNT injury to plants (1988, 7p., eng) 43-1149
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Influence of a river plume on the sea-ice meiofauna in southeastern Hudson Bay (1988, p.131-141, eng) 43-1487

Grakovich, V.F.
Standardized codes regulating construction and development in avalanche hazard regions (1987, p.343-352, rus) 43-2540

Gram, K.G.
Strength and deformation of spray ice (1989, p.681-693, eng) 43-3768

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Experimental study on breaking ice cover (1984, 14p, eng) 43-3855
Modelling the resistance of ice to ship motion (1984, 8p, eng) 43-1836

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Observations on floating snowpacks, lakes, rivers and the sea (1987, p.313-346, eng) 43-1302

Grandvaux, B.
Saga 1, a first step towards autonomous intervention submarines (1989, 21p, fre) 43-4023

Granlund, D.
Tracks for increased mobility under winter conditions (1985, p.249-255, swe) 43-377

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Prediction of octanol-water partition coefficients of organophosphonates: Evaluation of structure-function relationships (1988, 24p., eng) 43-1338

Grasty, R.L.
Airborne gamma ray snow survey of a forest covered area with a deep snowpack (1988, p.149-160, eng) 43-1829

Grave, N.A.
Problems in monitoring the cryolithozone (1987, p.103-106, rus) 43-4231

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Map showing Beaufort Sea coastal erosion, sediment flux, shoreline evolution, and the erosional shelf profile (1988, 22p. + map, eng) 43-103

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Structure and origin of perennially frozen deposits in marginal parts of the aggradation plains of northern Yakutia (1986, p.79-85, rus) 43-111

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Soil temperature and electric potential during diurnal and seasonal freeze-thaw (1989, p.37-43, eng) 43-1577
Two electric potential signatures of serial diurnal frost (1988, p.354-360, eng) 43-2827

Gray, D.M.
Energy-budget snowmelt model for the Canadian Prairies (1988, p.1292-1303, eng) 43-1316

Grazzini, G.
Experimental thermal diffusivities/conductivities of frozen media through Stefan Problem simulation (1988, p 229-235, eng) 43-1472

Grebenets, V.I.
Change in the thermal condition of soils in cryolithozone towns (1989, p.73-76, rus) 43-4612

Grechanyi, O.A.
Numerical model of transient processes of concurrent filtration of air and moisture in soil (1987, p.41-45, rus) 43-2269

Grechishchev, S.E.
Forecasting changes in geological media caused by technical operations (1988, p.84-102, rus) 43-736

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Information systems planning study (1987, 48p., eng) 43-4591
Utilization of Unmanned Aerial Vehicles in the ALBE Thrust (1986, p.249-257, eng) 43-4639

Greeley, R.
NASA Mars Project: evolution of climate and atmosphere (1988, p.1585, 1595-1596, eng) 43-1052

Green, A.H.
Millimeter wave snow data collection program description. Snowman I (1986, p.273-290, eng) 43-4641

Green, A.H., Jr.
Radar backscatter characteristics of snow covered terrain at 94 gigahertz (1984, p.115-119, eng) 43-3478

Greenan, H.
WMO solid precipitation measurement intercomparison at Sleepers River Research Watershed (1987, p.1-7, eng) 43-384

Greene, G.E.
On the feasibility and value of detecting and characterizing avalanches remotely by monitoring radiated sub-audible atmospheric sound at long distances (1989, p.267-275, eng) 43-3571

Greene, G.M.
Nearshore Great Lakes ice statistics (1988, 42p., eng) 43-1973

Greenwalt, R.N.
Probability distributions of rain on snow for northcentral Oregon (1985, p.37-43, eng) 43-4266
Rain on snow: shallow, transient snowpacks with frozen soils (1983, p.67-75, eng) 43-4354

Gregersen, O.
Performance monitoring of onshore structures at Svalbard (1988, p.329-342, eng) 43-632

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Evidence of atmospheric transport and deposition of organochlorine pesticides and polychlorinated biphenyls in Canadian arctic snow (1989, p.561-565, eng) 43-4498

Gregory, J.B.
Technology assessment and research program for offshore minerals operations. 1988 report (1988, 177p, eng) 43-3642

Greneker, E.F., III
Meteorological and snowpack conditions that affect the radar reflectivity of snow at two millimeter wave frequencies (1989, p.123-132, eng) 43-3882

Grenfell, T.C.
Multifrequency passive microwave observation of saline ice grown in a tank (1988, p.1687-1690, eng) 43-1896
Optical properties of antarctic snow (1988, p.247-248, eng) 43-1644

Greshnikova, L.E.
Albedo of underlying surfaces of the USSR (1988, p 69-81, rus) 43-1776

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Energy balance calculations on and near Hintereisferner (Austria) and an estimate of the effect of greenhouse warming on ablation (1989, p 305-323, eng) 43-3191
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Water temperature field in the polar hydrological zone of the Greenland Sea in summer 1980 (1986, p 68-81, rus) 43-1885

Gribbin, J.
Ice captures methane in bubbles of ancient air (1989, p.38, eng) 43-3285

Grieve, R.
Deterioration of concrete water tanks in cold climates (1989, p.51-54, eng) 43-3958

Griffith, T.W.
Climatic control of sedimentation in bays and fjords of the northern Antarctic Peninsula (1989, p.181-204, eng) 43-2274

Griffiths, F.
The Arctic as an international political region (1988, p 1-14, eng) 43-3289

Griffiths, H.D.
Swath altimetry of oceans and terrain (1987, p 319-322, eng) 43-1793

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Drift of *Mikhail Somov* in the Balleny ice pack (1988, p.110-121, rus) 43-3844
Fast ice conditions during unloading of expedition ships at Druzhnaya base and Molodezhnaya and Novolazarevskaya stations (1988, p.93-98, rus) 43-3841
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Ice navigation conditions for expedition ships in antarctic waters in the summer season of 1976-1977 (1988, p.83-93, rus) 43-3840
Unloading of the *Mikhail Somov* near Mirnyy Station in the absence of shore ice (1988, p 98-102, rus) 43-3842

Grigor'ev, M.N.
Role of cryomorphogenesis in topographic evolution of the Lena River estuary in Holocene (1988, p.22-28, rus) 43-521

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Solifluction effluents at the Yamal Peninsula (1988, p.43-46, rus) 43-524

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Compaction of a layer of loose soil by artificial thawing (1989, p.19-20, rus) 43-4464

Grigorian, S.
Some mathematical models for permafrost (1989, p 429-439, eng) 43-4601

Grimsted, L.A.
Graphics system for SNOTEL data (1987, p 154-157, eng) 43-3940

Grinberg, A.M.
Albedo of characteristic surfaces of Mongolia according to land and satellite survey data (1988, p.101-109, rus) 43-110

Grinshtein, IA.D.
Set of applied programs for spectral analysis of geocryological time series (1988, p.58-65, rus) 43-1601

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Morphological and structural peculiarities of the SP-22 drifting ice island (1989, p.77-86, eng) 43-2050
Morphometric characteristics of ice pressure ridges in the Arctic Basin (1988, p.46-55, rus) 43-803
Peculiarities of sea ice desalination in winter (1988, p.55-64, rus) 43-804

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Avalanche hazard forecasting in the Ukrainian Carpathians (1987, p.107-110, rus) 43-2507
Forecasting snowstorm avalanches in the USSR (1987, p.46-57, rus) 43-2498
Maximum snow accumulations in the Transcarpathian Oblast' (1988, p.63-70, rus) 43-1773

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Quaternary sediment patterns in the Weddell Sea: relations and environmental conditions (1988, p.551-561, eng) 43-1787
Simple method for the determination of ice-rafted debris in sediment cores (1987, p.123-126, eng) 43-405

Gromyko, A.N.
Structure of the Davydov glacier from data of radar echo sounding and thermal drilling (1988, p.208-215, rus) 43-964

Grönvall, H.
Finnish Ice Service (1988, p.95-110, eng) 43-1972

Grootes, P.M.
Isotopic alteration of firn cores (1987, p.79-80, eng) 43-2744
Oxygen isotope studies and compilation of isotopic dates from Antarctica (1988, p.122, eng) 43-1630

Grosfeld, K.
Ekström Ice Shelf, Antarctica (1988, p.180-183, eng) 43-1963

Gross, G.
Areal losses of glaciers in Austria 1850-1920-1969 (1987, p.131-141, ger) 43-1679

Gross, G.W.
Layered-capacitor method for bridge measurements of conductive dielectrics 2. New algorithm for inversion and parameter fitting (1988, p.387-396, eng) 43-1314

Gross, S.M.
Ice-core drilling for paleoclimatic information at plateau remote (1987, p.78-79, eng) 43-2743

Grosval'd, M.G.
"Submerged shorelines" on glaciated continental shelves, solving the puzzle? (1989, p.113-121, eng) 43-2229
Antarctic-style ice sheet in the Northern Hemisphere: toward a new global glacial theory (1988, p.239-267, eng) 43-4069
Antarctic-type ice sheets in the Northern Hemisphere (on the way to a global glacial theory) (1988, p.3-25, rus) 43-3299
Subtropical Tibetan ice sheet (the last glaciation of the Central Asian highland) (1988, p.95-106, rus) 43-4229

Ground water: Alaska's Hidden Resource, Fairbanks, Alaska, Mar. 16-17, 1989
Proceedings (1989, 199p., eng) 43-3665

Grout, B.W.W.
Effects of low temperatures on biological systems (1987, 500p., eng) 43-3979
Freezing and cellular organization (1987, p.147-173, eng) 43-3981
Higher plants at freezing temperatures (1987, p.293-314, eng) 43-3983

Grudnitskii, G.V.
Experience in and problems of marine pipeline construction (1988, p.33-36, rus) 43-567

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Comparative life history characteristics of two high Arctic grasses, Northwest Territories (1988, p.484-496, eng) 43-3672
Revegetation in the High Arctic: its role in reclamation of surface disturbance (1988, p.43-55, eng) 43-2307

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System for the digital processing of airphotos and satellite images: automated classification and mapping of hydrological objects and phenomena (1986, p.29-35, eng) 43-1206

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Quaternary sediment patterns in the Weddell Sea: relations and environmental conditions (1988, p.551-561, eng) 43-1787

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Investigation of the frictional connection on roads in winter, taking into account the care of roads (1985, 116p., ger) 43-1054

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Ice jams and floods on the Lower Vistula River (1986, p.51-67, eng) 43-2800

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Coupled heat transfer of a two-phase closed thermosyphon with solidification (1989, p.183-188, eng) 43-4214

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Radar observation on the sort of sea ice (1989, p.1084-1095, eng) 43-3805

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Relaxation bases for evaluating the thermo-stressed condition of road asphalt at low temperatures (1989, p.101-105, rus) 43-3859

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Avalanche formation, movement and effects (1987, 686p., eng) 43-1214
Measurements and modelling of snow avalanche speeds (1987, p.405-420, eng) 43-1249
Swiss improvements of the FMCW radar for snow measurements (1984, p.24-32, eng) 43-4312

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Aliphatic hydrocarbons and isomers of hexachlorocyclohexane in specimens of water, ice and snow from the Greenland Sea (1988, p.566-568, eng) 43-3944

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Results of testing a numerical method of long-range forecasting of ice phenomena in the Barents and Kara seas during cold seasons (1988, p.32-40, rus) 43-801
Wind effect on ice compressions in the arctic seas (1988, 10p., eng) 43-4439

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Time-dependent bond regain in driven piles in permafrost (1986, p.2.164-2.169, eng) 43-1485

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Studying the stable and unstable growth of crystals in a mathematical model of heat transfer in two-phase media (1988, p.25-27, rus) 43-557

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Use of data logging systems in snow hydrology (1984, p.120-131, eng) 43-4322

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Patterned ground formation and penetrative convection in porous media (1989, p.135-158, eng) 43-4423

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Effects of permafrost on groundwater in Huola Basin, northern Daxinganling Ridge (1988, p.143-150, chi) 43-2849

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Summary of India's geophysical programme in Antarctica (1989, p.153-170, eng) 43-2662

Guretskii, V.V.
Numerical modelling of the southern ocean ice cover (1987, 39p., rus) 43-1097

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Processing of results of pile tests in permafrost (1987, p.105-107, eng) 43-213

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Methods for sea ice indentation tests (1988, p.143-147, eng) 43-4179
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Reconstruction of the Tuyuksu glacier mass balance for the last century (1988, p.51-58, rus) 43-936

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Structural studies on an ice core from the Dzhantugan firn plateau in the Central Caucasus (1988, p.25-33, rus) 43-3251

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Evolution of a surprise snowfall in the United States Midwest (1987, p.2322-2345, eng) 43-1560

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Cryo-oscillations. Belousov-Zhabotinskii (BZ) oscillations in frozen and undercooled solution (1988, p.661-665, eng) 43-831

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Mass balance measurements on Norwegian glaciers in 1985, 1986, and 1987 (1988, 46p., nor) 43-1698

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Antarctica, as seen by a shipbuilder (1989, p.975-982, eng) 43-3794

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Comprehensive study of cold climate airport pavement cracking (1987, p.198-245, eng) 43-1863

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Relationship between mix characteristics and low-temperature pavement cracking (1988, p.290-319, eng) 43-1857

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Embankment design and construction in cold regions (1988, 173p., eng) 43-765
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NASA Mars Project: evolution of climate and atmosphere (1988, p.1585, 1595-1596, eng) 43-1052

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Analysis of the weather conditions leading to especially severe avalanche situations during the last 100 years (1988, p.175-186, ger) 43-606
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Hadipour, K.
Evaluation of permanent deformation and low temperature characteristics of some recycled asphalt concrete mixtures (1988, p.615-645, eng) 43-1859

Hadley, R.D.
Evaluation of marine oil transportation systems for Arctic areas (1988, p.125-146, eng) 43-617

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Fluctuations of glaciers 1980-1985 (Vol.5) (1988, 290p. + maps, eng) 43-1353
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Haefner, H.
Monitoring of seasonal snow cover on glaciers (1988, p.443-445, eng) 43-1526

Haehnle, R.J.
Design of a replacement science laboratory for McMurdo Station, Antarctica (1989, p.1-10, eng) 43-2084

Haendel, D.
Hydrology of the lakes in central Wohlthat Massif, East Antarctica: new results (1988, p.7-14, eng) 43-4513

Hagen, E.H.
Glacial geology of the Reckling Moraine on the east antarctic ice sheet (1987, p.61-63, eng) 43-2733

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Glacier mass balance investigations in the balance year 1986-87 (1988, p 205-209, eng) 43-2010
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Atmospheric icing of masts (1989, p.705-711, eng) 43-3770

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Fracture mechanics approach to various Arctic steel structures and their reliability analysis (1988, p.757-768, eng) 43-660

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Comparative study of chemical deicers (1988, p.1-11, eng) 43-2206
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Haines, J.A.
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Field measurements of the structure and strength of first-year ice ridges in the Baltic Sea (1989, p.169-174, eng) 43-2624

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Ice reconnaissance and forecasts in Storfjorden, Svalbard (1988, p.447-454, eng) 43-639

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Structural reliability analysis of a transmission tower using probabilistic finite element method (1987, p.41-51, eng) 43-1585

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Forty million years of antarctic glacial history yielded by Leg 119 of the Ocean Drilling Program (1989, p.99-106, eng) 43-2804

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Environment and resources of the southeastern Chukchi Sea. A review of scientific literature (1988, 103p., eng) 43-2426

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Late Cenozoic history of the interior basins of Alaska and the Yukon. Proceedings of a cooperative workshop between earth scientists from Canada and the United States of America (1989, 114p., eng) 43-4478

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Some dynamics studies on Urumqi Glacier No.1, Tianshan Glaciological Station, China (1989, p.70-73, eng) 43-3336
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Energies of the phases of ice at low temperature and pressure relative to ice Ih (1988, p.919-924, eng) 43-437
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Handbook of soil mechanics and foundation engineering
Handbook of soil mechanics and foundation engineering (1982, 1505p., jpn) 43-299

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Thermal and hydraulic conductivity of unsaturated frozen sands (1988, p.81-90, eng) 43-64

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Limited salt spreading on highways—effects on traffic movement and safety (1988, p.392-402, ger) 43-2187

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Navier-Stokes solution to the flowfield over ice accretion shapes (1988, p.710-716, eng) 43-1124

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Hans Pettersson Symposium, 2nd, Apr. 1987
Southern ocean—the Antarctic: present and past (1988, p.1-19, eng) 43-1093

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Field studies on stress waves in natural snow cover (1987, p.89-110, eng) 43-1292
Polar Tech' 88; Vol.1 and 2 (1988, 782p. (2 Vols), eng) 43-610

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New constitutive theory for snow based on a micromechanical approach (1987, p 87-104, eng) 43-1222

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Estimates of springtime soot and sulfur fluxes entering the Arctic troposphere: implications to source regions (1985, p.2203-2207, eng) 43-1004
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Surface of Io: a new model (1989, p.56-74, eng) 43-4334

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Greenland ice cap aeromagnetic survey 1985: magnetic measurements over the southern end of the Greenland ice cap (1987, p 86-90, eng) 43-741

Hardy BBT Ltd.
Geophysical assessment of waste drilling fluid containment sites in the Mackenzie River Valley region, NWT (1988, 30p. + appends., eng) 43-1971
Handling and disposal of waste drilling fluids from on-land dumps in the Northwest Territories and Yukon (1988, 58p., eng) 43-1703

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Beaufort Sea geophysical survey: scoping study [1985, 68p. + appends., eng] 43-282

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Meteorological and oceanographic data of the Winter-Weddell-Sea Project 1986 (ANT V/3) [1988, 115p., eng] 43-438

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Trends in snow surveying in Canada [1987, p.231-253, eng] 43-1299

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Semianalytic energy balance climate model with explicit sea ice and snow physics [1988, p.1065-1085, eng] 43-3074

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Functional improvement of autoclaved light weight concrete by inorganic surface modification [1988, p.275-288, eng] 43-4057

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Communications "black spots" [1986, p.372-375, eng] 43-2330

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Integrated remote sensing for Barents Sea ice [1988, p 495-506, eng] 43-643

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GEOSAT altimeter sea-ice mapping [1989, p.139-148, eng] 43-3509

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Henderson, D.A.
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Cloud and ice in the planetary scale circulation and in climate. Final report 1 Jan. 1977-30 Jan. 1983 [1984, 117p, eng] 43-1076

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Laboratory experiments on the dynamics of powder snow avalanches [1987, p.431-440, eng] 43-1252

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Chemical fractionation of atmospheric aerosol as a result of snow crystal formation and growth [1988, p.213-239, eng] 43-1467

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Microcomputer-based image-processing system [1988, p 249-252, eng] 43-172

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Field observation and experimental investigation on popouts as frost damage in concrete [1988, p.352-369, eng] 43-4061

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Diurnal frost-heave activity in the Sör-Rondane Mountains, Antarctica [1988, p.422-428, eng] 43-2483
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Hirayama, K.
Ice conditions of Lake Ogawara [1988, p.415-426, eng] 43-2941

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Toward the automated use of remote sensing data in operational ice forecasting [1988, p.1713-1715, eng] 43-1902

Hirschboeck, K.K.
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Hirst, J.F.
Measuring meltwater patterns around icebergs [1989, p.252-254, eng] 43-4550

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Current advance of Franz Josef and Fox glaciers, New Zealand [1987, p.165-172, ger] 43-1682

Hjelmroos, M.
Coloured snow episode on the Swedish west coast, January 1987: a quantitative study of airborne particles [1988, p 235-243, eng] 43-1873

Hnatiuk, J.
Current and future petroleum activities in Canada [1988, p.55-69, eng] 43-612

Ho, C.F.
Free drift model for river ice cover formation [1988, p.140-151, eng] 43-4124

Ho, C.J.
Natural convection heat transfer of cold water within an eccentric horizontal cylindrical annulus [1988, p.894-900, eng] 43-3087

Hodek, R.J.
Inventory of education and research opportunities in the field of cold regions engineering [1986, 63p., eng] 43-2213

Hodel, K.L.
Microtextures of quartz grains from modern terrestrial and subaqueous environments, North Slope of Alaska [1988, p.24-32, eng] 43-436

Hodell, D.A.
Evidence from Wright Valley for the response of the antarctic ice sheet to climate warming [1987, p.56-58, eng] 43-2731

Hodgins, D.O.
Evaluation of wave forecasting models and forecast wind fields in the Canadian context [1988, 356p, eng] 43-2258

Hodgins, S.L.M.
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Design of river intakes in cold climates [1984, p.1113-1127, eng] 43-674

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Static and dynamic ice loads on the Yamachiche Bend lightpier, 1984-86 [1986, p.115-126, eng] 43-265

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Distribution, analysis, and recovery of placer gold from the Porcupine mining area, southeastern Alaska [1987, p 267-289, eng] 43-3084

Hoff, R.M.
Five years of air chemistry observations in the Canadian Arctic [1985, p.1995-2010, eng] 43-983

Hoffman, K.
Identifying and comparing organic carbon source areas in an alpine watershed [1986, p.150-153, eng] 43-3914

Höfle, H.C.
Glacial geology in the Outback Nunatak area, west of northern Victoria Land, Antarctica [1987, p.253-257, eng] 43-1765

Höfling, R.
Hydrology of the lakes in central Wohlthat Massif, East Antarctica: new results [1988, p 7-14, eng] 43-4513

Hogan, A.W.
Increased transmission through brass obscurant clouds during snowfall [1988, p.489-496, eng] 43-3430

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Högbom, T.
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Information systems planning study [1987, 48p., eng] 43-4591

Högnäs, T.
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Snow algae from high-elevation, temperate latitudes and semi-permanent snow: their interaction with the environment [1987, p.73-79, eng] 43-391

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Snow load on gable roofs: results from snow load measurements on farm buildings in Norway [1989, p.95-104, eng] 43-3556

Hoke, J.E.
Effect of snow cover on the Regional Analysis and Forecast System (RAFS) low-level forecasts [1989, p.253-257, eng] 43-4475

Holden, J.T.
Ground freezing 88, Vol.1 [1988, 405p., eng] 43-54

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Ice jam development, release and surge wave propagation, Mackenzie River at Norman Wells [1988, p.209-223, eng] 43-2173

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Identification of Chernobyl fall-out as a new reference level in Northern Hemisphere glaciers [1988, p.183-187, eng] 43-162
Surface waveforms on the Ellesmere Island ice shelves and ice islands [1987, p 385-403, eng] 43-916

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Airborne sea ice thickness sounding [1989, p 1042-1052, eng] 43-3801

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Hydrogeologic classification of wetlands in glaciated regions [1988, p.26-30, eng] 43-2237

Holloway, K.
Cross-polar radar measurements in ice and rain [1988, p.235-236, eng] 43-1510

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Penetration of a low L/D, flared earth penetrating weapon into frozen soil targets [1989, 78p., eng] 43-4477

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Airborne gamma ray snow survey of a forest covered area with a deep snowpack [1988, p.149-160, eng] 43-1829

Holmberg, K.
Thin coatings in boundary lubrication [1988, 28p. + appends., fin] 43-1868

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Assisted revegetation in Denali National Park, Alaska, U.S.A. [1987, p.544-548, eng] 43-205

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Occurrence of ice fields and glaciers in a landscape with low relief [1985, p 8-18, swe] 43-1010

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Internal geometry and evolution of moulins, Storglaciären, Sweden [1988, p.242-248, eng] 43-171
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Mapping of seasonal sea ice off Labrador with C-band SAR imagery [1988, p.1423-1424, eng] 43-1891

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Effects of crude and diesel oil spills on plant communities at Mesters Vig, northeast Greenland [1987, p.490-497, eng] 43-197

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Floating production systems for Arctic areas—impact of icebergs on structural- and mooring system design [1988, p.523-538, eng] 43-645
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Arctic grout pile [1989, p.731-737, eng] 43-3224

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Interactions between dislocations and point defects in ice crystals [1988, p.97-128, eng] 43-1418
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Honiball, D.
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Greenland ice cap aeromagnetic survey 1985: magnetic measurements over the southern end of the Greenland ice cap [1987, p.86-90, eng] 43-741

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Englacial and subglacial hydrology: a qualitative review [1988, 21p, eng] 43-1869

Hopkins, D.M.
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On modeling the energetics of the ridging process [1989, p.175-178, eng] 43-2625

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Ice thickness and bedrock elevation in western Neuschwabenland and Berkner Island, Antarctica [1988, p.42-45, eng] 43-1942

Horibe, A.
De-icing heat-transfer characteristics along a circular cylinder immersed in a cold airstream with seawater spray [1989, p.123-128, eng] 43-4209
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Horibe, Y.
Gravitational separation of gases and isotopes in polar ice caps [1988, p.1675-1678, eng] 43-1202

Horii, M.
Study on the classification of the cities in snow areas in the Tohoku District [1988, p.135-142, jpn] 43-1322

Horii, Y.
Study on the toughness of large-heat input weld metal for low temperature-service TMCP steel [1988, p.1-9, eng] 43-1845

Horiuchi, Y.
Thermal storage experiment for underground soil and its application for preventing freezing on a road surface [1989, p.791-800, eng] 43-3147

Horjen, I.
Numerical modelling of sea spray icing on vessels [1989, p.594-704, eng] 43-3769

Horne, E.P.W.
Physical control of arctic ice algal production [1989, p.111-121, eng] 43-2403

Horrigmoe, G.
Finite element analysis of floating ice sheets [1988, p.715-725, eng] 43-657
Finite element discretization of sea ice plates [1988, p.439-450, eng] 43-2943
Material modelling of ice—failure surfaces and plasticity theories [1987, 18p. + graphs, eng] 43-1104

Horsley, L.E.
Modification and deployment techniques for hand-deployed Arctic long-life sonobuoys [1989, p.211-220, eng] 43-3518

Hosking, R.J.
Viscoelastic response of a floating ice plate to a steadily moving load [1988, p.409-430, eng] 43-3291

Hosoya, M.
Results of tests for a smaller snow vehicle [1988, p.218-237, jpn] 43-843

Houghton, D.D.
Cloud and ice in the planetary scale circulation and in climate. Final report 1 Jan 1977-30 Jan 1983 [1984, 117p., eng] 43-1076

Houghton, J.P.
Bering Sea Monitoring Program. Proceedings of a workshop (January 1987) and sampling design recommendations [1987, var.p., eng] 43-754

Houghton, R.A.
Global climatic change [1989, p 36-44, eng] 43-2698

House, M.
Evaluation of two search radar systems for detection of ice masses [1988, 240p + appends, eng] 43-2257

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Greenland Sea convection in the winter of 1987-1988 [1989, p.3223-3227, eng] 43-2395

Howard, D.
Measurement of ice forces on small vessels; Vol.1: technical report; Vol.2: appendices [1988, 51p. + appends., eng] 43-1697

Howard, J.D.
Sea-level fluctuation and coastal evolution [1987, 267p., eng] 43-3391

Howard-Williams, C.
Inorganic nitrogen uptake and regeneration in perennially ice-covered Lakes Fryxell and Vanda, Antarctica [1989, p.335-351, eng] 43-2404
Microbial biomass, photosynthesis and chlorophyll *a* related pigments in the ponds of the McMurdo Ice Shelf, Antarctica [1989, p.125-131, eng] 43-4184

Howdyshell, P.
Seismic and acoustic wave propagation: working group report [1987, p.253-255, eng] 43-858

Howe, J.B.
On the distribution of acidity within clouds as a function of droplet size [1987, p.54-60, eng] 43-389

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Environmental and physiological factors that influence cold hardiness and frost resistance in perennial crops [1987, p.139-150, eng] 43-2252

Hoxie, S.G.
Tensile strength of cracked ice [1989, p.303-311, eng] 43-2242

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Hsie, K.C.
Examination of the terminal velocity of falling snowflakes [1988, p.63-71, jpn] 43-1907

Hslung, C.C.
Dynamic response of an icebeam with flooding water effect [1989, p.311-320, eng] 43-3736

Hu, R.
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Laboratory observations of ice formation in frequently transited channels [1988, p.1-11, eng] 43-2974

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Ice structure analysis of river ice on Datonghe, nearby Liancheng power station [1987, p.79-82, chi] 43-489

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Progress in the study on basic features of glaciers in China in the last thirty years [1988, p.228-237, chi] 43-2862
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In-situ plate-load tests of frozen silt and gravel [1989, p.252-261, eng] 43-2107

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Review of research on permafrost problems of road engineering in cold regions of China [1988, p.344-351, chi] 43-2880

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Progress and suggestions for geophysical prospecting of glaciers and permafrost in China [1988, p.364-368, chi] 43-2884

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Winter Weddell Sea Project 1986—physical oceanography during leg ANT V/2 of *Polarstern* [1989, p.97-98, eng] 43-4435

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Huddleston, J.M.
Centralized forecasting system for the Western United States [1986, p.61-70, eng] 43-3904

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Terrain and permafrost: their influence on northern construction [1989, p.109-118, eng] 43-3488

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HVS-aided validation of pavement behavior at low temperatures (1987, p 168-197, eng) 43-1862
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Arctic snowmobile development: lightweight materials research for structure and suspension systems (1988, 32p., eng) 43-2150
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Microwave dielectric properties of low-salinity sea ice (1988, p.419-420, eng) 43-1518
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Experimental studies on the interaction between braking structures and moving snow masses (1987, p.311-317, rus) 43-2534
IAHR Symposium on Ice, 8th, Iowa City, Aug. 18-22, 1986
Proceedings, Vol.3 (1986, 599p, eng) 43-258
IAHR Symposium on Ice, 9th, Sapporo, Japan, Aug. 23-27, 1988
Proceedings (1988, 3 vols, eng) 43-2906
IAHR Working Group on River Ice Hydraulics
River ice jams: a state-of-the-art report (1986, p.561-594, eng) 43-279
IAHR Working Group on Testing Methods in Ice
IAHR—recommendations on testing methods of ice 5th report of Working Group on Testing Methods in Ice (1986, p.595-599, eng) 43-280
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Engineering geophysics (1989, 251p, rus) 43-3706
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Microstructure of frozen rocks (1988, 182p., rus) 43-285
Ice navigation
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Ice thickness data, winter 1984-85
Ice thickness data, winter 1984-85 (1988, 71p., eng) 43-1731
Iceberg scouring marks high North Sea areas
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Icebreakers. Chapter 18 and relevant sections of the USSR Register Rules for Classification and Construction of Sea-Going Ships
Icebreakers. Chapter 18 and relevant sections of the USSR Register Rules for Classification and Construction of Sea-Going Ships (1986, var. p, eng) 43-3854
Icecrete Contracting & Engineering A/S (ICE)
Icecrete project (1987, 15p, eng) 43-1108
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Final report on continued development of an ice thickness radar system (1986, var. p., eng) 43-4159
Final report on the application of a step frequency radar for determining the thickness of saline ice (1984, var. p., eng) 43-4160
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Study on keeping of underground fire cistern from freezing (1989, p.303-308, eng) 43-4227

Inaba, K.
Characteristics of groundwater during the snow-melting season in the Higashimushigame landslide area near Nagaoka (1988, p.61-75, jpn) 43-3522

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Oceanographic data of the 28th Japanese Antarctic Research Expedition from Nov. 1986 to Apr. 1987 (1988, 75p., eng) 43-590

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Aluminum contamination of groundwater: spring melt in Chalk River and Turkey Lakes watersheds—preliminary results (1988, p.66-71, eng) 43-1359

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Modeling climate change: an assessment of sea ice and surface albedo feedbacks (1989, p 8609-8622, eng) 43-3848

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Adhesion strength of piles in saline ice (1986, p.89-104, eng) 43-263
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Model ice of the NKK Ice Model Basin (1988, p.782-792, eng) 43-2973

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Analysis of frost resistant concretes with damping components (1989, p.42-45, rus) 43-3860

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Foundation design on permafrost with heat pumps (1988, p.73-74, eng) 43-1727

International Cesena Agricultura Conference, 2nd, Cesena, Italy, Oct. 8-9, 1987
Agrometeorology (1988, 498p., eng) 43-2248

International Cold Regions Engineering Specialty Conference, 5th St. Paul, MN, Feb. 6-8, 1989
Cold regions engineering (1989, 399p., eng) 43-2083

International Conference on Offshore Mechanics and Arctic Engineering, 8th, The Hague, Netherlands, Mar. 19-23, 1989
Proceedings of the eighth International Conference on Offshore Mechanics and Arctic Engineering, 1989 Volume 4 (1989, 476p., eng) 43-2601
Proceedings, Vol.1 (1989, 742p., eng) 43-3219

International Conference on Permafrost, 5th, Trondheim, Norway, Aug. 2-5, 1988
Permafrost; Fifth International Conference; (Proceedings), Vol.3 (1988, 87p., eng) 43-1717

International Conference on Port and Ocean Engineering under Arctic Conditions, 10th, Luleå, Sweden, June 12-16, 1989
Proceedings. POAC 89. Vols.1 and 2 (1989, 1187p. (2 vols.), eng) 43-3708

International Conference on Snow Engineering, 1st, Santa Barbara, CA, July 10-15, 1988
First International Conference on Snow Engineering, Santa Barbara, California, July 1988, Proceedings (1989, 573p., eng) 43-3544

International Conference on Technology for Polar Areas, Trondheim, Norway, June 15-17, 1988
Polar Tech' 88; Vol.1 and 2 (1988, 782p. (2 Vols.), eng) 43-610

International Congress on Experimental Mechanics, 6th, Portland, OR, June 6-10, 1988
Proceedings (1988, 1278p. (2 vols), eng) 43-977

International Geoscience and Remote Sensing Symposium, Edinburgh, U.K., Sep. 12-16, 1988
IGARSS '88 remote sensing: moving towards the 21st century Vol.1 (1988, 632p, eng) 43-1504
IGARSS '88 remote sensing: moving towards the 21st century; Vol.3 (1988, p.1231-1858, eng) 43-1889

International Meeting (on) the Canadian Arctic Islands—Canada's Missing Dimension, Ottawa, Nov. 21-24, 1987
Programs and abstracts (1988, 110p., eng) 43-1452

International Road Weather Conference, 3rd, Tampere, Finland, Feb. 24, 1986
Proceedings (1986, var. p., eng) 43-2753

International Specialty Conference on Cold Regions Engineering, 3rd, Edmonton, Alberta, Apr. 4-6, 1984
Proceedings, Vol.3 (1984, p.1021-1201, eng) 43-667

International Symposium on Antarctic Glaciology, 4th, Bremerhaven, FRG, Sep. 7-11, 1987
Proceedings (1988, 229p., eng) 43-1934

International Symposium on Cold Regions Heat Transfer, Sapporo, Japan, June 28-30, 1989
Proceedings (1989, 314p., eng) 43-4193

International Symposium on Frost in Geotechnical Engineering, Saariselkä, Finland, Mar. 13-15, 1989
Frost in geotechnical engineering; VTT Symposium 94, Vols. 1 and 2 (1989, 946p. (2 vols.), eng) 43-3093

International Symposium on Ground Freezing, 5th Nottingham, England, July 26-28, 1988
Ground freezing 88, Vol.1 (1988, 405p., eng) 43-54

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On the feasibility and value of detecting and characterizing avalanches remotely by monitoring radiated sub-audible atmospheric sound at long distances (1989, p.267-275, eng) 43-3571

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NOGAP B.6; Volume I: Beaufort Sea current measurements, March-August 1987 (1988, 42p., eng) 43-4035

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Mobility: working group report (1987, p.273-274, eng) 43-862
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Ice regime reconnaissance, Yukon River, Yukon (1984, p.1059-1073, eng) 43-670
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Joint U.S. Norwegian Cold Weather Combat Operations Conference, Elverum, Norway, Mar. 8-12, 1982
Proceedings (1982, var. p., eng) 43-2802

Jolles, W.H.
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All-Union Conference on Avalanches, 2nd, Yangiabad, USSR, May 1985. Proceedings (1987, 439p, rus) 43-2493
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Natural ice rubble studies [1983, 2 vols., eng] 43-4587

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Sea ice sediment entrainment and rafting in the Arctic [1989, p.308-317, eng] 43-2690
Seafloor temperature and conductivity data from coastal waters of the U.S. Beaufort Sea [1989, 19p., eng] 43-2123

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Scientific cruise reports of Arctic Expeditions ARK IV/1, 2 & 3 (1989, 146p., eng) 43-4191

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Snow making (1988, p.38-47, fre) 43-2355
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Design and monitoring of earth embankments over permafrost (1988, p.1001-1010, eng) 43-2319
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Influence of surface cover and climate on energy partitioning and evaporation in a subarctic wetland (1988, p.327-347, eng) 43-449
LaFleur, R.S.
Exploration of the iceformation method applied to a diffuser (1988, p 244-250, eng) 43-1464
Laforte, J.L.
Effect of voltage polarity on ice accretions on short string insulators (1989, p 419-426, eng) 43-2653
Effect of wind on the minimum flashover voltage of iced insulators in foul weather (1987, p 615-623, eng) 43-1594
Experimental results on the tensile strength of atmospheric ice (1989, p.405-410, eng) 43-2651
Låg, J.
Special peat formations in Svalbard (1980, p.205-210, eng) 43-451
Lai, Z.
Analysis and prediction of the variation trend of the annual runoff on the northern slope of Qilian Mountain (1988, p.47-56, chi) 43-467
Laird, B.B.
Theory of freezing: prediction of phase diagrams and interfacial structure for monatomic systems (1988, 167p, eng) 43-2690
Laird, C.M.
Comments on "Relative contributions of tropospheric and stratospheric sources to nitrate in antarctic snow" by M.R. Legrand and R.J. Delmas (1988, p.233-240, eng) 43-2245
Nitrate variability in South Pole ice sequences and fossil surface effects (1987, p.80-83, eng) 43-2745
Lakso, E.
Aeration at overflow weirs (1988, 104p., er 422
Lal, A.M.W.
Mathematical model for river ice processes (1988, p.356-366, eng) 43-3008
Lal, M.
Statistical analysis of fracture toughness and flexural strength of ice (1988, 75p., eng) 43-774
Lalond, M.J.L.
Remote monitoring of depth of snow on ground with a micrologger (1987, p.297-214, eng) 43-1297
Lalumiere, L.A.
Evaluation of sea ice thickness sensors (1988, 58p., eng) 43-1732
Lamb, D.
Geographical variability of ice phase evolution in supercooled clouds (1980, p.317-324, eng) 43-3951
Lambeck, K.
Late Pleistocene and Holocene sea-level change in the Australian region and mantle rheology (1989, p 497-517, eng) 43-2441
Late Pleistocene and Holocene sea-level: implications for mantle rheology and the melting history of the antarctic ice sheet (1988, p.443-455, jpn) 43-3975
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Energy-budget snowmelt model for the Canadian Prairies (1988, p.1292-1303, eng) 43-1316
Landry, M.
Dielectric withstand and breaking capacity of SF6 circuit breakers at low temperatures (1988, p.1029-1035, eng) 43-1559
Landsberger, S.
Abnormally enriched elemental concentrations in urban snow (1987, p.79-88, eng) 43-1291
Solute and particulate chemistry of background versus a polluted, black snowfall on the Cairngorm Mountains, Scotland (1989, p.395-401, eng) 43-4342
Landva, J.
Geotechnical aspects of seabed pits in the Grand Banks area (1988, p.448-454, eng) 43-1051
Lane, D.S.
Heating water and aggregates for cold weather concrete (1988, p.40-43, eng) 43-351
Lang, T.E.
Comparison of simulated runout distances of snow avalanches with those of actually observed events in Japan (1987, p.463-473, eng) 43-1255
Lange, M.A.
Development and properties of sea ice in the coastal regime of the southeastern Weddell Sea (1989, p.8193-8206, eng) 43-3821
Development of sea ice in the Weddell Sea (1989, p.92-96, eng) 43-3341
Elastic properties of frazil ice from the Weddell Sea, Antarctica (1989, p.208-217, eng) 43-3726
Enigmatic basal sea-ice layer of the Filchner-Ronne Ice Shelf (1987, p.89-91, eng) 43-2750
Numerical models of ice-shelf flow: ideal/real (1989, p.97-103, eng) 43-3342
Numerical models of steady-state thickness and basal ice configurations of the central Ronne Ice Shelf, Antarctica (1988, p 64-70, eng) 43-1946
Sea-ice investigations during the Winter Weddell Sea Project (1987, p.88-89, eng) 43-2749
Sea ice thickness data: the many vs. the few (1989, p.495-498, eng) 43-4431
Langer, J.S.
Dendrites, viscous fingers, and the theory of pattern formation (1989, p.1150-1156, eng) 43-1819
Langley, A.J.
Acoustic emission from the Arctic ice sheet (1989, p.692-701, eng) 43-2401
Langlois, P.M.
Millimeter-wave backscatter measurements of various snow forms (1988, p 451-452, eng) 43-1528
Langway, C.C., Jr.
Environmental record in glaciers and ice sheets (1989, 403p., eng) 43-3677
Ionic deposits in polar ice cores (1989, p.225-247, eng) 43-3690
Physical property reference horizons (1989, p.161-175, eng) 43-3686
Lanzhou Institute of Glaciology and Geocryology
Map of snow, ice and frozen ground in China—explanation (1988, c50p., eng) 43-1356
Lanziner, H.H.
Precise radar integrated navigation system (NAVFIX) for coastal and inshore navigation (1988, var.p, eng) 43-3210
Lapenis, A.G.
Glacial periods, carbon dioxide, and calcium balance in the World Ocean (1987, p.16-24, rus) 43-4230
Laperriere, F.
Evaluation of a water jet barrier in ice conditions (1988, p.157-159, eng) 43-3650
LaPotin, P.J.
QuickDraw data structures for image processing (1989, 17p., eng) 43-3676
Lapp, D.
Seasonal and historical analysis of the M.V. *Arctic* vessel performance and trafficability data base, 1983-87 (1988, 80p., eng) 43-2148
Study on ice meltponds (1982, 62p. + appends., eng) 43-1666
Lappalainen, H.
Model for planning snow plowing routes and equipment (1988, p.7-9, fin) 43-1798
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Thaw consolidation of frozen clays of post-glacial origin in Helsinki (1989, p.583-600, eng) 43-3131
Laprise, D.
Recent evolution of palsa bogs in subarctic Quebec: cartographic and dendrochronological analysis (1988, p.2217-2227, fre) 43-1501

Lapshin, A.V.
Marine glacio-isostatic hypothesis of glaciations [1987, p 30-36, rus] 43-224

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Accuracy of measurements of parameters found in the design formulas of Building Code SN-517-80 of the USSR [1987, p.357-362, rus] 43-2542
Fundamentals of classification of anti-avalanche measures from the position of optimization of protection from avalanches [1987, p.317-327, rus] 43-2535
Study on snow cover dynamics from scanner space images [1988, p.182-186, rus] 43-3276

Lapteva, N.I.
Study on snow cover dynamics from scanner space images [1988, p.182-186, rus] 43-3276

Larina, T.A.
System of standards in engineering geology [1988, p.104-108, rus] 43-598

Larina, T.B.
Formulation of stationary problems in glacier mechanics [1987, p.17-23, rus] 43-222

Larionov, V.
Problems of design and service of machinery and structures for polar regions [1989, p.820-830, eng] 43-3780

Larionov, V.P.
Physical and mechanical aspects of working capacity of equipment designed for the North [1987, 91p., rus] 43-112

Larionov, V.R.
Mechanics of the breakup and kinetics of dust during percussive breakup of frozen rocks [1988, p.54-58, rus] 43-3852

Larionov, V.V.
Effects of low temperatures on resistance to static and small-cycle deformation and destruction of welded structural steels [1987, p.37-43, rus] 43-2453

Larouche, P.
Factors affecting fast-ice consolidation in southeastern Hudson Bay, Canada [1989, p.367-375, eng] 43-4562

Larsen, B.
Forty million years of antarctic glacial history yielded by Leg 119 of the Ocean Drilling Program [1989, p.99-106, eng] 43-2804

Larsen, H.C.
Gravity survey on ice offshore South-East Greenland [1987, p 69-72, eng] 43-747

Larssen, B.B.
Study of particulate material in sea ice in the Fram Strait—a contribution to paleoclimatic research [1987, p.313-315, eng] 43-2011

Larsson, N.K.
Energy considerations in the design of northern housing [1985, 32p., eng] 43-1311

Lasca, N.P.
Fracturing of an ice sheet by ship-induced, ice-coupled waves [1989, p.75-82, eng] 43-1580

Laskow, V.
Ice flow and blockage investigation of shrouded propellers [1988, var.p., eng] 43-3204

Lasonde, G.J.
Effects of end conditions on the strength and fracture of ice under compression [1988, p.99-108, eng] 43-2913

Lau, P.A.
Observations of ice floe stress in the Eastern Arctic [1989, p 44-53, eng] 43-3711

Laughlin, T.L.
Report of the Arctic Environmental Data Workshop, Boulder, Colorado, March 21-24, 1988 [1988, var. p., eng] 43-3363

Laukhin, S.A.
Age of the last glaciation in northern East Chukotka [1989, p.136-140, rus] 43-3072
Date of the last glaciation in northern East Chukotka [1989, p.527-531, eng] 43-4471

Laumann, T.
Mass balance measurements on Norwegian glaciers in 1985, 1986, and 1987 [1988, 46p., nor] 43-1698

Laurinen, K.
Freeze-thaw effects on thaw settlement and pore pressure [1989, p.523-533, eng] 43-3125

Lauriol, B.
Topoclimatic zones and ice dynamics in the caves of the northern Yukon, Canada [1988, p.215-220, eng] 43-1031

Lautridou, J.P.
Recent advances in cryogenic weathering [1988, p.33-47, eng] 43-321

LaViolette, P.A.
Regarding the validity of polar trace metal data: a response [1988, p.221-224, eng] 43-877

Lavis, D.R.
Air cushion vehicles for Arctic operation [1988, p.59-71, eng] 43-1425

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Historical land clearing in the Fraser Lowland of British Columbia and Washington State: 1. Effects on soil genesis [1988, p.467-473, eng] 43-126
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Soil cement elements of earth dams erected at subzero temperatures [1987, p.96-102, rus] 43-1184

Lavrov, S.A.
Hydrophysical research in the melioration of lands with water surplus [1988, 260p., rus] 43-837

Lavrushin, IU.A.
Glacial-turbidite deposits of a glacial shelf [1988, p.173-177, rus] 43-2154

Law, H.K.
In-situ plate-load tests of frozen silt and gravel [1989, p.252-261, eng] 43-2107

Lawler, D.M.
Bibliography of needle ice [1988, p.295-310, eng] 43-1350

Lawrence, J.R.
Megalopolitan snowstorm of 11-12 February 1983: isotopic composition of the snow [1989, p.1637-1649, eng] 43-4417

Lawson, D.E.
Glacigenic resedimentation: classification concepts and application to mass-movement processes and deposits [1989, p.147-169, eng] 43-2130
Placer River Silt—an intertidal deposit caused by the 1964 Alaska earthquake [1976, p.151-162, eng] 43-830
Subsidence, inundation, and sedimentation: environmental consequences of the 1964 Alaska earthquake in the Portage, Alaska, area [1974, p.3-9, eng] 43-829

Lawson, W.
Tectonic processes in a surge-type glacier [1988, p.499-515, eng] 43-1466

Lawson, W.A.
Evaluation of marine oil transportation systems for Arctic areas [1988, p.125-146, eng] 43-617

Layman, R.
Comments on the characteristics of *in situ* snow at millimeter wavelengths [1986, p.317-320, eng] 43-4645

Laymon, C.A.
Glacial geology of western Hudson Strait, Canada, with reference to Laurentide Ice Sheet dynamics [1989, 345p., eng] 43-4572
Radiocarbon date list 3: Labrador and northern Quebec, Canada [1989, p.1-12, eng] 43-3426
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Layton, R.G.
Ice nucleation and antifreeze activity due to biological materials [1980, p.275-280, eng] 43-3948

Lazarev, E.I.
Radar measurements of sea ice thickness from an icebreaker [1988, p.152-156, rus] 43-814

Lazarev, G.E.
Map of antarctic isostatic rise after deglaciation [1989, p.30-33, rus] 43-4540

LaZerte, B.D.
Changes in stream chemistry during snowmelt runoff in two headwater catchments [1988, p.60-73, eng] 43-4117

Lazutin, N.V.
Thermo-aerodynamic safeguard for cooling towers against moisture and freezing [1988, p.52-55, rus] 43-4100

Le Quentrec, M.
Master plan for highway meteorology [1986, 12p., eng] 43-2757

Le Treut, H.
Isotopic modeling of climate oscillations: implications for a comparative study of marine and ice core records [1988, p.9365-9383, eng] 43-284

Leaf, C.F.
Estimated consumptive loss from man-made snow [1988, p 815-820, eng] 43-1557
Estimated consumptive loss from man-made snow [1986, p.162-164, eng] 43-3917
Windy Gap Project streamflow forecasting [1985, p.54-62, eng] 43-4268

Leavesley, G.H.
Microcomputer-based watershed-modeling and data-management system [1987, p.108-117, eng] 43-3933

Leavitt, E.
Remote sensing of extreme ice hazards [1987, p.335-347, eng] 43-911

Lebedeff, S.
Global sea-level changes during the past century [1987, p.3-16, eng] 43-3392

Lebedenko, IU.P.
Driving forces of moisture migration with cryogenic deformation [1988, p.3-13, rus] 43-2414
Experimental studies of heat- and mass-transfer kinetics in salinized, freezing disperse rocks [1988, p.39-41, rus] 43-552
Microstructure of frozen rocks [1988, 182p., rus] 43-285
Moisture migration characteristics in frozen, finely dispersed soils under osmotic pressure [1987, p.150-157, rus] 43-3380
Thermodynamics and kinetics of cryogenic deformation of the pore space structure of moisture-saturated disperse rocks [1987, p 41-51, eng] 43-2333

Lebedev, A.A.
Role of the phase transformation heat of ice in the energy balance at the ocean-atmosphere interface [1988, p.6-23, rus] 43-798

Lebedev, S.
Ice navigating ships [1989, p.28-29, rus] 43-3533

LeBlanc, L.
Ice pack conditions drive production, transport design [1989, p.26-28, eng] 43-2185

LeBlond, P.H.
Spectral evolution of wind-generated surface gravity waves in a dispersed ice field [1989, p.43-81, eng] 43-4535

Lecomte, C.
Operation "Bangavalanches". The sonic boom effect on avalanches [1987, p.215-222, eng] 43-1231

Ledley, T.S.
Coupled energy balance climate-sea ice model [1988, p.15,919-15,932, eng] 43-2490
Wandering Gondwanaland's impact on summer temperatures [1988, p.1397-1400, eng] 43-2033

Ledovskoĭ, I.V.
Probability estimation of snow cover mass on the ground [1988, p.96-104, rus] 43-4555

Lee, D.H.
Deterioration and some properties of concrete at low temperatures [1988, p.9-24, eng] 43-4045

Lee, F.C.
Ice-induced dynamic loads on offshore structures [1986, p.35-41, eng] 43-3217

Lee, G.C.
High-strength concrete-steel bond behavior at low temperature [1988, p.157-168, eng] 43-2064
Mechanical properties of concrete at low temperature [1988, p.13-24, eng] 43-151
Mechanical properties of high-strength concrete at low temperature [1988, p.169-178, eng] 43-2065
Some experimental observations on concrete behavior at low temperature [1989, p.831-838, eng] 43-3781

Lee, H.
Comprehensive study of cold climate airport pavement cracking [1987, p.198-245, eng] 43-1863

Lee, J.C.
Suppression of transmission line galloping by support compliance design [1988, 253p., eng] 43-1920

Lee, J.K.
Radar backscattering from snow-covered ice [1986, p.321-328, eng] 43-4646

Lee, M.
Mapping of seasonal sea ice off Labrador with C-band SAR imagery [1988, p.1423-1424, eng] 43-1891
Sea-ice analysis software—ICEMAN [1988, p.1717-1720, eng] 43-1903

Lee, S.H.
Inauguration of King Sejong, Korean antarctic research station [1989, p.141, eng] 43-2805

Lee, S.M.
Development of methodology for improved design of snow roads and airstrips [1988, p.301-302, eng] 43-1647
Improved techniques for construction of snow roads and airstrips [1988, 99p., eng] 43-1150
Recent results in improving snow roads and runways in Antarctica [1988, p.297-307, eng] 43-629
Snow as an acoustically porous material [1986, p 343-352, eng] 43-4648
Study of ice adhesion and sintering [1989, p.373-382, eng] 43-3582

Lee, Y.
Thermal effect on high-rise buildings in very cold regions: full scale and model studies [1989, p.117-122, eng] 43-4208

Lefebure, T.H.
Freeze-thaw weathering regime at a section of the Niagara Escarpment on the Bruce Peninsula, southern Ontario, Canada [1988, p.293-304, eng] 43-1354

Legendre, L.
Photoadaptation of sea-ice microalgae in springtime: photosynthesis and carboxylating enzymes [1988, p.177-185, eng] 43-2839
Photosynthetic responses of arctic sea-ice microalgae to short-term temperature acclimation [1989, p.437-442, eng] 43-4289

Legen'kov, A.P.
Attenuation coefficients and velocities of Sverdrup wave propagation in ice-free water and under ice [1987, p.53-58, rus] 43-889

Leggett, D.C.
Effect and disposition of TNT in a terrestrial plant and validation of analytical methods [1986, 17p., eng] 43-1200
Ice surface hydrolysis of diisopropylfluorophosphate (DFP) [1987, p 809-815, eng] 43-1876
Persistence of chemical agents on the winter battlefield. Part 2. Evaporation from ice and snow [1988, 10p., eng] 43-425
Removal of trace organics by overland flow [1982, p.176-184, eng] 43-1285

Legrand, M.
Long-term changes in the concentrations of major chemical compounds (soluble and insoluble) along deep ice cores [1989, p.319-341, eng] 43-3694

Legrand, M. *(cont.)*
Polar atmospheric circulation and chemistry of recent (1957-1983) south polar precipitation (1988, p.879-882, eng) 43-1554

Legrand, M.R.
Comments on "Relative contributions of tropospheric and stratospheric sources to nitrate in antarctic snow" by M.R. Legrand and R.J. Delmas (1988, p 233-240, eng) 43-2245

Lehmus, E.
Properties of EG/AD-model ice in VTT ice basin (1988, p 661-668, eng) 43-652

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Arctic road construction (1989, p.679-689, eng) 43-3138

Leicht, N.
City, two states adopt pavement precip system (1988, p.133-135, eng) 43-1854

Leide, J.E.
Soil development in the Beardmore Glacier region, Antarctica (1988, p.93-95, eng) 43-1620

Leidersdorf, C.B.
Arctic Island abandonment: planning and implementation for Mukluk Island (1988, p.49-60, eng) 43-711

Leikam, A.B.
Improved method for combined determination of physical properties of frozen ground (1988, p.65-71, rus) 43-1602

Leiva, J.C.
Variations of Rio Plomo glaciers, Andes Centrales Argentinos (1989, p.143-151, eng) 43-3181

Leivo, M.
Frost resistance of concrete in very low temperatures (1988, 31p. + appends., eng) 43-1705

Leliwa-Kopystynski, J.
Model of porous structure of icy satellites (1988, p.741-747, eng) 43-1763

Lel'mezh, N.A.
Analysis of frost resistant concretes with damping components (1989, p.42-45, rus) 43-3860

Lemieux, G.E.
Controlled river ice cover breakup; part 1. Hudson River field experiments (1986, p.281-291, eng) 43-274
Controlled river ice cover breakup; part 2. Theory and numerical model studies (1986, p.293-305, eng) 43-275
Dynamic friction of a metal runner on ice : Model sled test (1989, 17p., eng) 43-4609
Dynamic ice breakup control for the Connecticut River near Windsor, Vermont (1988, p.245-258, eng) 43-2018
Options for management of dynamic ice breakup on the Connecticut River near Windsor, Vermont (1988, 16p., eng) 43-5
Study of dynamic ice breakup on the Connecticut River near Windsor, Vermont (1987, p.163-177, eng) 43-399

Lemmelä, R.
Application of transfer function and conceptual pulse models to the study of groundwater level fluctuations (1988, p.35-46, eng) 43-4381
Heat and moisture properties in frozen sandy soil; measurements and modeling (1989, p.323-340, eng) 43-3109

Lemoigne, Y.
Study of the ice cover in Igloolik Bay (1988, p.239-249, eng) 43-1345

Leningrad. Zonal'nyĭ nauchno-issledovatel'skiĭ i proektnyĭ institut tipovogo i eksperimental'nogo proektirovaniia zhilykh i obshchestvennykh zdaniĭ
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Region 13, Western Glaciated Plains (1988, p.115-128, eng) 43-4293

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Ice floe distributions (1989, p.354-366, eng) 43-3740

Lenz, J.
Picocyanobacteria in the high Arctic (1989, p.99-101, eng) 43-4254

Lenzano, L.E.
Variations of Rio Plomo glaciers, Andes Centrales Argentinos (1989, p.143-151, eng) 43-3181

Leon G., R.E.
Need to regulate mountain area use vis-à-vis avalanche risk (1988, p.37-42, fre) 43-3208

Leonard, J.
Development of a half well deck variant of API 88 for the Canadian Coast Guard (1988, p.185-211, eng) 43-1758

Leonov, M.A.
Quasistationary model of thermal interaction between a pipeline and frozen ground (1987, p.68-73, rus) 43-1019

Leont'ev, E.B.
Drift of a giant iceberg in the Weddell Sea (1989, p.71-73, rus) 43-4543

Lepage, M.F.
Cold room studies for snow and ice control on buildings (1989, p.232-242, eng) 43-3568
Simulation to predict snow sliding and lift-off on buildings (1989, p.128-141, eng) 43-3559

Lepnev, M.I.
Cargoes and frost. (Freezing processes and defrosting loose cargo) (1988, 141p, rus) 43-3063

Lepneva, O.M.
Inflow of polluting substances into the snow cover and soils of city lawns (1988, p.17-20, rus) 43-1121

Leppäjärvi, R.
Hydrological yearbook 1981-1983 (1987, 238p., eng) 43-3492

Leppäranta, M.
Field measurements of the structure and strength of first-year ice ridges in the Baltic Sea (1989, p.169-174, eng) 43-2624
Phases of the ice season in the Baltic Sea (North of latitude 57N) (1988, 83p., eng) 43-1975

Leppävuori, E.K.M.
Mechanical properties and thermal loads of structural sandwich panels at low temperature (1988, p.749-756, eng) 43-659

LeSar, R.
New high-pressure phases of ice (1988, p.2284-2287, eng) 43-21

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Extreme ice feature maps of the Arctic Ocean derived from data recorded by nuclear submarines (1987, p.373-383, eng) 43-915

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Shore erosion of reservoirs of Angara River in permafrost (1988, p.59-64, rus) 43-2216

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Tool wear and tear intensity in cutting frozen coarse detrital soil (1989, p.101-104, rus) 43-3173

Leskov, B.N.
Testing the ice-forming activity of AgI and PbI2 pyrotechnic nucleants in stratiform clouds (1988, p.41-47, rus) 43-4585

Leslie, L.D.
Alaska climate summaries, 2nd edition. a compilation of long-term means and extremes at 478 Alaskan stations (1989, 478p, eng) 43-3846

Letavernier, G.
Determination of the frost susceptibility of calcareous rocks: lithologic and climatic parameters (1987, p.54-59,63, fre) 43-2069

Letellier, M.
Microdynamic behavior of water in clay gels below the freezing point (1984, p.279-286, eng) 43-1832

Lettenmaier, D.P.
Influence of snowmelt in evaluating small hydropower generation potential (1983, p.100-108, eng) 43-4357

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Evaluation of spatially-distributed snowpack estimation using pattern recognition (1989, 220p., eng) 43-3611

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Aliphatic and polycylic aromatic hydrocarbons in urban rain, snow and fog (1988, p.695-705, eng) 43-1071

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Salt migration in freezing soils (1989, p 57-65, rus) 43-4611

Levchenko, L.A.
Algorithms for automated forecasting of avalanche hazard (1987, p.163-166, rus) 43-2515

Levelton, B.H.
Study on hull corrosion and coatings (1988, Var. p., eng) 43-4474

Levenson, T.
Ice time: climate, science, and life on earth (1989, 242p, eng) 43-4488

Leventer, A.
Ice thickness in McMurdo Sound (1987, p.94-96, eng) 43-2752

Leventer, A.R.
Opal and carbon fluxes beneath ice-covered regions of McMurdo Sound (1988, p.132-134, eng) 43-1631
Recent biogenic sedimentation on the antarctic continental margin (1988, 238p., eng) 43-3521
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Effects of the growth mode upon the crystal orientation in artificial and natural hailstones (1980, p.333-346, eng) 43-3953
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Study of the initial stage of the accretion of ice (1980, p.365-372, eng) 43-3954

Levin, C.
Limited salt spreading on highways—effects on traffic movement and safety (1988, p.392-402, ger) 43-2187

Levit, B.
Adaptive simulation of transportation marine system along the Northern Sea Route (1988, p.706-718, eng) 43-2967
Estimation of ship and convoy speed in Arctic waters in evaluating fleet development effectiveness (1989, p.962-974, eng) 43-3793

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Basic characteristics and the elements of adaptive simulation of transportation processes on the Northern Sea Route (1987, p.20-33, rus) 43-314

Levkovich, V.R.
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Levy, M.
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Lewis, E.L.
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Lewis, J.
Proceedings of the 45th annual Eastern Snow Conference, Lake Placid, NY, June 8 and 9, 1988 (1988, 218p., eng) 43-4109

Lewis, J.C.
Ice-penetrating sonobuoy system breaks the High Arctic barrier (1988, p.63-67, eng) 43-2572
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Engineering geophysics (1989, 251p., rus) 43-3706

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Ice problem related to the regulation of rivers and the operation of hydropower stations (1985, p.41-49, swe) 43-359

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Algae of drifting sea ice north of Elephant Island (BIOMASS III, October 1986) (1988, p.217-229, eng) 43-2771
Sea ice microalgae community of the floating ice in the Admiralty Bay (South Shetland Islands) (1987, p.367-380, eng) 43-1375

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Wave interaction between two floating bodies (1989, p.627-637, eng) 43-3763

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Winter data resources of the Swedish Meteorological and Hydrological Institute (1985, p.30-34, swe) 43-357

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Applied climatology for road maintenance and increased traffic safety (1986, 8p., eng) 43-2762

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Frost action and permafrost (1988, p.(5)1-(5)35, eng) 43-1098

Lingle, C.S.
Surging as a potential response of ice sheets to carbondioxide-induced changes in the polar environment (SPICAE): Final report (1987, 21p., eng) 43-1714

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Impressed current cathodic protection of a caisson structure for arctic conditions (1988, p.25-29, eng) 43-1671

Lingovala, S.Kh.
Climatic resources of the Transcarpathian oblast' and mountain regions of Bulgaria (1988, 339p., rus) 43-1767

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Regulation of decomposition in Alaska tundra and root mycorrhizal processes in tundra soil: progress report (1986, 10p, eng) 43-881

Linkov, A.S.
Standardized models and their role in increased effectiveness in engineering and geocryological research (1988, p.3-13, rus) 43-1596

Liou, K.N.
Solar radiative transfer in cirrus clouds Pt. I single-scattering and optical properties of hexagonal ice crystals; Pt. II: theory and computation of multiple scattering in an anisotropic medium (1989, p.3-36, eng) 43-4420

Lipkin, IU.P.
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Performance of highway and all-season radial tires and traction aids on ice and in snow (1986, 20p, eng) 43-4590

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Undrained triaxial strength and stress-strain characteristics of a glacial till soil (1988, p.428-439, eng) 43-704

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Evaluation of the environmental impacts of snow disposal activities within the municipality of Anchorage, Alaska (1989, p.43-54 + 1 append., eng) 43-3666

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Dynamic model of sea ice forecast in the Bohai Sea (1988, p 282-292, eng) 43-3001

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Study of nonfreezable and freezable waters in hydrated aldolase by differential scanning calorimetry (1988, p.1093-1096, eng) 43-1196

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Seasonal road closures and highway meteorology (1988, p.60-65, fre) 43-836

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Forward reflection coefficient of snow at 35 GHz (1986, p.353-369, eng) 43-4649

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Biogeochemical survey of rivers and streams in the mountains and foot-hills province of arctic Alaska (1989, p.499-521, eng) 43-4603

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Seasonal ground frost occurrence: developing a statistically-based predictive model (1988, p.186-198, eng) 43-1368

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Transverse static ice pressure on bridge piers (1989, p.568-574, eng) 43-3758

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Effect of pressure saturation on strength of concrete of the Sayan-Shushenskaya dam (1987, p.63-66, rus) 43-1395

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Multifrequency passive microwave observation of saline ice grown in a tank (1988, p.1687-1690, eng) 43-1896

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KRMS GEOSAT-LIMEX '87 quick look report (1988, 47p., eng) 43-707
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Vessel performance and trafficability program, 1987, Milestone report No.6: early winter vessel performance assessment (1987, 33p., eng) 43-2139

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Persistence of soil moisture changes resulting from artificially extended snowmelt (1986, p.146-149, eng) 43-3913

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Composite icewall design and analysis (1989, p.1-22, eng) 43-4015

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Internal structure and regime of glaciers in Nordaustlandet according to airborne radio echo sounding data (1988, p.44-56, rus) 43-3302
Structure of the Davydov glacier from data of radar echo sounding and thermal drilling (1988, p.208-215, rus) 43-964
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On the temperature dependence of the relative frequency of ice nucleation by contact and vapor deposition (1980, p 267-273, eng) 43-3947

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Mackenzie environmetal monitoring project—Phase II, 1987 activities (1988, 254p. (Pertinent p.132-133), eng) 43-3061

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1987 seasonal ice cycle in the Canadian Beaufort Sea (1988, 57p. + appends., eng) 43-4397

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Radio echo-sounding as a glaciological technique—a bibliography (1988, 37p, eng) 43-1806

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Bare ice field in east Queen Maud Land, Antarctica, caused by horizontal divergence of drifting snow (1988, p.156-160, eng) 43-1959
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Depolarization due to raindrops and ice particles along Ka-band satellite communication path (1988, p.1272-1275, eng) 43-2279

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Scientific and operational support of river navigation in ice conditions (1988, p 697-705, eng) 43-2966

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System for the digital processing of airphotos and satellite images: automated classification and mapping of hydrological objects and phenomena (1986, p.29-35, eng) 43-1206

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Early Martian environments: the antarctic and other terrestrial analogs (1989, p.147-153, eng) 43-4580

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MANICE. Manual of standard procedures for observing and reporting ice conditions
MANICE. Manual of standard procedures for observing and reporting ice conditions (1989, Var. p., eng) 43-4473

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Facility designs in the Arctic for the Kuparuk Pipeline System (1993, p 84-107, eng) 43-3415

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Polar Floats Program (1989, p 186-194, eng) 43-3514
Winter Weddell Sea Project 1986—physical oceanography during leg ANT V/2 of *Polarstern* (1989, p.97-98, eng) 43-4435

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Air temperature variations over different surfaces in the West Gulkana Glacier valley (1988, p.81-91, eng) 43-2795
Glacier and climate studies, West Gulkana Glacier and environs, Alaska, Vol.I (1988, 142p, eng) 43-2788
Summer field season weather observations, West Gulkana Glacier and environs: 1986, 1987 (1988, p.123-142, eng) 43-2799
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Role of ice fracture in ice structure interactions (1989, 11p., fre) 43-4019

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Water conservation at the Swedish antarctic Wasa Base—implementation and results 1988/89 (1989, p.1143-1149, eng) 43-3810

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Micrometeorological measurements and instrumentation in support of remote sensing observations of an alpine snow cover (1984, p.161-164, eng) 43-4326
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Acid soil processes in the Okpilak Valley, Arctic Alaska (1989, 194p., eng) 43-3608

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Parameter estimation for the precipitation runoff modeling system using snow telemetry system data (1986, p.154-157, eng) 43-3915

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Factors limiting snowmelt runoff in a permafrost environment (1987, p 61-68, eng) 43-3928
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Arctic construction working group report (1987, p.311-314, eng) 43-866

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Performance of riprap in northern climates (1988, 124p. + 4 appends., eng) 43-1667

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SNOW III WEST field experiment report. Volume 1 (1988, 170p., eng) 43-2121

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May, J.
Greenpeace book of Antarctica (1988, 192p., eng) 43-1480

Mayer, I.
Characteristics of ice conditions based on aerial photography (1988, p 611-622, eng) 43-2959
Hydraulics of ice jam development (1988, p.304-315, eng) 43-3003

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Dominion Range ice core (1988, p.120-121, eng) 43-1629
Transantarctic Mountains ice core study (1987, p.78, eng) 43-2742

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Evaluation of ground-water quality monitoring in Alaska (1988, 39p., eng) 43-1691
Water-well data from the Houston area, Matanuska-Susitna Borough, Alaska (1988, 14p., eng) 43-1685

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Advance of Hubbard Glacier and closure of Russel Fiord, Alaska—environmental effects and hazards in the Yakutat area (1988, p 4-17, eng) 43-510
Hubbard Glacier near Yakutat, Alaska, ice damming and breakout of Russel Fiord/Lake, 1986 (1988, p 42-49, eng) 43-2138
Recent growth of Gulkana Glacier, Alaska Range, and its relation to glacier-fed river runoff (1986, p 91-99, eng) 43-878

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Possible mechanisms of crystal nucleation in clouds and their parametrization in numerical models (1988, p.7-13, rus) 43-1077

Mazur, P.
Anomalous light scattering at the surface of growing crystals, a theoretical analysis based on irreversible thermodynamics (1988, p.5267-5274, eng) 43-1423

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Effect of freezing and thawing on the stability of soil aggregates treated with organic wastes (1989, p.191-199, eng) 43-2368

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Freeze-thaw durability of wet-mix and dry-mix shotcretes with silica fume and steel fibres (1988, p.96-102, eng) 43-2589

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STAR-VUE/MARINE-VUE upgrades (1987, 81p., eng) 43-1708

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Phytoplankton standing crops within an antarctic ice edge assessed by satellite remote sensing (1988, p.12,487-12,498, eng) 43-723

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Scattering and reflection of acoustic waves by striated surfaces depicting the Arctic Ocean ice cover (1988, 117p., eng) 43-1922

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Activities at the Norwegian Hydrotechnical Laboratory (1989, p.617-623, eng) 43-4103

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Equation for calculating snow avalanche run-up against barriers (1987, p.605-612, eng) 43-1266
Mechanics of snow slab failure from a geotechnical perspective (1987, p 475-508, eng) 43-1256

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Atmospheric icing measurements on a test line in a mountain icing site (1988, p.477-485, eng) 43-3018
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Measurement of frost depth (1984, p.33-42, eng) 43-4313

McCord, T.B.
Analysis of Voyager images of Europa, plasma bombardment (1988, p.423-436, eng) 43-2323

McCoy, W.D.
Comment on "Paleoclimatic implications of the relationship between modern snowpack and late Pleistocene equilibrium line altitudes in the mountains of the Great Basin, western U.S.A." by Gregory A. Zielinski and William D. McCoy (1989, p.97-101, eng) 43-2479

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Ice jam flood frequency and annual damages at Dawson City on the Yukon River (1988, p.63-83, eng) 43-2165

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NOGAP E.6; Volume 1 Beaufort Sea current measurements, March-August 1987 (1988, 42p., eng) 43-4035

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Ice nucleation and antifreeze activity due to biological materials (1980, p.275-280, eng) 43-3948

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Vertical spatial coherence of scattering from the Arctic ice canopy: comparison of theory with experiment (1989, p.2378-2382, eng) 43-4374

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Alaska ground-water quality (1987, 8p., eng) 43-1734

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Study on wetting salt and sand stockpiles with liquid calcium chloride (1988, p.38-43, eng) 43-2211

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Studies of polar ice: insights for atmospheric chemistry (1989, p.363-377, eng) 43-3696

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Thermal performance degradation of wet insulations in cold regions (1988, p.25-34, eng) 43-152

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Layered-capacitor method for bridge measurements of conductive dielectrics 2 New algorithm for inversion and parameter fitting (1988, p.387-396, eng) 43-1314

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Examination of USAF Nephanalysis performance in the marginal cryosphere region (1988, p.1124-1137, eng) 43-3470

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Some advantages of using polarisation diversity illustrated through the analysis of radar data from a storm in Central Alberta (1988, p.237-240, eng) 43-1511

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Snow volume comparisons for atmospheric deposition monitoring (1988, p.124-135, eng) 43-4004

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Snow temperature profiles in the central Sierra Nevada (1983, p.9-18, eng) 43-4348

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Surging potential of polar ice streams: Part 1, Sliding and surging of large ice masses: a review (1985, 67p., eng) 43-880

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Millimeter-wave backscatter measurements of various snow forms (1988, p.451-452, eng) 43-1528

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Early Martian environments: the antarctic and other terrestrial analogs (1989, p.147-153, eng) 43-4580
Perennially ice-covered Lake Hoare, Antarctica: physical environment, biology and sedimentation (1989, p 305-320, eng) 43-3701

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Snow hydrology in the upper Yamuna basin, India (1988, p.84-93, eng) 43-4119

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Beaufort Environmental Monitoring Project 1986-1987; final report (1987, 175p., eng) 43-664

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Generation of internal waves by sea ice (1989, p.3287-3302, eng) 43-2396
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Late pleistocene periglacial wedge sites in Wyoming: an illustrated compendium (1987, 77p, eng) 43-1968

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Relative sea-level changes in Atlantic Canada: observed level and sedimentological changes vs. theoretical models (1987, p.87-96, eng) 43-3398

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Ice movement characteristics of the Bezengi glacier during its advancement stage (1987, p.95-99, rus) 43-236

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Field guide for predicting snow damage to ponderosa pine plantations (1988, 9p., eng) 43-1710

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Scientific cruise reports of Arctic Expeditions ARK IV/1, 2 & 3 (1989, 146p., eng) 43-4191

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Displacement of the crystallization front in the ice-water system (1989, p.109-113, eng) 43-2054

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Snow control with vortex and blower fences (1989, p.286-296, eng) 43-3573

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Snow control with vortex and blower fences (1989, p.286-296, eng) 43-3573

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AVHRR mosaic image of Antarctica (1989, p 669-674, eng) 43-4065

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Inexpensive remote snow-depth gauge: an assessment (1984, p.188-191, eng) 43-4333

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Heat and water balance estimation of variations in water temperature and ice phenomena in the estuarine region of the Danube River (1988, p.86-94, rus) 43-2392

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Technology of snow and ice removal (1989, p.104-112, eng) 43-2093

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Heat, carbon and water fluxes in a 12-box model of the world ocean (1988, p.161-177, eng) 43-2243

Mirenburg, IU.S.
Determination of rheological property parameters of frozen bases (1988, p.233-247, eng) 43-2666

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Calculation of stress-deforming conditions in flat foundations using electronic computers (1985, p.104-110, rus) 43-1665

Mironenko, V.A.
Forecasting changes in geological media caused by technical operations (1988, p.84-102, rus) 43-736

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Package of applied programs for numerical modeling of snow avalanches, mudflows and water flows (1988, p.161-165, rus) 43-3324
Prospects of using mathematical modeling in mapping of avalanche-danger regions (1988, p.133-136, rus) 43-950

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Ice nucleus measurements in the Kashka-Dar'ya River basin (1988, p.14-18, rus) 43-2711

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Underwater appearance of the Arctic (1988, p.74-76, rus) 43-4096

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Snow resources and regional runoff: regularities in the formation of runoff and estimation methods (1988, 192p., rus) 43-1886

Mitchell, D.L.
Evolution of snow-size spectra in cyclonic storms. Part I: Snow growth by vapor deposition and aggregation (1988, p 3431-3451, eng) 43-1533

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Antarctic winter; simulations with climatological and reduced sea-ice extents (1989, p.225-246, eng) 43-2836
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Atmospheric icing offshore eastern Canada (1986, p 325-341, eng) 43-277
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Deterioration and some properties of concrete at low temperatures (1988, p.9-24, eng) 43-4045

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Improved RP-HPLC method for determining nitroaromatics and nitramines in water (1988, 36p., eng) 43-1841

Miyata, K.
Snowfall and freeze forecasting system for national highway management in winter (1986, 16p., eng) 43-2700

Miyata, Y.
Frost heave mechanism model based on energy equilibrium (1988, p 91-98, eng) 43-65

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Depolarization due to raindrops and ice particles along Ka-band satellite communication path (1988, p 1272-1275, eng) 43-2279

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Crack closure measurements and fatigue threshold in the temperature range between -100 and 500 C (1988, p.1267-1272, eng) 43-980

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Probabilistic design for drifting Arctic ice features (1988, p.179-190, eng) 43-620

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Seasonal forecasting of winter precipitation as related to avalanche activity (1987, p.130-139, rus) 43-2511

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Evaporation preconcentration of trace elements in rainwater for inductively coupled plasma emission spectrometry (1985, p.659-664, jpn) 43-4190

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Prediction of road icing on national highway Routes 8 and 17 (1988, p.155-163, jpn) 43-1324

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Norwegian ice testing laboratory (1988, p 629-645, eng) 43-650

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Electromagnetic pulse sounding for geological surveying with application in rock mechanics and the rapid excavation program (1973, 169p., eng) 43-4164

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Experimental studies on the interaction between braking structures and moving snow masses (1987, p.311-317, rus) 43-2534

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Concrete and reinforced concrete studies (1988, 335p. (Pertinent p.261-281), rus) 43-2806

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Some aspects of snow cover development and avalanche formation in the Indian Himalaya (1987, p.453-462, eng) 43-1254

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Dynamic properties of thawed soils as a function of their physical conditions (1985, p.79-85, rus) 43-1661

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Oil-gas construction in the North: problems in ecology (round table discussion) (1988, p.15-24, rus) 43-897

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Ecohydrological approach to floral and vegetational patterns in Arctic landscape ecology (1987, p.414-424, eng) 43-190

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Use of surrogate snow samples to measure dry deposition on snowpacks in forests (1988, p.74-83, eng) 43-4118

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Impact of ice bergy bits on a concrete semisubmersible (1988, p.191-207, eng) 43-621

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Influence of frost action on the load exerted on buried pipe (1985, p 554-565, eng) 43-3491

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Glacial geodetic contributions to the mass balance and dynamics of ice shelves (1988, p.89-94, eng) 43-1950

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Wave propagation in a solid ice pack (1988, p.1702-1712, eng) 43-1482

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Continuous frozen ground index for flood forecasting (1983, p.109-119, eng) 43-4358
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Effect of ice formation on the elastic moduli of cement paste and mortar (1988, p.874-885, eng) 43-1444
Ice in cement paste as analyzed in the low-temperature scanning electron microscope (1989, p.306-314, eng) 43-2894

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Quaternary history and ice dynamics of the late Wisconsin Rainy and Superior lobes, central Minnesota (1989, 262p., eng) 43-3613

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Summer field season weather observations, West Gulkana Glacier and environs' 1986, 1987 (1988, p 123-142, eng) 43-2799

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Dielectric variability of a 130 m antarctic ice core: implications for radar sounding (1988, p.95-99, eng) 43-1951

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Cold weather concreting for oil production plant (1988, p.31-33, eng) 43-349

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Plant production, decomposition, and carbon efflux in a subarctic patterned fen (1989, p.156-162, eng) 43-4089

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Hydrologic investigations of water quality in selected placer mining areas in interior Alaska, Summer 1986 (1988, 73p., eng) 43-1689

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Studying certain characteristics of the surface layer of air above glaciers (1987, p.137-139, rus) 43-245

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Interpretation of piezocone penetrometer profiles in sediment from the Mackenzie Trough Canadian Beaufort Sea (1989, p.88-97, eng) 43-2203

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Influence of ground ice variability on settlement in thawing permafrost (1989, p.297-307, eng) 43-2111

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Reactive species responsible for inactivating the ice-nucleating activity of *Pseudomonas fluorescens* KUIN-1 by an ascorbic acid-Cu(II) ion system (1988, p 2015-2020, eng) 43-1140

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Approximate confidence intervals for verification criteria of the WMO intercomparison of snowmelt runoff models (1988, p.369-377, eng) 43-454

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Effect of additions of ground granulated blast furnace slag on the properties of concretes cured at low temperatures (1988, p.137-167, eng) 43-4051

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Airborne lidar observation of clouds in the antarctic troposphere (1989, p.491-494, eng) 43-4345

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Illusions and problems in water-budget synthesis (1983, p.419-423, eng) 43-3038

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Frost susceptibility of soils in Aomori province, Japan (1989, p.547-556, eng) 43-3127

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Results of computational analysis of a version of thermally insulated well casings (1987, p.75-80, rus) 43-2273

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Albedo of underlying surfaces of the USSR (1988, p.69-81, rus) 43-1776

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Ice streams and ice shelves: a review of some recent work by British Antarctic Survey glaciologists (1989, p.17-36, eng) 43-2660

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Frost-protected shallow foundations. Current state-of-the-art and potential application in the U.S. (1988, 130p. + appends., eng) 43-4165

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Ground snow loads for the 1990 national building code of Canada (1989, p 40-49, eng) 43-3550

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Regional and topoclimatic implications of rock glacier stratigraphy Blanca Massif, Colorado (1987, p 107-125, eng) 43-3049

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Monitoring snowpack conditions with an interactive geostationary satellite system (1986, p.51-60, eng) 43-3903

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Results of testing a numerical method of long-range forecasting of ice phenomena in the Barents and Kara seas during cold seasons (1988, p.32-40, rus) 43-801

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Prospects for comprehensive research on avalanches up to the year 2005 (1987, p.21-28, rus) 43-2495

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Low-temperature strength of truss joints with unshaped parts (1987, p.106-111, rus) 43-2459

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Runoff from hummocky swamps in Western Siberia (1989, p.88-94, rus) 43-4552
Variation in the components of the heat balance of swamps in Western Siberia (1988, p.30-37, rus) 43-2464

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Evaporation from intra-swamp lakes in the permafrost zone of Western Siberia (1988, p.38-54, rus) 43-2465

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Alaska geothermal bibliography (1989, 44p., eng) 43-3234
Preliminary results of water-quality investigations in the Mendenhall Peninsula and Auke Bay area, Juneau, Alaska (1988, 20p., eng) 43-1688

Mountain, K.R.
Paleoclimatic ice core program at Siple Station (1988, p.115-117, eng) 43-1626

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Experimental and theoretical approach to the thermal conductivity of wet porous media. 1. Experiments (1988, p 2305-2317, fre) 43-1380
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Regulating the thermal regime in highly mechanized placer mines in the North (1987, p 40-43, rus) 43-2287

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Framework for control of dynamic ice breakup by river regulation (1989, 14p., eng) 43-4385

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Vegetation-snow depth relationships in the boreal forest-tundra ecotone of Eastern Canada (1988, p.42-49, eng) 43-4115

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Optical properties of antarctic snow (1988, p 247-248, eng) 43-1644

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Arctic engineering principles applied to antarctic construction (1988, p.18-19, eng) 43-1712

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Relation between the Japan-Sea coastal heavy snowfall and upper winds (1987, p.1-16, eng) 43-825

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Study on ice melting at high pressures (1988, p.70-76, rus) 43-3305

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AC withstand voltage characteristics of insulator string covered with snow (1988, p.828-838, eng) 43-293

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Activities of the wintering party of the 27th Japanese Antarctic Research Expedition in 1986-1987 (1988, p.163-186, jpn) 43-841

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Application of some numerical simulation methods for the surface-layer avalanche at Maseguchi, Japan (1987, p.429-430, eng) 43-1251

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Development of high-strength steel plates for low-temperature use (1988, p.171-176, eng) 43-1276

Nakao, T.
Growth of ice covers in reservoirs using equilibrium surface temperature (1988, p.199-208, eng) 43-2993

Nakato, T.
Thermal analysis of heated lockwalls for ice control (1988, p.23-33, eng) 43-2976

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Bare ice field in east Queen Maud Land, Antarctica, caused by horizontal divergence of drifting snow (1988, p.156-160, eng) 43-1959
Ice coring operation at high altitudes in West Kunlun Mountains, China (1989, p.15-19, eng) 43-3436
Mass balance studies on Chongce Ice Cap in the West Kunlun Mountains (1989, p.37-43, eng) 43-3439
Stratigraphic and structural features of ice cores from Chongce Ice Cap, West Kunlun Mountains (1989, p.21-28, eng) 43-3437

Nakaya, S.
Origin of salts in pond waters of the Labyrinth in southern Victoria Land, Antarctica: a study on lithium and boron abundances (1988, p.103-112, eng) 43-839

Nakazawa, N.
Results from indentation tests on freshwater ice (1988, p 341-350, eng) 43-2934

Nakoriakov, V.E.
All terrain transport-technological vehicles (1988, 121p., rus) 43-2339

Namura, M.
Study on the toughness of large-heat input weld metal for low temperature-service TMCP steel (1988, p.1-9, eng) 43-1845

Nanninga, J.A.
Developing an effective snow plan (1989, p 58-60, eng) 43-4078

Nansen Remote Sensing Center, Solheimavik, Norway
NOAA AVHRR observations during the Marginal Ice Zone Experiment, between Spitsbergen and Greenland, June 7 to July 18, 1984 (1988, 132p., eng) 43-3959

Nara, K.
Application of an expert system to decisions on countermeasures against snow accretion on transmission lines (1988, p.1052-1058, eng) 43-1317

Narayanan, R.M.
Millimeter-wave backscatter measurements of various snow forms (1988, p.451-452, eng) 43-1528

Nardi, M.
Forecast of frost duration (1987, p.339-343, eng) 43-2254

Nardone, M.
Brillouin light scattering in low temperature water-ethanol solutions (1988, p.4469-4477, eng) 43-1029

Narita, H.
New classification of snow and ice on roads (1988, p.304-313, eng) 43-2931

Narita, S.
Model ice of the NKK Ice Model Basin (1988, p.782-792, eng) 43-2973
Model tests of an icebreaker in snow-covered ice (1988, p.216-226, eng) 43-2924

Narod, B.B.
Design and operation of a portable, digital impulse radar (1989, p.143-148, eng) 43-4151

Narumi, A.
Cooling and freezing process of water with a supercooled region up to the release of supercooling between horizontal concentric cylinders (1989, p.73-78, eng) 43-4200

Naruse, R.
Ablation process of snow and ice on roads (1988, p.294-303, eng) 43-2930
Bare ice field in east Queen Maud Land, Antarctica, caused by horizontal divergence of drifting snow (1988, p.156-160, eng) 43-1959
Closure rate of a 700 m deep bore hole at Mizuho Station, East Antarctica (1988, p.100-103, eng) 43-1952
Morphology, surface characteristics, and flow velocity of Solar Glacier, Patagonia (1988, p.414-421, eng) 43-2482
New classification of snow and ice on roads (1988, p.304-313, eng) 43-2931
Physical characteristics of snow-avalanche debris (1987, p 421-427, eng) 43-1250

Nasello, O.B.
Study of the initial stage of the accretion of ice (1980, p.365-372, eng) 43-3954

Nash, S.E.
Prefabricated metal buildings (1989, p.994-1004, eng) 43-4411

Nashid, M.S.
Probability based design of wood pole distribution lines (1987, p.167-175, eng) 43-1589

Nasseri, T.
Application of decision analysis to arctic exploration structures (1989, p.161-168, eng) 43-2623
Development of optimum techno-economic decisions for Arctic offshore installations (1988, p.551-565, eng) 43-646

National Research Council. Polar Research Board
Annual report 1988 and future plans (1989, 52p., eng) 43-2898

National Research Council. Polar Research Board. Ad Hoc Committee on Antarctic Physical and Chemical Oceanography
Physical oceanography and tracer chemistry of the southern ocean (1988, 128p., eng) 43-1173
National Research Council. Transportation Research Board
Deicing chemicals and snow control (1988, 53p., eng) 43-2205
Naumov, A.V.
Resistance to destruction of steel pipes in the temperature range of 77-293 K during static and dynamic loads (1987, p.100-105, rus) 43-2458
Navarre, J.P.
Snow mechanics: laboratory tests of snow strength (1987, p.129-137, fre) 43-1225
Statistical model for local avalanche forecasting (1987, p.571-580, fre) 43-1262
Nawwar, A.M.
Laser ignition of oil spills. Phase 2: outdoor demonstration experiments (1985, 36p. + appends, eng) 43-3244
MV *Arctic* structural performance. Final report (1985, var. p., eng) 43-3365
Segmented model technology for ice resistance determination (1988, p.113-124, eng) 43-616
Simple model for collision of floating bodies (1989, p.309-314, eng) 43-2640
Nawy, E.G.
Evaluation of cold-weather concrete patching materials (1989, p.36-44, eng) 43-2335
Nazarov, I.M.
Monitoring snow-cover pollution (1988, p.61-71, eng) 43-1454
Nazarov, V.D.
Penetration of solar radiation in the snow-firn layer on Vavilov Glacier (Severnaya Zemlya Archipelago, October Revolution Island) (1989, p.64-70, eng) 43-2048
Radiation characteristics of the snow cover of Vavilov Glacier (Severnaya Zemlya) (1989, p.55-63, eng) 43-2047
Nazintsev, IU.L.
Fast ice conditions during unloading of expedition ships at Druzhnaya base and Molodezhnaya and Novolazarevskaya stations (1988, p.93-98, rus) 43-3841
Heat and moisture exchange of antarctic fast ice with the atmosphere in Alasheev Bight (1989, p.54-62, eng) 43-4370
Nebolsine, P.
Laser ignition of oil spills: telescope assembly and testing (1988, 23p., eng) 43-3246
Nebolsine, P.E.
Laser ignition of Arctic oil spills (1987, p.355-365, eng) 43-3242
Laser ignition of oil spills. Phase 1. concept development. Final report (1985, 89p. + appends. eng) 43-3243
Nedell, S.S.
Sedimentary geology of the Valles Marineris, Mars and antarctic Dry Valley lakes (1987, p.269-444, eng) 43-1699
Nedesheva, G.N.
Cryolithological structure of subaqueous delta deposits of the Kolyma River (based on core drilling results) (1989, p.48-53, rus) 43-4384
Neeman, B.U.
Milankovitch theory and climate sensitivity 2. Interaction between the Northern Hemisphere ice sheets and the climate system (1988, p.11,175-11,191, eng) 43-724
Nefedova, T.V.
Changes in soils of northern West Siberia, induced by pipeline construction (1988, p.60-68, rus) 43-819
Technogenic changes in soils of northern regions of western Siberia related to pipe laying (1988, p.50-57, eng) 43-4261
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Yield stress of frozen hydrocarbon fuels (1989, p.843-848, eng) 43-4558
Neiland, B.J.
Planting willow for moose habitat restoration on the North Slope of Alaska (1987, p 537-543, eng) 43-204
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Snow reserves on the slopes of little studied mountain basins (1988, p.86-89, rus) 43-1784
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Methods and techniques in geocryological research (1988, 162p., rus) 43-1595
Problems in developing territories with permafrost (1988, p.36-43, rus) 43-2198
Nelson, D.J.
Freeze protection of solar irradiated paved surfaces using integral phase-change material (1988, p.195-200, eng) 43-3819
Nelson, D.M.
Particulate matter and nutrient distributions in the ice-edge zone of the Weddell Sea: relationship to hydrography during late summer (1989, p.191-209, eng) 43-2886
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Hydrostatic-system palsas at Toolik Lake, Alaska field observations and simulation (1986, p.79-94, eng) 43-543
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Underwater observations of ice/structure interactions in small-craft harbors (1989, p.930-942, eng) 43-3790
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Analysis of Voyager images of Europa: plasma bombardment (1988, p.423-436, eng) 43-2323
Nelson, R.E.
Postglacial pollen record from western Kodiak Island, Alaska (1988, p.59-63, eng) 43-157
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Snow control on floating ice sheets (1989, p.161-169, eng) 43-2099
Nenow, D.
Some replica possibilities for electron-microscope investigations of ice crystal morphology (1988, p.1431-1436, eng) 43-2309
Neralla, V.R.
Atmospheric Environment Service Regional Ice Model (RIM) for operational applications (1988, p 135-153, eng) 43-1565
Nessim, M.
Development of optimum techno-economic decisions for Arctic offshore installations (1988, p.551-565, eng) 43-646
Nessim, M.A.
Application of decision analysis to arctic exploration structures (1989, p.161-168, eng) 43-2623
Nesterov, V.V.
Regional characteristics of scientific and technological progress in construction under polar conditions (1987, p.58-63, rus) 43-106
Neuman, C.M.
Occurrence and potential significance of warm weather during winter in the eastern Canadian Arctic (1988, p.395-403, eng) 43-2480
Neustroev, A.N.
Early progress of *Mikhail Somov* in Alasheyev Bight in spring 1976 (1988, p.121-125, 127, rus) 43-3845
Nevecherla, V.L.
Cryogenic heaving in seasonal and perennial freezing of soils (1989, p.58-65, rus) 43-4613
Nevel, D.E.
Iceberg impact forces (1986, p.345-369, eng) 43-278
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Nitrogen removal works year-round (1989, p.68, eng) 43-4080
Newark, M.J.
Ground snow loads for the 1990 national building code of Canada (1989, p.40-49, eng) 43-3550
Newbury, G.S.
Elasticity solutions for semi-infinite ice sheets subjected to in-plane and lateral edge loads (1988, p 691-701, eng) 43-655
Newell, J.
Arctic cloudiness in spring from satellite imagery: a response (1988, p.539-540, eng) 43-2036
Feasibility study of full scale iceberg impact experiments (1989, p.383-392, eng) 43-2649
Newman, W.S.
Holocene neotectonics and the ramapo fault zone sea-level anomaly: a study of varying marine transgression rates in the lower Hudson estuary, New York and New Jersey (1987, p.97-111, eng) 43-3399
Ney, S.C.
Cold weather probability and the effects of cold weather on a natural gas pipeline (1988, p.749-763, eng) 43-1336
Nezherlev, A.G.
Possible reasons for the onset of the avalanche-forming process (1988, p.49-52, rus) 43-2677
Nghiem, S.V.
Theoretical models for polarimetric microwave remote sensing of earth terrain (1989, p.61-81, eng) 43-4422
Nicholaichuk, W.
Managing snow to extend the areal range of winter wheat production (1986, p.30-40, eng) 43-3901
Nicholls, C.F.
Remote monitoring of depth of snow on ground with a micrologger (1987, p 297-214, eng) 43-1297
Nichols, P.D.
Antarctic benthic and sea-ice microalgal interactions: food chain processes and physiology (1988, p.174-175, eng) 43-1640
Changes in the lipid composition of antarctic sea-ice diatom communities during a spring bloom. an indication of community physiological status (1989, p.133-140, eng) 43-4185
Nicod, J.
Eastern Beaufortin (1988, p.121-146, fre) 43-1163
Nie, P.M.
Dynamic state of air temperature in railroad tunnels in cold regions (1988, p.450-453, chi) 43-2856
Nielsen, A.
Snow-melting and snow loads on glass roofs (1989, p.168-177, eng) 43-3562
Nielsen, K.
Tunnelling in permafrost (1988, p.319-328, eng) 43-631
Nielson, R.K.
Low temperature thermal treatment of volatile organic compounds (1988, p.187-202, eng) 43-1810
Nieminen, J.
Moisture transfer in building structures. numerical methods (1989, 102p., fin) 43-3964
Nieminen, P.
Frost damage in road materials in Kittilä, Northern Finland (1989, p.709-719, eng) 43-3141
Porosity and related properties of frost susceptible tills (1989, p 557-564, eng) 43-3128
Nikiforov, E.G.
Water temperature field in the polar hydrological zone of the Greenland Sea in summer 1980 (1986, p 68-81, rus) 43-1885
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Experience with building construction and operation by the permafrost soil stabilization method (1988, p.181-184, eng) 43-142
Nikitin, A.I.
Contamination of the White Sea by radioactive waste of West European countries (1989, p.620-622, eng) 43-2235
Nikitin, P.P.
Repairs and protection of piles in hydraulic structures (1988, p.55-56, rus) 43-896
Nikitin, V.A.
Internal friction characteristics of sea ice (1983, 8p., eng) 43-3171
Nikolaev, IU.V.
Computer processing of ice data analyses obtained from side looking radar (1987, p 86-90, rus) 43-890
Nikolaev, V.I.
Reconstruction of natural conditions near Beaver Lake in Early Pleistocene (1988, p.108-111, rus) 43-3311
Nikolaeva, S.K.
Behavior of water saturated sand-clay ground under dynamic conditions (1988, p 207-215, rus) 43-886
Nikolenko, A.V.
Laboratory-determined characteristics of water vapor diffusion in snow cover (1988, p.90-96, rus) 43-941
Thermophysical properties of snow and ice on the Vavilov Dome, Severnaya Zemlya (1987, p.51-58, rus) 43-227
Nikonov, V.V.
Morphology of forest soils on the Kola Peninsula (1988, p.68-76, eng) 43-1119
Nilsson, A.
National highway system in the Swedish mountains (1985, p 88-95, swe) 43-364
Nilsson, B.
Results of evaluations of snow data collected during a 10-year period (1985, p.115-121, swe) 43-368
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Environmental loads on structures NPD—guidelines for loads and load effects (1989, p.133-138, eng) 43-2619
Nim, IU.A.
Electric sounding using transitional processes in geocryological mapping of the arctic basin coastal zone (1989, p.105-111, rus) 43-4615
Nip, A.M.K.
Snow retention in a large cutblock (1987, p.491-496, eng) 43-1309
Nisbet, J.S.
General equations for the motions of ice crystals and water drops in gravitational and electric fields (1989, p.11-29, eng) 43-2902
Nishi, T.
Development of new type of fence as protection from snow cornices (1988, p.225-230, jpn) 43-2703
Nishikawa, I.
Crack closure measurements and fatigue threshold in the temperature range between -100 and 500 C (1988, p.1267-1272, eng) 43-980
Nishikawa, K.
Winter concrete work using air dome as a protective structure (1988, p 237-253, eng) 43-4055
Nishikawa, M.
Evaporation preconcentration of trace elements in rainwater for inductively coupled plasma emission spectrometry (1985, p.659-664, jpn) 43-4190
Nishimura, H.
Characteristic growth processes of ice crystals on the antarctic ice sheet (1988, p.104-108, eng) 43-1953
Nishimura, K.
Experiments on snow-avalanche dynamics (1987, p.395-404, eng) 43-1248
New classification of snow and ice on roads (1988, p.304-313, eng) 43-2931
Physical characteristics of snow-avalanche debris (1987, p.421-427, eng) 43-1250
Nishio, F.
Correlation of tephra layers in antarctic ice by trace element abundances and refractive indices of glass shards (1987, p.103-118, eng) 43-3409
Distribution of reflected power from the bed by radio echo-sounding in the Shirase Glacier drainage area, east Dronning Maud Land, Antarctica (1989, p.124-126, eng) 43-3346
Glaciological research program in east Queen Maud Land, East Antarctica, Part 7, 1986 (1988, 49p., eng) 43-540
Glaciological research program in East Queen Maud Land, East Antarctica, Part 8, 1986-1987 (1989, 59p., eng) 43-3071

Inference of radio scattering parameters of antarctic ice sheet using 179 MHz airborne radio echo sounding data (1988, p.157-160, eng) 43-1506
Sea salt in deposited snow on sea ice and snow drift (1988, p.17-24, jpn) 43-219
Temperature profile in a 700 m borehole at Mizuho Station, East Antarctica (1988, p 277-285, jpn) 43-2328

Nishio, N.
Experimental study of frost heaving of a saturated soil (1988, p 65-72, eng) 43-62

Nishiumi, H.
Conceptual design of multipurpose structure in ice covered sea (1988, p 580-590, eng) 43-2956

Nishizawa, S.
Structural design of new type three legged ice barrier (1988, p.591-600, eng) 43-2957

Nishizumi, K.
Study of antarctic meteorites and polar ice using radionuclides produced by cosmic rays (1988, p.85-86, eng) 43-1617

Nishnevich, L.M.
Evaluation of the stability of pile supports for reinforced-concrete bridges against action of frost-heave forces (1985, p.60-66, rus) 43-1658

Nistratova, T.A.
Frozen-engineering-geological conditions in the southeastern part of the Charskaya Basin for land-based industrial and civil engineering (1987, p.117-124, rus) 43-3376

Nitta, N.
Tidal entrances in the Okhotsk coast, Japan (1988, p.103-111, eng) 43-2984

Niva, J.
Concrete pavement in arctic conditions (1988, p.10-11, fin) 43-1795

Nixon, W.A.
Alluvium-reinforced ice: a preliminary report of bending strength tests (1989, p.309-313, eng) 43-4451
Application of fracture mechanics to ice/structure interactions (1988, p.1-12, eng) 43-150
Effects of prestrain on the compressive ductile-to-brittle transition in ice (1988, p.109-117, eng) 43-2914
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Preliminary results concerning the effects of notch acuity and pre-strain on the fracture toughness of equiaxed freshwater ice (1989, p.23-29, eng) 43-2605
Tensile strength of cracked ice (1989, p.303-311, eng) 43-2242

Niziol, T.A.
Probing lake-effect snowbands using a portable radiosonde unit (1988, p 7-12, eng) 43-4112

Noble, P.G.
Conceptual development of an ice piloting information system (1988, 57p, eng) 43-1352

Nogovitsyn, D.D.
Environmental impact of hydroelectric power plants in the Far North (1987, 103p, rus) 43-42

Nohara, I.
Studies on a practical use of snow melting system by using the heat of ground water through pipes (1988, p.285-309, jpn) 43-457

Nohguchi, Y.
Mathematical model of avalanche motions (1985, p.409-414, eng) 43-2190
Similarity solutions for avalanches of granular materials down curved beds (1988, p 153-174, eng) 43-4253

Noma, T.
Heat transfer involving close-contact and natural convective melting in capsules (1989, p.169-174, eng) 43-4213

Nomura, N.
Fracture toughness and strain softening properties of frozen mortar (1988, p 25-36, eng) 43-4046

Noone, K.J.
Soot in the Arctic snowpack: a cause for perturbations in radiative transfer (1985, p.2045-2053, eng) 43-988

Nooze, P. de
Numerical modelling of glacier d'Argentière and its historic front variations (1989, p.373-389, eng) 43-3195

Nordal, R.S.
Frost protection in design and construction (1989, p.127-163, eng) 43-3096

Nordell, B.
Pressure-melting of ice (1989, p 249-258, eng) 43-3730

Nordén, P.
Extra high strength structural steels for ice breakers (1989, p 839-851, eng) 43-3782

Nordgren, R.P.
Dynamic ride up and crushing of short ice ridges on conical structures (1989, p.287-291, eng) 43-2638

Nordlund, O.P.
Full-scale measurements of the dynamic properties of a channel marker (1988, p.549-560, eng) 43-2953
Measurements of ice-induced vibrations of channel markers (1988, p.537-548, eng) 43-2952

Nordström, K.
Geomorphic impact of snowmelt on slope erosion and sediment production (1985, p.32-41, swe) 43-1014

Norem, H.
Continuum model for calculating snow avalanche velocities (1987, p.363-379, eng) 43-1246

Norland Science and Engineering Ltd.
Vessel performance and trafficability study for the MV *Arctic* 1987 trading season, Appends A, B and C (1988, 2 pieces, eng) 43-2151

Norman, G.A., Jr.
Supercooled warm rain process and the specification of freezing precipitation (1988, p.2172-2182, eng) 43-4578

Norment, H.G.
Numerical studies of sampling efficiencies of the ASCME and PMS aspirator hydrometeor measurement instruments (1986, p.57-75, eng) 43-4627

North, G.R.
Origin of the Greenland ice sheet (1985, p 66-67, eng) 43-1161

Northern Hydrocarbon Development in the Nineties: a Global Perspective, Yellowknife and Calgary, Canada, Sep. 30-Oct. 4, 1988
Conference proceedings (1989, 257p, eng) 43-3487

Northern Libraries Colloquy, 12th, Boulder, CO, June 5-9, 1988
Twelfth Northern Libraries Colloquy, 5-9 June 1988 (1988, 331p., eng) 43-792

Norwegian-United States Cold Weather Conference, Oslo, Norway, June 18-24, 1987
Proceedings (1987, var.p., eng) 43-218

Noskov, B.D.
Studying the effect of pressure ridges on structures built on the continental shelf (1986, p.148-158, rus) 43-731

Noskov, IU.A.
Transport of freezing cargoes: a handbook (1988, 206p., rus) 43-2895

Notenboom, W.G.
Construction of the Pangnirtung water reservoir (1988, p 613-632, eng) 43-1329

Nottingham, D.
Method and H-pile tip for driving piles in permafrost (1987, 8 col., eng) 43-1061
Pipeline supported structures on driven piles in permafrost state of the art (1983, p.326-346, eng) 43-3418

Novakovskii, B.A.
Study on snow cover dynamics from scanner space images (1988, p.182-186, rus) 43-3276

Novikov, I.P.
Compaction of a layer of loose soil by artificial thawing (1989, p.19-20, rus) 43-4464

Novikov, S.M.
Evaporation from intra-swamp lakes in the permafrost zone of Western Siberia (1988, p.38-54, rus) 43-2465
Freezing of swamps in the middle part of the Ob' River region (1988, p.55-69, rus) 43-2466
Problems of swamp hydrology (1988, 152p., rus) 43-2461
Study on hydrometeorological conditions for the harvest of perennial grasses in drained swamps (for example, old agricultural drainage systems) (1988, p.114-133, rus) 43-2471

Novorotskaia, A.G.
Effect of economic activity on the chemical composition of the snow cover of the southern Amur area (1988, p.116-120, rus) 43-3267

Noyel, G.A.
Dielectric properties of supercooled glycerol-water solutions (1988, p.627-638, eng) 43-1315

Numata, S.
Effect of additions of ground granulated blast furnace slag on the properties of concretes cured at low temperatures (1988, p.137-167, eng) 43-4051

Numata, Y.
Parameterization of snow albedo (1988, p.216-224, jpn) 43-2702
Parameterization of the snow density in the top snow layer (1988, p.80-86, jpn) 43-1909

Numazawa, K.
Application of the freezing method to the undersea connection of a large diameter shield tunnel (1988, p.383-388, eng) 43-100

Nummedal, D.
Sea-level fluctuation and coastal evolution (1987, 267p, eng) 43-3391
Transgressive stratigraphy at sequence-bounding unconformities: some principles derived from Holocene and Cretaceous examples (1987, p.241-260, eng) 43-3408

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Heating formworks with conductive coverings in cast-in-place construction (1987, 138p., rus) 43-1137

Nuriev, F.Z.
Deterioration of building foundations in the town of Dudinka due to cryogenic factors (1988, p.135-140, rus) 43-538

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Influence of forest stand characteristics on snow interception in the coastal forests of British Columbia (1988, p.566-573, eng) 43-295

Nyberg, R.
Mass movements, nivation processes and climatic fluctuations in northern Scandinavian mountains (1988, p.245-253, eng) 43-927
Nivation and local glaciation in Scania and Lapland, Sweden. A research project (1985, p.2-7, swe) 43-1009
Recent and Pleistocene local glaciation in Spain—a review (1985, p 49-55, swe) 43-1016

Nye, C.J.
Alaska geothermal bibliography (1989, 44p., eng) 43-3234

Nye, J.F.
Geometry of water veins and nodes in polycrystalline ice (1989, p.17-22, eng) 43-4135

Nygård, M.K.
Numerical simulation of ice behaviour and ice structure interaction (1988, p.261-274, eng) 43-626

Nyman, K.J.
Design of single pile supports for arctic pipelines (1983, p 525-540, eng) 43-3423
Facility designs in the Arctic for the Kuparuk Pipeline System (1983, p 84-107, eng) 43-3415
Thaw settlement analysis for buried pipelines in permafrost (1983, p.300-325, eng) 43-3417

Nyström, B.
On a finite element model for freezing and thawing soils (1989, p 342-353, eng) 43-3739

Nyström, M.
Finite element analysis of floating ice sheets (1988, p.715-725, eng) 43-657
Finite element discretization of sea ice plates (1988, p.439-450, eng) 43-2943
Mathematical modeling of floating ice sheets (1987, 11p, eng) 43-1106

Nystuen, J.A.
Precipitation in the Canadian Atlantic Storms Program: measurements of the acoustic signature (1989, p.237-257, eng) 43-4463

Oakes, A.G.
Nimbus-7 data product summary (1989, 106p., eng) 43-2247

Oates, K.
Diffusion and location of hydrochloric acid in ice: implications for polar stratospheric clouds and ozone depletion (1989, p 487-490, eng) 43-4430

Obata, H.
Reactive species responsible for inactivating the ice-nucleating activity of *Pseudomonas fluorescens* KUIN-1 by an ascorbic acid-Cu(II) ion system (1988, p.2015-2020, eng) 43-1140

Oborina, S.F.
Relationship of dynamics of the border zone of the antarctic ice cover with tides (1989, p.137-142, eng) 43-2059

Obradović, M.M.
Isotopic and geochemical study of snowmelt runoff in a small Arctic watershed (1986, p.15-30, eng) 43-835

O'Brien, H.
Overview of obscuration in the cold environment (1988, p.537-555, eng) 43-3433
Snow as a thermal background: preliminary results from the 1987 field test (1989, p.5-24, eng) 43-3873
Thermal measurements in snow (1986, p.183-193, eng) 43-4634

O'Brien, S.G.
Digitized Green Function code for scattering by irregular inhomogeneous particles (1986, p.93-100, eng) 43-4629
Millimeter wave scattering by snow crystals and equivalent solids of revolution (1986, p.77-91, eng) 43-4628
Propagation of polarized millimeter waves through falling snow (1988, p.2445-2450, eng) 43-975
Scattering by irregular inhomogeneous particles via the digitized Green's function algorithm (1988, p.2431-2438, eng) 43-973
Scattering of millimeter waves by snow crystals and equivalent homogeneous symmetric particles (1988, p.2439-2444, eng) 43-974

Obukhov, A.I.
Inflow of polluting substances into the snow cover and soils of city lawns (1988, p.17-20, rus) 43-1121

Ochifuji, K.
Experiments and calculations for ground heat extraction and storage with a heat pump (1989, p.227-231, eng) 43-4217

O'Connell, S.
Scientific ocean drilling in the polar regions (1989, p.1001-1011, eng) 43-3797

Ödegård, R.
Periglacial forms related to terrain parameters in Jotunheimen, southern Norway (1988, p.59-61, eng) 43-1726

Odesskii, P.D.
Determination of the effect of elastic energy factor on steel destruction (1987, p.66-72, rus) 43-2455

Odrova, T.V.
Changes in the regime of the Yenisey and Angara rivers due to flow regulation (1987, p.84-95, rus) 43-51

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Effects of topography and nutrient status on the biomass, vegetative characteristics, and gas exchange of two deciduous shrubs on an arctic tundra slope (1988, p.342-351, eng) 43-291

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Energy balance calculations on and near Hintereisferner (Austria) and an estimate of the effect of greenhouse warming on ablation (1989, p.305-323, eng) 43-3191
Evolution of the east antarctic ice sheet: a numerical study of thermo-mechanical response patterns with changing climate (1988, p.52-59, eng) 43-1944
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Proceedings (1989, 418p., eng) 43-3176
Simulation of historic glacier variations with a simple climate-glacier model (1988, p.333-341, eng) 43-1990
Oeschger, H.
Environmental record in glaciers and ice sheets (1989, 403p., eng) 43-3677
North Atlantic deep water formation: information from ice cores (1985, p.27-31, eng) 43-1153
Past environmental long-term records from the Arctic (1989, p.287-317, eng) 43-3693
Offshore Technology Conference, 20th, Houston, TX, May 2-5, 1988
Proceedings (1988, 4 vols., eng) 43-708
O'Flynn, B.
Composite ice-resisting walls (1988, 7p, eng) 43-118
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Automation of radar measurements of the thickness of sea ice (1987, p.982-985, eng) 43-2844
Penetrating radar sensing of oceanic and freshwater ice with digital signal processing (1987, 314p., eng) 43-4183
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Crack closure measurements and fatigue threshold in the temperature range between -100 and 500 C (1988, p.1267-1272, eng) 43-980
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Dislocations in artificially grown single crystals of ice (1988, p.27-47, eng) 43-1415
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Rationalization of cold-weather concreting using non-freezing agent (1988, p.168-191, eng) 43-4052
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Characteristics of heat and water fluxes on glacier and ground surfaces in the West Kunlun Mountains (1989, p.89-98, eng) 43-3446
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Heat and water balances on glaciers and ground surfaces at high altitudes in the West Kunlun Mountains, China (1989, p.147-152, eng) 43-4212
Meteorological conditions of the West Kunlun Mountains in the summer of 1987 (1989, p.67-76, eng) 43-3443
Permafrost and ground water on the southern slope of West Kunlun Mountains (1989, p.105-110, eng) 43-3448
Recent advances in automatic snow and ice observations. Part 1 (1988, p.231-236, jpn) 43-2704
Ohkita, S.
Study on the toughness of large-heat input weld metal for low temperature-service TMCP steel (1988, p.1-9, eng) 43-1845
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Road grip and its measurement (1985, p.179-197, swe) 43-373
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Behaviour of concrete at low temperatures (1989, p.808-819, eng) 43-3779
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Distribution of reflected power from the bed by radio echo-sounding in the Shirase Glacier drainage area, east Dronning Maud Land, Antarctica (1989, p.124-126, eng) 43-3346
Glaciological research program in east Queen Maud Land, East Antarctica, Part 7, 1986 (1988, 49p., eng) 43-540
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Inference of radio scattering parameters of antarctic ice sheet using 179 MHz airborne radio echo sounding data (1988, p.157-160, eng) 43-1506
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Comparison of simulated runout distances of snow avalanches with those of actually observed events in Japan (1987, p.463-473, eng) 43-1255
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Mechanical properties of circular slabs of frozen sand and clay in bending tests (1988, p.187-192, eng) 43-76
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Milankovitch theory and climate sensitivity 2. Interaction between the Northern Hemisphere ice sheets and the climate system (1988, p.11,175-11,191, eng) 43-724
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Estimating the water equivalent of snow cover in a mountainous region from precipitation and daily mean temperature (1989, p.37-48, jpn) 43-4519
Exposure tests of concrete under freezing and thawing environment (1988, p.331-351, eng) 43-4060
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Experimental study on adfreeze bond strength of sea ice to heavy-duty coated steel pipe piles (1988, p.281-293, eng) 43-2929
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Performance monitoring of onshore structures at Svalbard (1988, p.329-342, eng) 43-632
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Pipe fracture by freezing in curved water pipes (3rd report, freezing behavior of 45-degree curved and straight pipes) (1988, p.984-992, jpn) 43-4485
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Influence of air convection on the hygrothermal performance of building structures (1989, 106p., fin) 43-3965
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Temperature profile in a 700 m borehole at Mizuho Station, East Antarctica (1988, p.277-285, jpn) 43-2328
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Integrated remote sensing for Barents Sea ice (1988, p.495-506, eng) 43-643
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Peculiarities of the formation of catastrophic avalanches (1987, p.68-74, rus) 43-230
Typing of winters in terms of the leading factors of avalanche formation under the conditions of the Caucasus (1987, p.110-117, rus) 43-2508
Winters of the greatest avalanche hazard in the Elbrus Mountain area (1988, p.106-110, rus) 43-3264
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Effect of glaciers on annual run-off, Johan Dahl Land, south Greenland (1988, p.200-207, eng) 43-165
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Arabinoxylans from rye and wheat seed that interact with ice (1989, p.173-185, eng) 43-3541
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Measurements of the mechanical properties of snow (1985, p.173-178, swe) 43-372
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Design procedures for detachable platforms located in iceberg infested areas (1988, p.451-462, eng) 43-2944
Technical and economic feasibility of platform systems in iceberg infested areas (1989, p.918-929, eng) 43-3789
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Atmospheric transport and deposition of trace elements onto the Greenland Ice Sheet (1985, p.2065-2081, eng) 43-990
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Observations of Arctic haze during polar flights from Alaska to Norway (1985, p.2143-2151, eng) 43-997
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Rock glacier response to abrupt changes in talus production (1987, p.55-64, eng) 43-3046
Role of advection in the energy balance of late-lying snowfields. Niwot Ridge, Front Range, Colorado (1988, p.1962-1968, eng) 43-2023
Omar, A.F.
Ice force estimation during local impact of a ship's plate (1988, p.101-112, eng) 43-615
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Dynamic and thermodynamic modelling of sea ice in coastal seas (1989, p.377-384, eng) 43-3742
Modeling the thermal regime of estuaries (1988, p.346-355, eng) 43-3007
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Timing and duration of river ice break-up (1987, p.192-196, eng) 43-401
Using the borehole jack to determine changes in river ice strength (1988, p.283-303, eng) 43-2177
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Information systems planning study (1987, 48p., eng) 43-4591
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Slushflow release mechanism: a first approximation (1987, p.331-336, eng) 43-1242
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Characteristics of hot wire anemometer in low temperature flow (effect of aspect ratio) (1988, p.387-392, jpn) 43-4484
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Examination of the terminal velocity of falling snowflakes (1988, p.63-71, jpn) 43-1907
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Variability of ice growth characteristics in Lake Haruna, Japan (1988, p.209-218, eng) 43-2994
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Elasto-plastic analysis of total ice force and local ice pressure acting on a circular pile (1988, p.351-360, eng) 43-2935
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Distribution of periglacial landforms in the Langtang Valley, Nepal Himalaya (1989, p.209-220, eng) 43-3463
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Intercomparison of synthetic- and real-aperture radar observations of Arctic sea ice during winter MIZEX '87 (1988, p.1419-1422, eng) 43-1890
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Effects of frost hardening, dehardening and freezing stress on *in vivo* chlorophyll fluorescence of seedlings of Scots pine (*Pinus sylvestris* L.) (1988, p.231-238, eng) 43-1058
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Evaporation and melting of ice crystals (1989, 101p., eng) 43-3606
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Durability of concrete structures. Coating protection against atmospheric acid attack (1988, 41p. + appends., eng) 43-1706
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Observations of low-frequency acoustic-to-seismic coupling in the summer and winter (1989, p.352-359, eng) 43-4500
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Ice reserves in the south of Eastern Siberia (1987, p.15-27, rus) 43-3654
Orheim, O.
Glaciological investigations of Store Supphellebre, West-Norway (1970, 48p., eng) 43-791
Numerical analysis of landsat thematic mapper images of Antarctica. surface temperatures and physical properties (1988, p.109-120, eng) 43-1954
Orlov, A.V.
Formation of moraines on Tien Shan glaciers (1988, p.215-223, rus) 43-965
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Estimating concrete frost resistance during production (1988, p.35-37, rus) 43-3849
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Meteorological and aerological conditions of the Novaya Zemlya bora (1989, p.88-96, eng) 43-3233

Results of investigations of the ice regime of the northwestern Atlantic and the development of techniques to forecast the ice conditions in its individual regions (1989, p.17-25, eng) 43-3227

O'Rourke, M.
Codes and standards' perspective (1989, p.507-509, eng) 43-3597
Modeling wind effects on drifting (1989, p 178-187, eng) 43-3563
Roof snow loads; drifting against a higher wall (1987, p.124-132, eng) 43-3935
Snow load data analysis, winter 1976-77 (1977, 9p. + appends., eng) 43-931

Orth, W.
Creep formula for practical application based on crystal mechanics (1988, p.205-211, eng) 43-79
Two practical applications of soil freezing by liquid nitrogen (1988, p.389-394, eng) 43-101

Orwig, C.E.
Making observations and models agree in spring snowmelt forecasting (1984, p.149-160, eng) 43-4325
Use of new SSARR model automatic updating procedure (1988, p.52-57, eng) 43-5996

Orzhekhovskii, U.R.
Investigation of frost heave of soils and its affect on pile foundations (1989, p.503-510, eng) 43-3123

Osada, K.
Glaciological research program in east Queen Maud Land, East Antarctica, Part 7, 1986 (1988, 49p, eng) 43-540
Sea salt in deposited snow on sea ice and snow drift (1988, p.17-24, jpn) 43-219

Osborn, M.T.
Lidar observations of arctic polar stratospheric clouds, 1988: signature of small, solid particles above the frost point (1988, p.867-870, eng) 43-1553

Osborne, R.D.
Thermal mapping of road surface temperature (1983, p.212-213, eng) 43-1695

Osetinskii, IU.V.
Analysis of frost resistant concretes with damping components (1989, p.42-45, rus) 43-3860

Osgood, S.
DYE-2 and DYE-3—a 30 year engineering history (1989, p.11-26, eng) 43-2085

Oshima, M.
Okhotsk program and related activities (1988, p.71-88, eng) 43-613

Osipenko, N.M.
Localized brittle fracture of thin solids with cracklike effects under compression with containment (1987, p.150-159, eng) 43-605
Mechanics of destruction and some problems of ice destruction (1987, 41p. + appends., eng) 43-719

Osipov, A.E.
Studies on snow cover to evaluate conditions for winter recreation (1988, p 81-89, rus) 43-3307

Osipov, V.I.
Thixotropy of water-saturated soils, its nature and the determining factors (scientific review) (1988, p.3-31, rus) 43-597

Oskomov, V.V.
Influence of atmospheric precipitation intensity on the neutron component of cosmic radiation (1987, p.72-75, rus) 43-1047

Oslo. Norsk Polarinstitutt
Yearbook of the Norwegian Polar Research Institute, 1987 (1988, 46p., eng) 43-346

Osmonov, K.
Formation and dispersion of surface moraines in the Koylyu River basin (1988, p.78-92, rus) 43-2388

Osokin, N.I.
Albedo of characteristic surfaces of Mongolia according to land and satellite survey data (1988, p.101-109, rus) 43-110

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Model of snow in a study of motion in universal gliding units (1988, p.52-61, rus) 43-2341
Modeling motion of universal gliding units (1988, p.90-101, rus) 43-2342

Osterkamp, T.E.
Frazil ice nucleation by ejecta from supercooled water (1986, p.249-263, eng) 43-272
Investigation of frazil and anchor ice and their role in ice cover development (1989, 14p., eng) 43-4486
Mapping shallow permafrost by electromagnetic induction—practical considerations (1988, p.279-288, eng) 43-1348
Measurements of permafrost temperatures to evaluate the consequences of recent climate warming; Final report (1987, 21p., eng) 43-1729
Salt redistribution during laboratory freezing of saline sand columns (1988, p.29-33, eng) 43-57

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Historic glacier variations in Scandinavia (1989, p.109-128, eng) 43-3179
Sediment production in different types of glaciers (1985, p.28-31, swe) 43-1013

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Concrete and reinforced concrete studies (1988, 335p. (Pertinent p 261-281), rus) 43-2806

Ostroumov, M.N.
Unusual ice crystals in central Antarctica (1988, p.97-101, rus) 43-1766

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Behavior of water saturated sand-clay ground under dynamic conditions (1988, p.207-215, rus) 43-886

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Relationship of vegetation type and slope gradient to trail erosion in interior Alaska (1987, p.450-452, eng) 43-1478

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Conceptual design of multipurpose structure in ice covered sea (1988, p 580-590, eng) 43-2956

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Consideration of wind effect in standardization of snow load (1989, p.256-263, eng) 43-3570

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Transport and chemical composition of the summer aerosol in the Norwegian Arctic (1985, p.2109-2120, eng) 43-993
Vertical distribution of aerosols in the Norwegian Arctic (1988, p.2213-2222, eng) 43-1203

Otterman, J.
Dependence of snow melting and surface-atmosphere interactions on the forest structure (1988, p.1-8, eng) 43-1377

Ottesen Hansen, N.E.
Dynamic ice loads on the Great Belt Western Bridge (1989, p.453-466, eng) 43-3748

Ottosen, O.
Energy balance on outlet glaciers from the Inland Ice, West Greenland (1987, p.99-105, eng) 43-752

Outcalt, S.I.
Hydrostatic-system palsas at Toolik Lake, Alaska: field observations and simulation (1986, p.79-94, eng) 43-543
Soil temperature and electric potential during diurnal and seasonal freeze-thaw (1989, p.37-43, eng) 43-1577
Two electric potential signatures of serial diurnal frost (1988, p.354-360, eng) 43-2827

Outer Continental Shelf Environmental Assessment Program; comprehensive bibliography
Outer Continental Shelf Environmental Assessment Program; comprehensive bibliography (1988, 746p., eng) 43-1833

Ovcharenko, V.G.
Field tests of electronic densimeters (1988, p.186-190, rus) 43-3277

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Effects of microstructure of ice crystal and cumulonimbus clouds on albedo and absorption of solar and long-wave radiation (1988, p.583-587, rus) 43-1905

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Placer River Silt—an intertidal deposit caused by the 1964 Alaska earthquake (1976, p.151-162, eng) 43-830
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Freezing of aqueous solutions containing gases (1988, p 843-848, eng) 43-1570

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Microwave propagation through the melting layer at grazing angles of incidence (1988, p.1106-1113, eng) 43-1555

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Polar Floats Program (1989, p.186-194, eng) 43-3514

Oxtoby, D.W.
Molecular theory of dendritic crystal growth (1988, p.11-12, eng) 43-1743

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Frazil slush accumulation process in a small reservoir in Hokkaido (1988, p.170-178, eng) 43-2990

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Runoff analysis of the Urumqi River in China's Xinjiang Province (1989, p.35-72, jpn) 43-3542

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Permeability coefficient of water in snow and firn at the accumulation area of Yala Glacier, Nepal Himalaya (1989, p.203-208, eng) 43-3462

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Influence of freezing and freeze-drying on the stability of liposomes dispersed in aqueous media (1988, p.129-139, eng) 43-1569

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Pace, M.E.
Computer-aided structural modeling (CASM) (1989, p 526-540, eng) 43-4409

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Transport and chemical composition of the summer aerosol in the Norwegian Arctic (1985, p.2109-2120, eng) 43-993
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Model of infiltration in frozen soil accounting for water quality (1988, p.263-271, fre) 43-294

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Chemical composition of ice containing tephra layers in the Byrd Station ice core, Antarctica (1988, p.315-330, eng) 43-2006

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Ice scour mechanisms (1989, p.123-132, eng) 43-3718

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Estimating snow course water equivalent from SNOTEL pillow telemetry: an analysis of accuracy (1986, p.81-86, eng) 43-3906
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SCS snow survey water supply forecasting program: current operations and future directions (1988, p.43-51, eng) 43-3995

Palmer, R.A.
Thermal model for snow-covered terrain (1989, p.25-36, eng) 43-3874

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Changes in photosynthetic metabolism of sea-ice microalgae during a spring bloom in McMurdo Sound (1988, p.176-177, eng) 43-1641
Contribution of carbon fixed by nitrifying bacteria during ice cover in McMurdo Sound, Antarctica (1988, p.171-172, eng) 43-1638
Temperature dependence of inorganic nitrogen uptake and assimilation in antarctic sea-ice microalgae (1989, p.443-446, eng) 43-4189

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Marine operations of a detachable production platform (1989, p 885-895, eng) 43-3786

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FORTRAN microcomputer program for heat and mass transfer in frozen soils (1989, p.709-726, eng) 43-4600
Sensitivity of a thaw simulation to model parameters (1988, p.99-106, eng) 43-66

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Forecast of frost duration (1987, p 339-343, eng) 43-2254

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Erosion and diagnostics of eroded soils in Siberia (1988, 117p, rus) 43-1561

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Damming of the Vilyuy River channel at the construction site of the Vilyuy III Hydroelectric Station (1987, p 692-697, eng) 43-139

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Age of the last glaciation in northern East Chukotka (1989, p.136-140, rus) 43-3072
Date of the last glaciation in northern East Chukotka (1989, p.527-531, eng) 43-4471

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Two-power law for analysis of velocity profiles in ice covered rivers (1988, 13p. + append., eng) 43-932

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Rain-snow boundaries and freezing precipitation in Canadian East Coast winter storms (1988, p.377-398, eng) 43-1428

Paterson, R.B.
Effect of parallel midbody on the resistance of ships in level ice (1988, 83p. + appends, eng) 43-1925

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Geotechnical aspects of snow pack stability in the Himalayan region (1987, p.353-354, eng) 43-1244

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Airborne organochlorines in the Canadian High Arctic (1989, p 243-255, eng) 43-3868

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Geomorphic response of streams to floods in the glaciated terrain of southern New England (1988, p.261-277, eng) 43-1550

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Glaciers of the Austrian Alps 1985/86 Summary report on glacier measurement of the Austrian Alpine Association in 1986 (1987, p.173-189, ger) 43-1683

Paulson, A.
Snow fences (1988, 1p., eng) 43-1056

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Hydrophysical research in the melioration of lands with water surplus (1988, 260p, rus) 43-837

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Subarctic lichen polygons and soil development along a colonization gradient on eolian sands (1989, p.175-184, eng) 43-4092

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Meridional heat transport by the ice and ocean in the western Arctic (1988, p.16-19, eng) 43-1493
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Acoustically induced ground motion in sand under winter conditions (1989, p.37-54, eng) 43-3875
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Trace metals and organic compounds in ice cores (1989, p.207-223, eng) 43-3689

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Marine science atlas of the Beaufort Sea: geology and geophysics (1987, 43p., eng) 43-870

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Techniques used by water survey of Canada for measurement and computation of streamflow under ice conditions (1988, p.255-282, eng) 43-2176

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Lithospheric thickness, antarctic deglaciation history, and ocean basin discretization effects in a global model of postglacial sea level (1988, p.325-346, eng) 43-785

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Experimental study of frost susceptibility of sandy gravel with different contents of fine-grained soil (1988, p.22-27, chi) 43-464

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Late Quaternary sea-level fluctuations and depositional sequences, southwest Louisiana continental shelf (1987, p.199-219, eng) 43-3406

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Final report on continued development of an ice thickness radar system (1986, var. p., eng) 43-4159

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Alpine Meadows avalanche trial, conflicting viewpoints of the expert witnesses (1987, p.665-677, eng) 43-1274

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Probabilistic ice information system for Canadian waterways [1989, p.28-32, eng] 43-4255
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On the objective analysis of snow microstructure [1987, p.49-59, eng] 43-1217
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Microcomputer-based image-processing system [1988, p.249-252, eng] 43-172
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Mechanical properties of multi-year sea ice. Phase II: Ice structure analysis [1988, 27p., eng] 43-4593
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Operation "Bangavalanches" The sonic boom effect on avalanches [1987, p.215-222, eng] 43-1231
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Designing, commissioning and installing an ice detection system in Wales: problems and solutions [1986, 11p., eng] 43-2763
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Program for the analysis of iceberg rolling [1988, p.33-50, eng] 43-788
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Electromagnetic pulse sounding for geological surveying with application in rock mechanics and the rapid excavation program [1973, 169p., eng] 43-4164
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Effect of snow cover on the Regional Analysis and Forecast System (RAFS) low-level forecasts [1989, p 253-257, eng] 43-4475
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Development of a comprehensive numerical river ice model [1988, p.345-367, eng] 43-2180
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Global design load selection for arctic mobile drilling platform [1988, p.371-384, eng] 43-2937
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Vegetation-snow depth relationships in the boreal forest-tundra ecotone of Eastern Canada [1988, p.42-49, eng] 43-4115
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General purpose computer program for the reliability analysis and design of structural line components [1987, p 223-230, eng] 43-1591
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Particle-laden Eurasian Arctic sea ice: observations from July and August 1987 [1989, p.59-66, eng] 43-4389
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Primary effluent as a heat source for heat pumps [1988, p.141-146, eng] 43-2160
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Planning with winter climate in mind [1988, p.65-83, eng] 43-4238
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New Goodrich wind tunnel tests advanced aircraft de-icing systems [1988, p.78-80, eng] 43-1205
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Embankment design and construction in cold regions [1988, 173p., eng] 43-765
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Method of automatic evaluation of geophysical properties of oil and gas wells [1988, p.76-83, rus] 43-1604
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Air instead of water used in sub-arctic line testing [1988, p.11-12, eng] 43-4531
Pickard, J.
Antarctic oases, Davis Station and the Vestfold Hills [1986, p.1-19, eng] 43-1189
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Proceedings [1983, 740p., eng] 43-3412
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Effect of a small wetland on runoff response during spring snowmelt [1985, p.137-154, eng] 43-1694
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Experience with foundation construction in tamped trenches in East Siberia and the Far North [1988, p.177-181, eng] 43-141
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Heat- and mass transfer during cooling and hardening of water drops in air streams [1988, p.86-88, rus] 43-550
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Analysis of coastal recession models: North Carolina coast [1987, p.59-68, eng] 43-3396
Sea-level fluctuation and coastal evolution [1987, 267p., eng] 43-3391
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Operational response to hazardous ice features [1987, p.349-358, eng] 43-912
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Winter ice interactions with an Arctic offshore structure [1986, p 49-73, eng] 43-261

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Workshop on extreme ice features, [Proceedings] [1987, 463p., eng] 43-899

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Properties and classification of selected volcanic ash soils from Kenai Peninsula, Alaska [1988, p.395-413, eng] 43-2371
Properties and classification of three volcanic ash-derived pedons from Aleutian Islands and Alaska Peninsula, Alaska [1988, p 455-462, eng] 43-125

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Probabilistic prediction of snow loads on sloped roofs [1986, p.41-50, eng] 43-3902

Pintur, D.A.
Sensitivity and uncertainty analysis of an iceberg structure collision model [1989, p.586-595, eng] 43-3760

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Resistively heated metal monolith as a cold start assist for a methanol engine. Interim report [1988, 21p., eng] 43-3971

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Mathematical model of frost heave in granular materials [1988, 248p, eng] 43-305

Pissart, A.
Analytical treatment of data from measurements of displacement in a periglacial environment [1988, p.87-117, fre] 43-2298
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Pitter, R.L.
Convective diffusion and ice crystal habit [1980, p.281-288, eng] 43-3949

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Forecast of frost duration [1987, p.339-343, eng] 43-2254

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Lime treatment of asphalt, Parts 1 and 2. Final report [1987, 70p., eng] 43-1745

Planning for winter snows
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Deterministic growth model of pattern formation in dendritic solidification [1987, p.L1177-L1183, eng] 43-1279

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Cloud physics and weather modification [1988, 136p., rus] 43-2709
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Plesniak, I.
Some problems of freezing the rock mass [1989, p.379-390, eng] 43-3114

Plotnikov, V.V.
Using multipurpose optimization algorithms in solving sea ice prediction problems [1988, p.57-66, rus] 43-4556

Plouffe, P.R.
2-D modelling of river ice thermal melting [1988, p.417-433, eng] 43-2183

Pnevmatikos, S.
Soliton dynamics of hydrogen-bonded networks: a mechanism for proton conductivity [1988, p.1534-1537, eng] 43-1489

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Application of a method of nuclear magnetic resonance for the analysis of components and phase composition of rocks [1988, p.71-76, rus] 43-1603

Podkopaev, IU.L.
Mathematical modeling of heat and mass processes in media with phase transformations [1988, p.7-9, rus] 43-556

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Peculiarities and regularities of river ice breakup in Yakutia [1988, p.14-21, rus] 43-2344

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Automated system of avalanche diagnostics and forecasting in Kazakhstan [1988, p.165-171, rus] 43-3325
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Seasonal forecasting of winter precipitation as related to avalanche activity [1987, p.130-139, rus] 43-2511

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"Snow pole" of the Caucasus [1988, p.25-30, rus] 43-2673

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Studying the frost- and brine-corrosion resistance of steel-fiber concretes [1988, p.71-75, rus] 43-565

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Practical code formats for reliability based design of transmission structures [1987, p.89-100, eng] 43-1588

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Breakdown of potassium feldspars during cryolithogenesis, depending on the pH of the media [1988, p.108-114, rus] 43-534

Pokonov, N.Z.
Experience of joint venture of the All-Union Scientific Research Institute's Electrical Installation Project and the Oil-Gas Construction Ministry for western Siberia [1988, p.19-21, rus] 43-696

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Hydrodynamic modeling of ice drift in Far Eastern seas [1988, p.49-53, rus] 43-3635

Polarstern Shipboard Scientific Party
Breakthrough in Arctic deep-sea research: the R/V *Polarstern* Expedition 1987 [1988, p 665, 676-678, eng] 43-782

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Full-scale tests of icebreaking capabilities of the "Captain Chechkin" class icebreakers in shallow waters [1982, 4p., eng] 43-1191
Research of ice-going qualities of river icebreakers [1988, p.686-696, eng] 43-2965
Results of full-scale trials of an ice class river dry cargo ship [1982, 5p., eng] 43-3170

Poliakov, S.V.
Gas inclusions in lake ice and radioluminescent temperature of the ice sheet [1985, p 60-66, eng] 43-662
Variations in infrared radiation from snow and ice cover [1988, p.83-87, rus] 43-2196

Poliakov, V.A.
Use of combined hydrochemical and isotope methods in studying ground ice [1988, p.91-98, rus] 43-595

Polishchuk, O.A.
Effect of mutual action of compound additives and vacuum evaporation on frost resistance of coarse and fine-grain concretes [1986, p.88-90, rus] 43-2215

Polkhov, A.P.
Forecast of dangerous and catastrophic hydrometeorological phenomena in the Norwegian, Greenland, and Barents seas and on the Kola Peninsula [1989, p.62-69, eng] 43-3230

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Pomeroy, J.W.
Blowing snow particle detector [1989, p.167-174, eng] 43-2365
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Pon, C.J.
Clearances for galloping on overhead lines [1987, p.503-512, eng] 43-1592

Poole, L.R.
Airborne lidar studies of Arctic polar stratospheric clouds [1988, 237p, eng] 43-341
Lidar observations of arctic polar stratospheric clouds, 1988: signature of small, solid particles above the frost point [1988, p.867-870, eng] 43-1553

Poole, P.
Arctic snowmobile development: lightweight materials research for structure and suspension systems [1988, 32p., eng] 43-2150

Poorooshasb, F.
Small scale modelling of iceberg scouring of the seabed [1989, p.133-145, eng] 43-3719

Popov, A.A.
Design of grounding devices for the 110-220 kV substations in the Far North, in the presence of natural grounding [1988, p.13-15, rus] 43-695

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Methods and trends of searching for gas hydrate deposits in the northern West-Siberian Platform [1988, p.110-115, rus] 43-1609

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Forecasting the temperature regime of warehouses, under construction in permafrost on a multilayer foundation [1987, p.30-34, rus] 43-2286
Heat transfer between freezing column and soil [1987, p.34-37, rus] 43-2267

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Features of the determination of the basic characteristics of ice category cargo vessels in the initial design stage [1988, 14p., eng] 43-2143
Ship mass effect on propulsion in continuous ice fields [1988, 5p., eng] 43-4440

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Cost analysis for exploration of natural resources in relation to geological survey organizations [1988, p.113-121, rus] 43-1545

Popović, K.
Frost resistance of OPC-CSF mortars investigated by means of repeated cycle- and one cycle-freezing test [1989, p.267-277, eng] 43-2893

Popović, M.
Freezing of the hard-sphere liquid [1988, p.808-810, eng] 43-2841

Popovich, A.P.
Studies of shallow ventilated foundations on permafrost [1988, p.115-122, rus] 43-535

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Properties of the chemical composition of indigenous ice in the lower Amur River region [1987, p.28-38, rus] 43-3655

Porębska, M.
Investigations of the frost heave of colliery spoil [1988, p.107-114, eng] 43-67

Portes, J.
Isotopic modeling of climate oscillations: implications for a comparative study of marine and ice core records [1988, p.9365-9383, eng] 43-284

Potanin, V.A.
Pollution of the waters of the northern seas and problems of its investigation [1989, p.55-61, eng] 43-3229
Possibility of long range forecasting of ice conditions in the Barents Sea [1987, p.117-124, rus] 43-1883

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Criteria analysis of equations describing thermodynamic processes in ice covers [1989, p.95-100, eng] 43-2052
Displacement of the crystallization front in the ice-water system [1989, p.109-113, eng] 43-2054
General mathematical model of a quasi-stationary ice cover [1989, p.21-27, eng] 43-2043

Potapezuk, M.G.
Predictions of airfoil aerodynamic performance degradation due to icing [1988, 16p., eng] 43-3967

Potapov, V.R.
Thermal compression of ice cover and protective measures for transport ships and engineering structures [1987, p.99-102, rus] 43-892

Potapova, T.M.
Evaluating the possibility of using oligotrophic swamps as indicators of the effect of air pollution on the quality of surface waters [1988, p.23-29, rus] 43-2463

Potts, D.F.
Snow accumulation, melt, and soil moisture recharge under various lodgepole pine stand densities in western Montana [1984, p.98-108, eng] 43-4320
Spatial and temporal variability in forest soil frost development in western Montana [1986, p.165-167, eng] 43-3918

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Melting of an ice surface in porous medium [1988, p.352-358, eng] 43-2316

Pourchet, M.
Determination of the glacial mass balance in the accumulation zone by *in situ* measurements of Chernobyl radioactivity [1989, p.365-370, fre] 43-4489
Identification of Chernobyl fall-out as a new reference level in Northern Hemisphere glaciers [1988, p.183-187, eng] 43-162

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Determination of ground and roof snow loads at a particular site [1989, p.456-461, eng] 43-3589
Observations on consistency and reliability of field data in snow survey measurements [1987, p.69-77, eng] 43-3929

Powell, G.H.
Finite element techniques for pipelines subjected to extreme loads [1983, p.474-485, eng] 43-3420

Powell, R.D.
Rainstorm-induced event sedimentation at the tidewater front of a temperate glacier [1988, p.409-412, eng] 43-175

Powell, T.
Interannual fluctuations in primary production, meteorological forcing at two subalpine lakes [1989, p.310-323, eng] 43-4291

Powers, J.P.
Freezing a temporary roadway for transport of a 3000 ton dragline [1988, p.357-365, eng] 43-97

Powers, L.M.
Oil production in the Arctic National Wildlife Refuge: the technology and the Alaskan oil context [1989, 123p., eng] 43-2590

Pozdniakov, I.V.
Landscapes and permafrost conditions of lands in the Khurmuli River basin, subject to economic development [1988, p 29-36, rus] 43-522

Poznanin, V.L.
Ice formation during the development of ravine thermal erosion (1988, p.53-58, rus) 43-3256
Pozniak, I.I.
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Pre-wetted salt: then and now
Pre-wetted salt. then and now (1989, p.52-53, eng) 43-4077
Preller, R.
Air/ocean/ice models' working group report (1987, p.139-142, eng) 43-851
Integrated remote sensing for Barents Sea ice (1988, p.495-506, eng) 43-643
Premo, G.A.
Case histories in seasonal frost areas (1988, p.160-169, eng) 43-772
Prentice, M.L.
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Evidence from Wright Valley for the response of the antarctic ice sheet to climate warming (1987, p.56-58, eng) 43-2731
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Thermal action of coastal waters on the boundary of the antarctic ice cover (1989, p.101-108, eng) 43-2053
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Cities designed for winter (1988, 384p, eng) 43-4235
Need for new approaches (1988, p.19-31, eng) 43-4236
Winter policies, plans and designs: the Canadian experience (1988, p.35-64, eng) 43-4237
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Experience with foundation construction in tamped trenches in East Siberia and the Far North (1988, p 177-181, eng) 43-141
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Late Quaternary sea-level fluctuations and sedimentary phases of the Texas coastal plain and shelf (1987, p.181-198, eng) 43-3405
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Sea-level changes resulting from future retreat of ice sheets an effect of CO2 warming of the climate (1987, p.356-370, eng) 43-3623
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Development of satellite tracked ice beacons to study ice drift tracks and oceanic heat fluxes off Labrador (1988, p.61-70, eng) 43-4170
Ice-cover and ice-ridge contributions to the freshwater contents of Hudson Bay and Foxe Basin (1988, p 6-11, eng) 43-156
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Contribution of carbon fixed by nitrifying bacteria during ice cover in McMurdo Sound, Antarctica (1988, p.171-172, eng) 43-1638
Inorganic nitrogen uptake and regeneration in perennially ice-covered Lakes Fryxell and Vanda, Antarctica (1989, p.335-351, eng) 43-2404
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Temperature dependence of inorganic nitrogen uptake and assimilation in antarctic sea-ice microalgae (1989, p.443-446, eng) 43-4189
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Mathematical characteristics of sea ice dynamics models (1988, p.15,609-15,618, eng) 43-1736
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Studies of the combine method of underground mining of perennially frozen placer deposits (1988, p 62-73, rus) 43-2783
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Prodanovic, A.
Calculation of iceberg impact forces (1989, p.546-556, eng) 43-3756
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Agrometeorology (1988, 498p., eng) 43-2248
Effects of the growth mode upon the crystal orientation in artificial and natural hailstones (1980, p 333-346, eng) 43-3953
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Environmental pollution and the ice regime of rivers and lakes in the zone affected by a city (1988, p.74-80, rus) 43-4582
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Study of cold resistance of cemented steel for gears (1987, p.60-65, rus) 43-2454
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Computer processing of ice data analyses obtained from side looking radar (1987, p.86-90, rus) 43-890
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Modeling seasonal variations of sea level in the Arctic Ocean (1988, p.57-65, rus) 43-4581
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Proskurina, G.V.
Minimal river discharge of the Chulyma basin (1988, p 67-74, rus) 43-2351
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Ice information obtained from meteorological satellites (1988, p.141-148, rus) 43-812
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Observations on floating snowpacks: lakes, rivers and the sea (1987, p.313-346, eng) 43-1302
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Albedo of break-up ice covers (1987, p.197-202, eng) 43-402
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Ice jam characteristics, Liard-Mackenzie rivers confluence: discussion and reply (1988, p.275-278, eng) 43-300
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Snow hydrology of the Waimakariri catchment, South Island, New Zealand (1988, p.44-68, eng) 43-4258
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Constitutive modelling of brittle and ductile ice (1987, ca20p., eng) 43-1105
Rate-sensitive damage and cracking model for ice (1989, p.47-53, eng) 43-2609
Pullan, S.E.
Acoustic properties of frozen near-shore sediments, southern Beaufort Sea, Arctic Canada (1988, p.197-203, eng) 43-78
Pulliainen, J.T.
35-GHz helicopter-borne polarimeter radar (1988, p.423-424, eng) 43-1520
Pulpan, H.
Seismic-hazard analysis of the Nenana Agricultural Development area, central Alaska (1988, 29p., eng) 43-1686
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Changes in glacial and climatic conditions of Spitsbergen in the Subboreal period (1987, p.108-112, rus) 43-239
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Computation of water budget of a snow bound river basin (1988, p.103-106, eng) 43-2885
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Electromagnetic pulse sounding for geological surveying with application in rock mechanics and the rapid excavation program (1973, 169p., eng) 43-4164
Pustovalov, A.A.
Self-cooling filling dams (1988, p.7-8, rus) 43-23
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Ensuring the optimal heat regime for permafrost beds of building (1988, p.41-44, eng) 43-1337
Probabilistic-statistical calculation of subgrades for buildings in permafrost (1988, 250p., rus) 43-1453
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Ice temperature measurement in deep holes of Antarctica using a heat sensor embedded in the hole bottom (1989, p.129-136, eng) 43-2058
Paleoclimatic interpretation of the results of thermometry of holes to a depth of 900 m at Vostok Station (1989, p.119-123, eng) 43-2056
Temperature distribution in the central part of the antarctic ice cover with a change in the paleotemperature at the surface (1989, p.28-36, eng) 43-2044
Putilin, A.F.
Formation of gullies in the southeastern part of West Siberia (1988, 81p., rus) 43-714
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Impact of ice bergy bits on a concrete semisubmersible (1988, p.191-207, eng) 43-621
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Photosynthesis by antarctic microalgae (1988, p.176-177, eng) 43-1642
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Principles of territorial distribution of biosphere reserves and global monitoring networks in the Subarctic (1987, p.33-40, eng) 43-2416
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Research on the damage causes and the preventive measures of slope protection on earth dam in Suihua region of Hailongjiang (1987, p.92-96, chi) 43-491
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On salt heave of saline soil (1988, p.35-39, eng) 43-58
Quadfasel, D.
Greenland Sea convection in the winter of 1987-1988 (1989, p.3223-3227, eng) 43-2395
Quart, B.
M.V. *Arctic* manoeuvring performance in ice. Final report (1984, 100p. + appends., eng) 43-4153
M.V. *Arctic* manoeuvring performance in ice. Summary report (1984, 16p, rus) 43-4152
Quickenden, T.I.
Red emission from pulse irradiated H2O ice (1988, p.403-412, eng) 43-1135
Quigley, M.A.
Operations for an under-ice ecology program (1988, p 372-376, eng) 43-821
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Calibration of a water-balance model for small watersheds in eastern Oregon (1988, p.347-360, eng) 43-1556
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Foundation technology in cold regions (1987, p.305-310, eng) 43-865
Response of pavement to freeze-thaw cycles: Lebanon, New Hampshire, Regional Airport (1989, 31p., eng) 43-2809
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Air mass characteristics in the vicinity of Barrow, Alaska, 9-19 March 1983 (1985, p.2127-2134, eng) 43-995
Airborne CO2 measurements in the Arctic during spring 1983 (1985, p.2195-2201, eng) 43-1003
Distribution and transport of pollution aerosols over the Norwegian Arctic on 31 March and 4 April 1983 (1985, p.2135-2142, eng) 43-996
Intrusions of stratospheric air into Alaska's troposphere, March 1983 (1985, p.2153-2158, eng) 43-998
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Observations of Arctic haze during polar flights from Alaska to Norway (1985, p.2143-2151, eng) 43-997
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Special features of the methods of analysis of hydrochemical elements and pollutants in the waters of the polar regions (1989, p.103-114, eng) 43-4371
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Patterns of vegetation recovery after tundra fires in northwestern Alaska, U.S.A. (1987, p.461-469, eng) 43-194
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Model studies on ice-stream surging (1989, p.132-137, eng) 43-3348
On the surging potential of polar ice streams: Part 2 Ice streams and physical characteristics of the Ross Sea drainage basin, West Antarctica (1985, 81p., eng) 43-1716
Surging as a potential response of ice sheets to carbondioxide-induced changes in the polar environment (SPICAE): Final report (1987, 21p., eng) 43-1714
Surging as a potential response of ice sheets to CO2-induced changes in the polar environment (SPICAE): Progress report, Jan. 1-Aug. 3, 1984 (1984, 21p., eng) 43-1715
Surging as a potential response of ice sheets to CO2-induced changes in the polar environment (SPICAE). Progress report, Sep. 1984-Aug. 1985 (1985, 26p., eng) 43-1713

Radok, U. *(cont.)*
Surging potential of polar ice streams Part 1. Sliding and surging of large ice masses. a review (1985, 67p., eng) 43-880

Rafal'skaia, M.IA.
Soil cement elements of earth dams erected at subzero temperatures (1987, p.96-102, rus) 43-1184

Rahja, J.
Contracting also suitable for municipal winter road service (1988, p.13-15, 26, fin) 43-1796

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Progress in Arctic air chemistry, 1980-1984 (1985, p.1987-1994, eng) 43-982
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Rail pull-aparts. old problem, new solution (1988, p.26, eng) 43-2406

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Long-term environmental records from antarctic ice cores (1989, p.343-361, eng) 43-3695

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Full-thickness ice strength measurements (1988, p.29-31, eng) 43-3499
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Use of Landsat data for the study of Alpine glaciers, Comments on the paper by Della Ventura et al. (1987) and Reply (1988, p.1167-1174, eng) 43-337

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Real-time processing of digital image data in support of the Canadian sea ice analysis and prediction programme (1988, p.1707-1711, eng) 43-1901

Ramsay, B.R.
Checking the floe of ice. real-time processing of digital image data (1988, p.17-20, eng) 43-1573

Rancourt, K.L.
On the distribution of acidity within clouds as a function of droplet size (1987, p.54-60, eng) 43-389

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High-flow air screens reduce or prevent ice-related problems at navigation locks (1988, p.34-43, eng) 43-2977

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Novel transmissometry at SNOW III West (1986, p.129-139, eng) 43-4632
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LIMEX '87 Pilot Project, LIMEX '89 and long-term objectives for data collection on the Canadian East Coast (1988, p.421-422, eng) 43-1519
SAR-seen multi-mode waves in ice: evidence of imaging nonlinearities (1988, p.141-144, eng) 43-1505

Rangachari, R.
Snow hydrology in the upper Yamuna basin, India (1988, p.84-93, eng) 43-4119

Rangachary, N.
Analysis of the synoptic weather pattern associated with extensive avalanching in Western Himalaya (1987, p.311-316, eng) 43-1240
Some aspects of snow cover development and avalanche formation in the Indian Himalaya (1987, p.453-462, eng) 43-1254

Rango, A.
Application of a simple snowmelt-runoff model to large river basins (1983, p.89-99, eng) 43-4356
Average areal water equivalent of snow in a mountain basin using microwave and visible satellite data (1988, p.447-448, eng) 43-1527
Microcomputers (PCs) for snow cover analyses using multisensor satellite data (1988, p.459-460, eng) 43-1531
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Snowmelt-runoff modeling in the microcomputer environment (1987, p.1-9, eng) 43-3922

Rantajärvi, L.
Heat and moisture properties in frozen sandy soil, measurements and modeling (1989, p.323-340, eng) 43-3109

Rao, K S.
Capability of Bhaskara-II satellite microwave radiometer brightness temperature data to discriminate soil moisture conditions of Indian landmass (1984, p.91-96, eng) 43-1928

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Counter-avalanche rack in France (1988, p.13-24, fre) 43-3206

Rapley, C.G.
Swath altimetry of oceans and terrain (1987, p.319-322, eng) 43-1793

Rapp, A.
Mass movements, nivation processes and climatic fluctuations in northern Scandinavian mountains (1988, p.245-253, eng) 43-927
Nivation and local glaciation—geomorphological and climatological applications, report on a minisymposium in Abisko, Sep. 1983 (1985, 72p., swe) 43-1008
Nivation and local glaciation in Scania and Lapland, Sweden. A research project (1985, p.2-7, swe) 43-1009

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Ice in cement paste as analyzed in the low-temperature scanning electron microscope (1989, p.306-314, eng) 43-2894

Rasmussen, L.A.
Bed topography and mass-balance distribution of Columbia Glacier, Alaska, U.S A , determined from sequential aerial photography (1988, p.208-216, eng) 43-166

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Temporal variations of trace gases in ice cores (1989, p.193-205, eng) 43-3688

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Blast noise propagation research (1987, p.251-252, eng) 43-3297

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Exploratory drilling on the shelf (1988, 198p , rus) 43-755

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Machinery for working in permafrost (1986, 215p , rus) 43-4480

Rastogi, P.K.
Holographic study of frost damage (1988, p.142-143, eng) 43-2588

Ratcliffe, R.
Variations in the global water budget (1983, 518p., eng) 43-3035

Rathmayer, H.
Frost in geotechnical engineering; VTT Symposium 94, Vols. 1 and 2 (1989, 946p. (2 vols.), eng) 43-3093

Ratkin, N.E.
Scientific and technological progress and the quality of the environment in the Kola Peninsula (1987, p.71-79, rus) 43-107

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Studies of thermophysical properties of rocks and soils by KAMAK standards (1988, p.83-89, rus) 43-1605

Ratsek, I.V.
Setting up the second phase of the automated information system of the National Water Inventory "Hydrology-glaciers" (1988, p.120-125, rus) 43-2689

Rauber, R.M.
Characteristics and evolution of supercooled water in wintertime storms over the Sierra Nevada: a summary of microwave radiometric measurements taken during the Sierra Cooperative Pilot Project (1988, p.989-1015, eng) 43-2398

Ravaska, O.
Influence of test conditions and equipment on the frost heave test (1989, p.931-944, eng) 43-3158

Raven, P.W.J.
MCEI laboratory as a centre of offshore oil and gas producing structures research (1989, p.1180-1187, eng) 43-3813

Ray, S.R.
Late-winter chemical and physical characteristics of the Fairbanks alluvial aquifer (1987, p.127-140, eng) 43-4429

Raychaudhuri, A.K.
Continuous-cooling method of specific heat measurement in the temperature range 100-300 K (1988, p.1017-1022, eng) 43-1369

Raymond, C.F.
Evolution of Variegated Glacier, Alaska, U.S.A., prior to its surge (1988, p.154-169, eng) 43-159
Simple method for determining the response time of glaciers (1989, p.343-352, eng) 43-3193

Raynaud, D.
Elemental and isotopic composition of occluded O2 and N2 in polar ice (1989, p.5137-5150, eng) 43-2722
Long-term environmental records from antarctic ice cores (1989, p.343-361, eng) 43-3695
N2O measurements of air extracted from antarctic ice cores: implication on atmospheric N2O back to the last glacial-interglacial transition (1989, p.189-201, eng) 43-3974

Raynolds, M.K.
Effects of winter seismic trails on tundra vegetation in Northeastern Alaska, U S.A. (1989, p.188-202, eng) 43-4093

RCC used in cold climate
RCC used in cold climate (1988, p 20, eng) 43-1210

Rebhan, D.
Ground freezing with liquid nitrogen (1988, p.273-277, eng) 43-87

Recommendations for the design of external walls for residential panel buildings in the northern construction-climatic zone
Recommendations for the design of external walls for residential panel buildings in the northern construction-climatic zone (1986, 94p., rus) 43-1887

Redfield, R.K.
SNOW IV field experiment data report. overview (1989, p.1-3, eng) 43-4297

Reed, D.J.
Earthquakes, rivers and ice. scientific research at the Laguna San Rafael, southern Chile, 1986 (1988, p.392-405, eng) 43-2003

Reed, S.C.
Waste management practices in Antarctica (1989, p.122-130, eng) 43-2095

Reeh, N.
Dating by ice flow modeling: a useful tool or an exercise in applied mathematics? (1989, p.141-159, eng) 43-3685
Glaciological investigations at the margin of the inland ice north-east of Jakobshavn, West Greenland (1987, p.102-108, eng) 43-742
Greenland ice sheet mass balance (1985, p.53-59, eng) 43-1158
Ice-sampling programme in the Thule area, North Greenland (1987, p.81-84, eng) 43-748
Stable isotope studies on the Greenland ice-sheet margin (1987, p.108-114, eng) 43-743

Rees, W.G.
Synthetic aperture radar data over terrestrial ice (1988, p.165-168, eng) 43-1508
Technological limitations on satellite glaciology (1989, p.7-22, eng) 43-2002
Topographic effects on light scattering from snow (1988, p.161-164, eng) 43-1507

Refsdal, G.
Frost protection in design and construction (1989, p.127-163, eng) 43-3096

Regrettier, J.F.
Adelie land airport (1989, p.91-96, eng) 43-2614

Rehn, F.K.J.
Fluvial sediment transport during snowmelt in periglacial environments as exemplified by Kärkevagge valley, northwestern Sweden (1985, p 56-68, swe) 43-1017

Rehwald, W.
Chernobyl fallout on Alpine glaciers: a new reference horizon for dating (1987, p 1577-1578, eng) 43-1059

Reimnitz, E.
Construction of an arctic barrier island by alternating sea-ice pileup and overwash (1988, p.180-182, eng) 43-513
Evidence for sea-ice impact on Icy Reef, Beaufort Sea coast (1988, p.190-192, eng) 43-514
Ice rafting: an indication of glaciation? (1988, p.254-255, eng) 43-2373
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Microtextures of quartz grains from modern terrestrial and subaqueous environments, North Slope of Alaska (1988, p.24-32, eng) 43-436
Sea ice sediment entrainment and rafting in the Arctic (1989, p.308-317, eng) 43-2690
Seafloor temperature and conductivity data from coastal waters of the U.S. Beaufort Sea (1989, 19p , eng) 43-2123

Reina, P.
Rescue bid for frozen 'mole' in London common (1989, p.36, eng) 43-2078

Reinhardt, H.W.
Bond behaviour of reinforced concrete at low temperature (1989, p.852-861, eng) 43-3783

Reinmann, J.J.
NASA's rotorcraft icing research program (1988, p.802-832, eng) 43-3817

Relth, J.
Solutions to instrumentation problems experienced in offshore programmes (1988, p.435-446, eng) 43-638

Relstad, G.M.
Numerical solutions for laminar heat transfer in parallel plates with freezing and thawing by using periodic flow reversals (1989, p.39-44, eng) 43-4197

Remenda, V.H.
Development of a methodology for reservoir site selection in glaciated terrain (1988, p 123-142, eng) 43-1326

Remy, F.
Mapping of the topography of continental ice by inversion of satellite-altimeter data (1989, p.98-107, eng) 43-4146

Ren, B.H.
Existing glacier fluctuation and its relation to the climatic changes in China (1988, p.244-249, chi) 43-2863

Ren, Z.W.
River bed variation in sections susceptible to ice jamming (1988, p.326-335, eng) 43-3005

Renquist, A.R.
Climatological assessment of the utility of wind machines for freeze protection in mountain valleys (1989, p.194-205, eng) 43-4403

Repp, K.
Hydrology of Bayelva, Spitsbergen (1988, p.259-268, eng) 43-2019

RER keeps out snow
RER keeps out snow (1988, p.23, eng) 43-1848

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Research (1988, p.35-39, eng) 43-416

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Cost analysis for exploration of natural resources in relation to geological survey organizations (1988, p.113-121, rus) 43-1545

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Transition of stresses in frozen alcohol specimens dried in vacuum (1989, p.113-116, eng) 43-4207

Reszka, K.
Transition of stresses in frozen alcohol specimens dried in vacuum (1989, p.113-116, eng) 43-4207

Retelle, M.J.
Relative sea level chronology determined from raised marine sediments and coastal isolation basins, northeastern Ellesmere Island, Arctic Canada (1989, p.113-125, eng) 43-4085

Revera, O.Z.
Effect of drainage projects on the annual, summer-autumn and minimal runoff from rivers of the Pripet Marshes in the Ukraine (1988, p.134-145, rus) 43-2472

Rey, L.
Arctic: mankind's unique heritage and common responsibility (1987, p.345-350, eng) 43-184
Field study on snow mechanical properties with special regard to liquid water content (1987, p.183-193, eng) 43-1229

Reynaud, L.
Glacier variations in the French Alps and their effect on the glacial area (1988, p.3-12, fre) 43-3205
Identification of Chernobyl fall-out as a new reference level in Northern Hemisphere glaciers (1988, p.183-187, eng) 43-162

Reynolds, D.W.
Report on winter snowpack-augmentation (1988, p.1290-1300, eng) 43-1735

Reynolds, J.M.
Structure of Wordie Ice Shelf, Antarctic Peninsula (1988, p.57-64, eng) 43-287

Reynolds, W.J.
Aspects of wind on West Gulkana Glacier, Alaska (1988, p.93-105, eng) 43-2796
Glacier and climate studies, West Gulkana Glacier and environs, Alaska, Vol.1 (1988, 142p., eng) 43-2788
Valley wall longwave flux contributions, West Gulkana Glacier, Alaska (1988, p 63-80, eng) 43-2794

Rezenfel'd, B.I.
Formalizing experts' experience in avalanche forecasting (1988, p.171-176, rus) 43-958

Rhea, J.O.
Orographic precipitation model for hydrometeorological use (1978, 198p., eng) 43-1363

Riabets, IU.S.
Investigation of the plastic pipes operational reliability in permafrost areas (1989, p 691-697, eng) 43-3139

Riabova, L.D.
Variations in infrared radiation from snow and ice cover (1988, p.83-87, rus) 43-2196

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Regularities governing the formation of composition and properties of loess in southern East Siberia and northern Mongolia (1988, p.98-106, rus) 43-596

Ricard, M.
Crack nucleation in polycrystalline ice under compressive stress states (1989, p.13-21, eng) 43-2604

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Field measurements of standard targets taken with military electro-optical systems at Snow-III West (1986, p.25-27, eng) 43-4624
SNOW III WEST field experiment report. Volume 1 (1988, 170p., eng) 43-2121
Thermal model for snow-covered terrain (1989, p.25-36, eng) 43-3874

Richard, J.L.
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Snow pillow overloading by slope induced creep (1984, p.184-187, eng) 43-4332
Snowpack chemistry in southcentral British Columbia (1985, p 88-98, eng) 43-4272

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Analysis of inverse heat transfer problems with phase changes using an integral method (1988, p.554-561, eng) 43-666

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Antitank obstacles for winter use (1988, 11p., eng) 43-1997
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Experiments on the heat transfer from water flowing through a chilled-bed open channel (1989, p.51-58, eng) 43-4199
Land mines in winter (1989, 10p., eng) 43-4041

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Comparison of the compressive strength of antarctic frazil ice and columnar saline ice grown in the laboratory (1989, p.269-278, eng) 43-3732
Confined compressive strength of multi-year pressure ridge sea ice samples (1988, p.295-301, eng) 43-921
Elastic properties of frazil ice from the Weddell Sea, Antarctica (1989, p.208-217, eng) 43-3726
Mechanical properties of multi-year sea ice (1987, p.121-153, eng) 43-905
Mechanical properties of multi-year sea ice (1988, p.54-61, eng) 43-3646
Mechanical properties of multi-year sea ice. Phase II: Ice structure analysis (1988, 27p., eng) 43-4593

Richter, W.
Deuterium in the water cycle of the Schirmacher Oasis (Dronning Maud Land, East Antarctica) A data compilation (1988, p.55-97, eng) 43-4516
Penitents also in Antarctica? On ablation forms at Schirmacher Oasis, Dronning Maud Land (East Antarctica) (1986, p.104-111, ger) 43-725

Rick, S.W.
Density functional theory for the freezing of Lennard-Jones binary mixtures (1989, p.1188-1199, eng) 43-1820

Rickman, R.W.
Temperature and water profiles during diurnal soil freezing and thawing: field measurements and simulation (1989, p.3-10, eng) 43-2577

Ricou, G.
Shear-creep system for studying grain-boundary behaviour in ice (1989, p.140-142, eng) 43-4150

Riley, J.T.
Analytical ice shape predictions for flight in natural icing conditions (1988, 39p., eng) 43-3969

Riley, N.
Ice accretion in the Barents Sea—instrumentation of the "Ross Rig" (1988, p.423-434, eng) 43-637

Riley, R.G.
Drilling fluids and the arctic tundra of Alaska: assessing contamination of wetlands habitat and the toxicity to aquatic invertebrates and fish (1988, p.683-697, eng) 43-19

Rind, D.
Climatic impact of a change in North Atlantic deep water formation (1985, p 62-65, eng) 43-1160

Rink, C.
Doctrine of geosystems and statistical methods as a means of avalanche forecast (1987, p.581-582, eng) 43-1263

Rioux, D.F.
Portable digital data-acquisition system for surface-based ice-radar studies (1988, p.349-354, eng) 43-1992

Ripley, H.
Integrated aerial surveillance system designed for ice management in the marginal ice zone (1988, p.471-483, eng) 43-641

Riska, K.
Analysis of factors influencing ship response in collision with multi-year ice floes (1989, p.750-763, eng) 43-3774

Risner, J.K.
Geohydrology of Mars (1989, p.184-192, eng) 43-4599

Rist, M.A.
Experimental results on the failure of polycrystalline ice under triaxial stress conditions (1988, p.118-127, eng) 43-2915

Ritter, B.
Glacial geodetic contributions to the mass balance and dynamics of ice shelves (1988, p.89-94, eng) 43-1950

Ritter, M.B.
Collective behavior of supercooled liquids in porous media (1988, p.966-969, eng) 43-2843

Ritz, C.
Interpretation of the temperature profile measured at Vostok, East Antarctica (1989, p.138-144, eng) 43-3349

Rivard, G.
Documentation and analysis of an ice jam, Mackenzie River at Norman Wells, N.W.T. (1985, 188p., eng) 43-3622

Rivkin, R.B.
Biomass and production in polar planktonic and sea ice microbial communities: a comparative study (1989, p.273-283, eng) 43-4483
Photosynthesis by antarctic microalgae (1988, p.176-177, eng) 43-1642

Rizzotti, G.
ANAS snow clearing service (1988, p.32-41, ita) 43-1062

Roberts, A.A.
Helium and C(1)-C(3) hydrocarbon concentrations in permafrost ice, Marsh Creek area, Arctic National Wildlife Refuge, Alaska (1988, 18p. + tables, eng) 43-678

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Geotechnical investigation of surficial soils to support hard mobile launcher (HML) studies: frozen strength characterization of WES/CRREL NH&S test sites in Montana (1988, var. p., eng) 43-3638
Snowmelt-runoff modeling in the microcomputer environment (1987, p.1-9, eng) 43-3922

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Determining variability of snow accumulation and ablation on western rangelands (1985, p.156-159, eng) 43-4280
Diurnal fluctuations in remote precipitation gage readings (1987, p.10-19, eng) 43-3923
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Study on hull corrosion and coatings (1988, Var. p, eng) 43-4474

Robertson, S.B.
Hydrology of Arctic wetlands (1988, p.262-269, eng) 43-2238

Robin, G. de Q.
Antarctic ice sheet, its history and response to sea level and climatic changes over the past 100 million years (1988, p.31-50, eng) 43-1095

Robinson, D.A.
Comments on "Comparison of Northern Hemisphere snow cover datasets' (1988, p.435-442, eng) 43-3468
Construction of a United States historical snow data base (1988, p 50-59, eng) 43-4116
Examination of USAF Nephanalysis performance in the marginal cryosphere region (1988, p.1124-1137, eng) 43-3470

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Winter precipitation, snowpack and atmospheric conditions in the southern Canadian Rockies (1987, p.435-454, eng) 43-1306

Roblee, C.J.
Design approach for piles subject to ice jacking (1988, p 65-85, eng) 43-148

Robock, A.
Comments on "Comparison of Northern Hemisphere snow cover datasets" (1988, p.435-442, eng) 43-3468
Effects of dirty snow in nuclear winter simulations (1988, p.5319-5332, eng) 43-210

Rocard, F.
Chemical irradiation effects in ices (1988, p.349-353, eng) 43-52

Rockenbauer, A.
Cryo-oscillations. Belousov-Zhabotinskii (BZ) oscillations in frozen and undercooled solution (1988, p.661-665, eng) 43-831

Rodionov, V.S.
Changes in ultrastructure and phospholipid content of summer pine needles at freezing (1989, p.238-244, rus) 43-4158

Rodriguez, R.
On the feasibility and value of detecting and characterizing avalanches remotely by monitoring radiated sub-audible atmospheric sound at long distances (1989, p.267-275, eng) 43-3571

Roeder, R.S.
Radar backscatter characteristics of snow covered terrain at 94 gigahertz (1984, p.115-119, eng) 43-3478

Roelke, R.J.
Efficient numerical simulation of a one-dimensional electrothermal deicer pad (1988, p.1097-1105, eng) 43-2027

Roen, S.
Ice problems in intakes to power plants (1988, p.81-91, eng) 43-2982
Modeling of open water area in lake ice due to submerged power plant outlet (1988, p.72-80, eng) 43-2981

Rogachko, S.I.
Studying the effect of pressure ridges on structures built on the continental shelf (1986, p.148-158, rus) 43-731

Rogers, B.
Impact of snow on herbaceous and shrubby vegetation (1975, p.175-214, eng) 43-1364

Rogers, J.C.
Snow as an acoustically porous material (1986, p.343-352, eng) 43-4648

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Performance of highway and all-season radial tires and traction aids on ice and in snow (1986, 20p., eng) 43-4590

Rogerson, R.J.
Radio-carbon dated gelifluction lobe in the Nachvak Fiord area, northern Labrador, Canada (1988, p.657-662, eng) 43-2000

Rogozhina, R.IA.
Effect of mutual action of compound additives and vacuum evaporation on frost resistance of coarse and fine-grain concretes (1986, p.88-90, rus) 43-2215

Rohardt, G.
Meteorological and oceanographic data of the Winter-Weddell-Sea Project 1986 (ANT V/3) (1988, 115p., eng) 43-438

Rohe, D.R.
Special study/comparison test in Alaska of over snow mobility systems for the M101A1/M119 towed howitzers Final letter report (1988, 53p. + appends., eng) 43-1976

Rokoengen, K.
Iceberg scouring and sea bed morphology on the eastern Weddell Sea shelf, Antarctica (1989, p.43-57, eng) 43-4388

Romagnoli, R.
Ice growth modeling for icing control purpose of offshore marine units employed by the petroleum industry (1988, p.486-497, eng) 43-3019
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Study of the influence of rubble fields and pile-ups on the interactions between the ice and the structure of the drilling rigs (1988, p.605-613, eng) 43-649

Romanov, P.G.
Prognosis and regulation of heat and moisture regime of frozen soils (1989, p.371-377, eng) 43-3113

Romanov, V.P.
Salt migration in freezing soils (1989, p.57-65, rus) 43-4611

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Composition of cryohydrogeological massifs with shallow, discontinuous freezing (1987, p.109-117, rus) 43-3375
Results and problems of studying changes in geological media when building large hydraulic structures (1988, p.139-152, rus) 43-739

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Approximation methods for calculating the thermal effect of snow cover (1987, p.183-188, rus) 43-3383
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Romenskii, A.A.
Studies of thermal deformation and stresses in rocks during construction of vertical mine shafts (1987, p.20-23, rus) 43-2263

Rönning, B.
Investigation of environmental conditions and an evaluation of suitable platform concepts for the southern Barents Sea (1989, p 896-907, eng) 43-3787

Rönning, O.I.
Revegetation experiments at Ny-Ålesund, Spitsbergen, Svalbard (1987, p.549-553, eng) 43-206

Roofing materials and coatings. January 1980-March 1989. (Citations from World Surface Coatings Abstracts)
Roofing materials and coatings. January 1980-March 1989. (Citations from World Surface Coatings Abstracts) (1989, 63p., eng) 43-4608

Rooney, J.W.
Embankment stabilization techniques (1988, p.13-34, eng) 43-767
Hess Creek thermal erosion test site: frozen cut slope surface treatments (1984, p.1129-1149, eng) 43-675
Unified geotechnical engineering systems approach applied to Arctic pipeline planning and design (1983, p.291-299, eng) 43-3416

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Subglacial geology of ice stream B, West Antarctica (1988, 165p., eng) 43-4524
Water-pressure coupling of sliding and bed deformation: III. Application to Ice Stream B, Antarctica (1989, p.130-139, eng) 43-4149

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Results of 1986 snow acidity sampling in California (1988, p.162-165, eng) 43-4009

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Materials characterization and response of flexible pavements at low temperatures (1987, p.130-167, eng) 43-1861
Thermal rippling of asphalt concrete pavements (1988, p.464-483, eng) 43-1858

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Horizontal inhomogeneities in the particulate carbon component of the Arctic haze (1985, p.2175-2180, eng) 43-1001

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Megalopolitan snowstorm of 11-12 February 1983: isotopic composition of the snow (1989, p.1637-1649, eng) 43-4417

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Mathematical model for freeze-thaw durability of concrete (1988, p.776-783, eng) 43-967

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Consideration of wind effect in standardization of snow load (1989, p.256-263, eng) 43-3570

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Development and opportunities in Greenland (1988, p.769-782, eng) 43-661
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Rosengren, A.
Mechanical properties of bitumen (1986, 60p. + appends., swe) 43-1878

Rosenshein, J.S.
Hydrogeology (1988, 524p. + 3 maps, eng) 43-4292

Rosqvist, G.
Glacier fluctuations recorded in lacustrine sediments on Mount Kenya (1988, p 219-232, eng) 43-970

Rossi, P.
Agrometeorology (1988, 498p, eng) 43-2248

Rossinskii, K.I.
Dynamics and thermal regimes of rivers (1987, 406p., eng) 43-3885
Study of dynamics and thermal conditions of rivers for the efficient utilization of water resources (1987, p.3-16, eng) 43-3886

Rossiter, J.R.
Evaluation of sea ice thickness sensors (1988, 58 p., eng) 43-1732

Rothrock, D.A.
Blending sequential scanning multichannel microwave radiometer and buoy data into a sea ice model (1989, p.10,907-10,920, eng) 43-4527
Estimating sea ice concentration from satellite passive microwave data and a physical model (1988, p.1677-1683, eng) 43-1895
Quantitative use of satellite SAR imagery of sea ice (1987, p.323-326, eng) 43-1794

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Spectral reflectance of snow-covered and snow-free terrain in western Greenland (1987, p.115-121, eng) 43-1677
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Use of Landsat data for the study of Alpine glaciers; Comments on the paper by Della Ve tura et al. (1987) and Reply (1988, p.1167-1174, eng) 43-337

Rottler, P.
SPRI participation in the winter Marginal Ice Zone Experiment, MIZEX-87 (1989, p.33-36, eng) 43-2218

Rouse, W.R.
Energy balance of the intertidal zone of western Hudson Bay I: ice-free period (1989, p.327-345, eng) 43-4560
Energy balance of the intertidal zone of western Hudson Bay II: ice-dominated periods and seasonal patterns (1989, p 346-366, eng) 43-4561
Influence of surface cover and climate on energy partitioning and evaporation in a subarctic wetland (1988, p.327-347, eng) 43-449
Soil heat flux in permafrost: characteristics and accuracy of measurement (1987, p.571-584, eng) 43-2037

Rovinskii, F.IA.
Monitoring of environmental background pollution. Vol.4 (1987, 364p, rus) 43-26

Row, D.
Finite element techniques for pipelines subjected to extreme loads (1983, p.474-485, eng) 43-3420

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Periodic motions in Weddell Sea pack ice (1989, p.145-151, eng) 43-3350

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Seasonal variation of photosynthetically active radiation in Big Lake, Southcentral Alaska (1987, p.95-103, eng) 43-4428

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Modelling solar irradiance on a slope under a leafless deciduous forest during snowmelt (1988, p.203-207, eng) 43-4132

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Use curing blankets to offset cold weather effects on concrete (1988, p.1036-1037, eng) 43-2136

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Working capacity of hydraulic props under permafrost conditions (1987, 105p, rus) 43-1088

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Brittle destruction of reservoirs and improvement of their durability (1987, p.94-99, rus) 43-2457

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Fossil glacial cirques and cirque problematics at low altitudes in Central and Northern Sweden (1985, p.19-25, swe) 43-1011
High arctic landscapes: comparison and reflexions (1988, p.255-264, eng) 43-928

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Greenland Sea convection in the winter of 1987-1988 (1989, p.3223-3227, eng) 43-2395

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Integrated aerial surveillance system designed for ice management in the marginal ice zone (1988, p.471-483, eng) 43-641

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Methods and trends of searching for gas hydrate deposits in the northern West-Siberian Platform (1988, p.110-115, rus) 43-1609

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Modeling the ice cover breakup on the Susquehanna River near the Safe Harbor hydroelectric facility (1988, p.229-238, eng) 43-2996

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Snow vehicles (1986, 191p., rus) 43-715

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Standardized codes regulating construction and development in avalanche hazard regions (1987, p.343-352, rus) 43-2540

Runólfsson, S.
Land reclamation in Iceland (1987, p.514-517, eng) 43-200

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Durability of concrete structures. Coating protection against atmospheric acid attack (1988, 41p. + appends., eng) 43-1706

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Heat loss self-regulation in open pulp flows on ash dumps at subzero air temperatures (1987, p.4-11, rus) 43-1187

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Winter albedo characteristics at St. Paul, Minnesota (1989, p.227-232, eng) 43-4404

Russell-Head, D.S.
Compacted-snow runways: guidelines for their design and construction in Antarctica (1989, 68p., eng) 43-3474

Russia. Gosudarstvennyi komitet standartov
State standards index of the USSR, 1988 (1987, 4 vols., rus) 43-1143

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Effect of multiple freeze-thaw cycle conditioning of the moisture damage in asphalt concrete mixtures (1986, p.213-236, eng) 43-1860

Schieldrop, B.
Continuum model for calculating snow avalanche velocities (1987, p.363-379, eng) 43-1246

Schlegel, M.G.
Geologic origin and fill properties of the Barrow Unit materials (1984, p.1045-1058, eng) 43-669

Schlosser, E.
Optical studies of antarctic sea ice (1988, p.289-293, eng) 43-1349

Schlup, U.
State of art in Switzerland (1986, 6p, eng) 43-2755

Schmid, W.
On the geometry, flow and age of firn and ice at the Colle Gnifetti core drilling site (Monte Rosa, Swiss Alps) (1988, p.1-19, eng) 43-2594

Schmidt, L.R.
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Constructing scaled models for snowdrift tests outdoors (1987, p.166-169, eng) 43-3943
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Portable animal protection shelter and wind screen (1988, p.170-173, eng) 43-4011
Portable ten-meter instrument mast (1984, p.168-171, eng) 43-4328
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Swiss improvements of the FMCW radar for snow measurements (1984, p.24-32, eng) 43-4312
System that monitors blowing snow in forest canopies (1987, p 227-230, eng) 43-583

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Arctic haze (1987, p 285-288, eng) 43-3298
Distribution and transport of pollution aerosols over the Norwegian Arctic on 31 March and 4 April 1983 (1985, p.2135-2142, eng) 43-996
Lidar detection of leads in Arctic sea ice (1989, p.530-532, eng) 43-3359
Observations of Arctic haze during polar flights from Alaska to Norway (1985, p 2143-2151, eng) 43-997

Schoettle, A.W.
Glacier lakes ecosystem experiments site. an "experimental" wilderness (1987, p.161-165, eng) 43-580

Schofield, S.A.
Molecular theory of dendritic crystal growth (1988, p.11-12, eng) 43-1743

Scholander, J.
Winter knowledge in the Swedish forestry (1985, p.50-53, swe) 43-360

Scholz, H.
Influence of glacier run out on melt water deposits of Russell Glacier near Söndre Strömfjord, West Greenland (1988, p.55-74, eng) 43-2597

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Application of a snow accumulation-ablation model for areal distribution of shallow ephemeral snowpacks (1987, p 129-143, eng) 43-396

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Effects of end conditions on the strength and fracture of ice under compression (1988, p.99-108, eng) 43-2913
Effects of prestrain on the compressive ductile-to-brittle transition in ice (1988, p.109-117, eng) 43-2914
Mechanical properties of saline ice (1988, p.45-47, eng) 43-3645
Tensile strength of cracked ice (1989, p 303-311, eng) 43-2242
Tensile strength of ice containing cracks; final report (1988, 7p, eng) 43-1701

Schultz, L.
Search for meteorites in the Allan Hills region, 1985-1986 (1988, p.82-83, eng) 43-1616

Schumacher, J.D.
Oceanographic conditions on the northern Bering Sea shelf: 1984-1985 (1988, 55p., eng) 43-516

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Development of an analytical method for the determination of explosive residues in soil. Part II: Additional development and ruggedness testing (1988, 46p, eng) 43-4594

Schumann, T.
Aerosol and hydrometeor concentrations and their chemical composition during winter precipitation along a mountain slope 2. Enhancement of below-cloud scavenging in a stably stratified atmosphere (1988, p.2741-2750, eng) 43-2318

Schunke, E.
Earth hummocks (thufur) (1988, p 231-245, eng) 43-329
Studies of the periglacial topography of the central Brooks Range and the Arctic Slope of northern Alaska (1987, p.149-171, ger) 43-407

Schutt, J.
Search for meteorites in the Allan Hills region, 1985-1986 (1988, p.82-83, eng) 43-1616

Schuyler, G.D.
Simulation to predict snow sliding and lift-off on buildings (1989, p.128-141, eng) 43-3559

Schwander, J.
Transformation of snow to ice and the occlusion of gases (1989, p 53-67, eng) 43-3680

Schwarz, J.
Model and full-scale tests in ice (1989, 6p., eng) 43-4031
Second Icebreaking Technology Expedition with R.V. *Polarstern*. Final report, Vol.1 (1987, 354 leaves, ger) 43-2430
Temperature and ice conditions in the Mississippi River near Cordova, Illinois since startup of Quad Cities Nuclear Power Station (1973, 17p. + tables, eng) 43-420

Schweiger, A.
Arctic cloudiness in spring from satellite imagery: a response (1988, p.539-540, eng) 43-2036

Schweiger, A.J.
Bibliography of snow and ice hazards on highways (1987, 110p., eng) 43-753

Schweiker, K.S.
Radar backscatter characteristics of snow covered terrain at 94 gigahertz (1984, p.115-119, eng) 43-3478

Scialdone, J.
Comments on "Comparison of Northern Hemisphere snow cover datasets" (1988, p.435-442, eng) 43-3468

Scott, D.B.
Relative sea-level changes in Atlantic Canada: observed level and sedimentological changes vs theoretical models (1987, p.87-96, eng) 43-3398

Scott, J.N.
Navier-Stokes solution to the flowfield over ice accretion shapes (1988, p.710-716, eng) 43-1124

Scott, P.T.
Characterization of a modified hexagonal silver iodide ice nucleus aerosol (1989, p.722-726, eng) 43-4547

Scotto, G.E.
Spring opening of the Gran San Bernardo Pass (1988, p.76-79, ita) 43-1066

Sea Ice Forces and Mechanics Conference, Anchorage, AK, July 22-23, 1986
Proceedings (1988, 64p, eng) 43-3495

Sea ice. Remote sensing, mapping, and characterization. January 1972-March 1989. (Citations from the International Aerospace Abstracts Database)
Sea ice. Remote sensing, mapping, and characterization. January 1972-March 1989. (Citations from the International Aerospace Abstracts Database) (1989, 114p., eng) 43-3467

Seaber, P.R.
Hydrogeology (1988, 524p. + 3 maps, eng) 43-4292

Seaberg, J.Z.
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Seaberg, S.Z.
Character of the englacial and subglacial drainage system in the lower part of the ablation area of Storglaciären, Sweden, as revealed by dye-trace studies (1988, p.217-227, eng) 43-167

Seakem Oceanography Ltd.
Evaluation of hovercraft for dispersant application (1988, 57p. + appends, eng) 43-1704

Sear, C.B.
Index of sea ice variations in the nordic seas (1988, p 339-355, eng) 43-2038

Sedelkin, V.M.
Thermal stabilization of soils at the base of objects of gas-transportation systems (1988, p 34-37, rus) 43-548

Sedlacek, A.J.
Photochemistry of solid ozone (1989, p.509-511, eng) 43-1202

Sedov, B.M.
Seismic investigations in permafrost regions (1988, 184p., rus) 43-727

Sedov, R.V.
Glaciers of the Iskaten Range (1988, p.129-133, rus) 43-949

Seeber, G.
Ice-motion determination by means of satellite positioning systems (1988, p.36-41, eng) 43-1941

Segal, Z.
Ice loads and the requirements for hulls of icebreakers (1987, p 31-32, rus) 43-697

Segal, Z.B.
Ice propulsion definition for river icebreakers and transport ships (1988, 10p., eng) 43-411

Segar, D.A.
Bering Sea Monitoring Program. Proceedings of a workshop (January 1987) and sampling design recommendations (1987, var.p., eng) 43-754

Segawa, T.
Depolarization due to raindrops and ice particles along Ka-band satellite communication path (1988, p.1272-1275, eng) 43-2279

Seidel, K.
Multisensor snow cover mapping and snowmelt runoff simulations (1988, p.186-191, eng) 43-4129

Seiler, J.H.
Making sensitive data collection instruments work in the Arctic (1988, p.33-36, eng) 43-4497

Seiler, W.
N2O measurements of air extracted from antarctic ice cores: implication on atmospheric N2O back to the last glacial-interglacial transition (1989, p.189-201, eng) 43-3974

Seitz, W.R.
Development of a membrane for *in-situ* optical detection of TNT (1988, 6p., eng) 43-1842
Single fiber measurements for remote optical detection of TNT (1989, 7p., eng) 43-3870

Seki, N.
Effect of an air layer on the thermal insulation of clothing materials (1989, p.251-256, eng) 43-4219
Proceedings (1989, 314p., eng) 43-4193

Sellars, C.D.
Ice jam flood frequency and annual damages at Dawson City on the Yukon River (1988, p.63-83, eng) 43-2165

Sellmann, P.V.
Coastal subsea permafrost and bedrock observations using dc resistivity (1989, 13p., eng) 43-4386
Evaluation of several auger bits in frozen fine-grained soils, asphalt, and concrete (1988, 10p, eng) 43-1024
Seafloor temperature and conductivity data from coastal waters of the U.S. Beaufort Sea (1989, 19p, eng) 43-2123

Semenenko, G.V.
Characteristics of the spring ice cover melting process in the Zeya reservoir (1988, p.33-35, rus) 43-3636

Semenov, IU.A.
Loads of solid ice sheet on hydraulic structures in the upper and middle Volga River (1988, p.165-171, rus) 43-1780

Semenova, G.V.
Geocryological features of sporadic permafrost in West Siberia (1988, p.149-160, rus) 43-1614

Seminar on Applied Ice Mechanics, Narvik, Norway, Sep. 8-9, 1987
Proceedings (1987, var.p., eng) 43-1099

Semkin, R.G.
Chemistry of atmospheric deposition, the snowpack, and snowmelt in the Turkey Lakes Watershed (1988, p.38-46, eng) 43-1358

Semtner, A.J., Jr.
Prospects for modeling and predicting the large-scale ocean circulation and its mesoscale variability in the Arctic Ocean and Greenland Sea (1987, p.119-121, eng) 43-849

Sen, D.C.
Process design for offshore oil and gas production in cold ocean environment (1988, p 864-869, eng) 43-1709

Senbu, O.
Experimental study on testing method for frost resistance of autoclaved lightweight concrete (1988, p.384-401, eng) 43-4063

Sengupta, M.
Notes on Norwegian arctic road construction techniques (1988, p 26-29, eng) 43-4496

Senior, C.A.
Antarctic winter; simulations with climatological and reduced sea-ice extents (1989, p 225-246, eng) 43-2836

Senn-Irlet, B.
Macromycetes in alpine snow-bed communities—mycocoenological investigations (1988, p.251-263, eng) 43-155

Senneset, K.
Norwegian ice testing laboratory (1988, p.629-645, eng) 43-650
Permafrost; Fifth International Conference; (Proceedings), Vol.3 (1988, 87p., eng) 43-1717

Seppälä, M.
Palsas and related forms (1988, p.247-278, eng) 43-330
Permafrost thickness and distribution in Finnish Lapland—results of geoelectrical soundings (1987, p.127-147, eng) 43-406
Rock pingos in northern Ungave Peninsula, Quebec, Canada (1988, p.629-634, eng) 43-1283
Slushflows in a subarctic environment, Kilpisjärvi, Finnish Lapland (1988, p.97-105, eng) 43-16

Serebrennikov, A.V.
Structural studies on an ice core from the Dzhantugan firn plateau in the Central Caucasus (1988, p 25-33, rus) 43-3251

Serebriannyi, L.R.
Formation of moraines on Tien Shan glaciers [1988, p 215-223, rus] 43-965

Seregin, V.E.
Cooling of cryoagents by the pumping-out of vapor [1989, p 63-68, eng] 43-4399

Sergeev, B.N.
Parametrization of the precipitation processes in mixed and in ice clouds in numerical models [1988, p.32-35, rus] 43-1078

Sergeev, B.P.
Radiation properties of some natural and disturbed ground covers in the Yamal Peninsula [1988, p 61-70, rus] 43-527

Sergeev, E.M.
Engineering geology today: theory, practice, problems [1988, 293p., rus] 43-883
Problems in rational utilization of geological media [1988, 246p., rus] 43-734

Sergeev, V.V.
Numerical modeling of ice crystal formation by the dissemination of ice-forming aerosols in convective clouds [1988, p.18-27, rus] 43-1429

Sergeeva, G.M.
Effect of mutual action of compound additives and vacuum evaporation on frost resistance of coarse and fine-grain concretes [1986, p.88-90, rus] 43-2215

Sérodes, J.B.
Role of ice in the morpho-sedimentological regime of a foreshore of the St. Lawrence River's middle estuary [1988, p.348-354, fre] 43-706

Seroshtan, T.I.
Cryogenic taiga soils of the Selemdzha River basin [1987, p.40-50, rus] 43-38

Serreze, M.C.
Seasonal variations in sea ice motion and effects on sea ice concentration in the Canada Basin [1989, p.10,955-10,970, eng] 43-4530

Serson, H.V.
Stable-isotope (O-18/O-16) tracing of fresh, brackish, and sea ice in multi-year land-fast sea ice, Ellesmere Island, Canada [1989, p.9-16, eng] 43-4134

Servas, V.P.
HVS-aided validation of pavement behavior at low temperatures [1987, p.168-197, eng] 43-1862

Sesiashvili, L.D.
Space-time distribution of various physico-mechanical characteristics of snow cover under conditions of the Central Caucasus [1987, p.240-248, rus] 43-2525

Sevenard, IU.K.
Studies of the regularities governing swelling of morainal loam [1987, p.72-78, rus] 43-1183

Severinova, E.P.
Cargoes and frost. (Freezing processes and defrosting loose cargo) [1988, 141p , rus] 43-3063

Severskii, E.V.
Rock glaciers of the Kungey Ala Tau (Northern Tien Shan) [1987, p.196-212, rus] 43-3384

Severskii, I.V.
Results and prospects for mapping of avalanche hazard in the USSR [1987, p.167-180, rus] 43-2516

Sewage waste discharge to the arctic marine environment, February 1987
Sewage waste discharge to the arctic marine environment, February 1987 [1988, var. p., eng] 43-3060

Sezin, A.I.
Experience in and problems of marine pipeline construction [1988, p.33-36, rus] 43-567

Sezin, V.M.
Mapping of avalanche hazard by the "weighted value" method [1987, p.193-198, rus] 43-2518
Principles in forecasting avalanche hazard in the USSR [1987, p.37-46, rus] 43-2497

Shabanov, P.P.
Construction of snow-ice roads in the Arctic [1988, p.35-37, rus] 43-2231

Shabtaie, S.
Can relict crevasse plumes on antarctic ice shelves reveal a history of ice-stream fluctuation [1988, p.77-82, eng] 43-1948
Ice-thickness map of the west antarctic ice streams by radar sounding [1988, p.126-136, eng] 43-1956
Interaction between ice stream B and Ross Ice Shelf, Antarctica [1988, p.113-115, eng] 43-1625
Mass-balance studies of ice streams A, B, and C, West Antarctica, and possible surging behavior of Ice Stream B [1988, p.137-149, eng] 43-1957

Shadrin, O.B.
Experience in and problems of marine pipeline construction [1988, p.33-36, rus] 43-567

Shafer, B.
Proceedings of the 54th annual meeting, Phoenix, AZ, Apr. 15-17, 1986 [1986, 198p., eng] 43-3897
Proceedings of the 56th annual meeting, Kalispell, Montana, Apr. 19-21, 1988 [1988, 191p., eng] 43-3990

Shafer, B.A.
Analysis of 1983 snowmelt runoff production in the upper Colorado River basin [1984, p.1-11, eng] 43-4310
Centralized forecasting system for the Western United States [1986, p 61-70, eng] 43-3904

Shafer, M.W.
Collective behavior of supercooled liquids in porous media [1988, p.966-969, eng] 43-2843

Shafrai, S.D.
Behavior of bolted flanged connectors in low temperatures [1988, p.9-14, rus] 43-2432
Ways of improving structural-technological methods of preventing brittle failure of steel structure junctions and elements [1988, p.5-9, rus] 43-564

Shahbodaghlou, F.
Feasibility model for use of weather protection in cold region construction [1988, 308p , eng] 43-1919

Shaikhutdinov, R.Sh.
Avalanche activity on Ratmanov Island [1987, p.412-418, rus] 43-2550
Conditions of avalanche formation in Kamchatka [1987, p.398-404, rus] 43-2548
Determining the boundaries of avalanche-danger zones in the Kamchatka River basin [1987, p.133-137, rus] 43-244
Snow cover characteristics in the Kamchatka River basin according to data from traverse measurements of snow thickness and density [1988, p.30-35, rus] 43-2674

Shalman, D.A.
Road and airport snowplows Catalog-handbook [1971, 121p., rus] 43-4102

Shamanova, I.I.
Methods of small-scale mapping of potential thermokarst [1989, p.99-104, rus] 43-4614
Some aspects of the impact of climate on the development of thermokarst in the low-temperature cryolithozone of Northern Yakutia [1987, p.306-312, eng] 43-134

Shanin, S.A.
Experience in producing a catalog of avalanche-prone areas and maps to evaluate the avalanche formation conditions in poorly studied mountain territories [1987, p.202-214, rus] 43-2520

Shao, W.
Snow damages to the highway from Zongdian to Deqin, Yunnan Province, and their control [1987, p 45-52, chi] 43-483

Shapiro, L.H.
Deformation of floating ice sheets of variable thickness under in-plane compressive loading [1989, p.385-407, eng] 43-3743

Shapovalov, A.A.
Preliminary selection of chemical compounds capable of increasing frost resistance of plants [1988, p.124-128, eng] 43-1120

Sharma, A.K.
Estimation of rainfall rates from passive microwave remote sensing [1988, 220p., eng] 43-1916

Sharma, M.G.
Development of fracture criterion for asphalt mixes at low temperatures [1989, 35p., eng] 43-1822

Sharma, S.S.
Strength profiles of Dakshin Gangotri ice shelf in Eastern Antarctica [1989, p.289-299, eng] 43-3734

Sharon, J.
Chilling tale: how ground freezing solved tunneling problems [1988, p.48-51, eng] 43-1449

Sharp, M.
Structure and stability of the former subglacial drainage system of the Glacier de Tsanfleuron, Switzerland [1989, p.119-134, eng] 43-3085
Surging glaciers: behaviour and mechanisms [1988, p.349-370, eng] 43-828
Surging glaciers: geomorphic effects [1988, p.533-559, eng] 43-2275
Tectonic processes in a surge-type glacier [1988, p.499-515, eng] 43-1466

Sharp, R.P.
Living ice: understanding glaciers and glaciation [1988, 225p., eng] 43-2408

Shatov, S.V.
Analyzing the trends in the improvement of mounted rippers [1988, p.108-112, rus] 43-591

Shats, M.M.
Problems in monitoring the cryolithozone [1987, p.103-106, rus] 43-4231

Shaw, G.E.
Aerosol measurements in central Alaska, 1982-84 [1985, p.2025-2031, eng] 43-985
Aerosol transport from sources to ice sheets [1989, p.13-27, eng] 43-3678
Antarctic aerosols: a review [1988, p.89-112, eng] 43-1405
Chemical air mass systems in Alaska [1988, p.2239-2248, eng] 43-1204

Shaw, R.J.
NASA's rotorcraft icing research program [1988, p 802-832, eng] 43-3817
Predictions of airfoil aerodynamic performance degradation due to icing [1988, 16p., eng] 43-3967

Shchadrichev, E.V.
Study of cold resistance of cemented steel for gears [1987, p.60-65, rus] 43-2454

Shchapova, L.N.
Origin, chemistry and biology of soils in Primorye and the Amur region [1987, 196p., rus] 43-37

Shchelokov, V.K.
Ensuring the optimal heat regime for permafrost beds of building [1988, p.41-44, eng] 43-1337

Shcherbakov, O.N.
Pollution of the waters of the northern seas and problems of its investigation [1989, p.55-61, eng] 43-3229

Shchetinnikov, A.S.
Runoff from the Pamir-Alai glaciers and potential opportunities for its regulation [1988, p.80-91, rus] 43-2684

Sheikh-Taheri, A.
Methodology for establishing ground snow loads [1985, p.163-166, eng] 43-4282

Shelegov, V.G.
Variations in strength characteristics of heavy concretes exposed to high temperatures and freeze-thaw cycles [1989, p.58-61, rus] 43-3858

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Dynamic transport of river ice [1988, p.147-156, eng] 43-3028

Shen, H.T.
Dynamic transport of river ice [1988, p.147-156, eng] 43-3028
Field investigation of frazil ice jam in Yellow River [1988, p.157-175, eng] 43-2170
Free drift model for river ice cover formation [1988, p.140-151, eng] 43-4124
Mathematical model for river ice processes [1988, p.356-366, eng] 43-3008

Shen, M.
Calculation of the stress field in soils during freezing [1988, p.121-127, eng] 43-69
Mechanics of freezing and thawing in soils [1989, p.73-103, eng] 43-3094
Numerical solutions for freezing and thawing of soils using boundary-conforming curvilinear coordinate systems [1989, p.391-400, eng] 43-3115

Shen, W.
Flexural properties of eastern Bohai one-year sea ice [1988, p.199-205, eng] 43-2922
General view of ice mechanics in China [1988, p.378-389, eng] 43-3010
Ice conditions and research for economical development and exploitation of natural resource in the cold regions of China [1988, p.1-17, eng] 43-2907
Measurement of "elastic coefficients" of Bohai Sea ice under uniaxial compression [1989, p.321-331, eng] 43-3737
On salt heave of saline soil [1988, p.35-39, eng] 43-58
Primary study of ice forces on the structures in Bohai Sea [1989, p.537-545, eng] 43-3755
Study of ice adhesion and sintering [1989, p.373-382, eng] 43-3582

Shen, Z.
Uniaxial compressive strength of frozen medium sand under constant deformation rates [1988, p.225-232, eng] 43-82

Sheng, D.
On a finite element model for freezing and thawing soils [1989, p.342-353, eng] 43-3739
Verification and application of a numerical model for frost front penetration [1989, p.401-414, eng] 43-3116

Sheng, W.K.
Hydrogeochemical characteristics in the Gozha Lake area of the West Kunlun Mountains [1989, p.119-122, eng] 43-3450

Shentsis, I.D.
Estimating climatic characteristics of snow cover and precipitation in mountains using the mathematical model of snow reserve formation [1987, p.62-68, rus] 43-229

Sheremet'ev, A.N.
Thickness and velocity of the ice cover in the Mirnyy observatory region from radar sounding data [1989, p.47-54, eng] 43-2046
Use of radar sounding method in the study of dynamics of the antarctic ice cover [1989, p.143-149, eng] 43-2060

Sheremetov, R.T.
Accuracy of characteristics of snow cover at stations in the mountain-glacial basin of Aktru (Altay Mountains) [1988, p.81-87, rus] 43-2353

Sheridan, P.J.
Characterization of aircraft-collected particles present in the Arctic aerosol, Alaskan Arctic, spring 1983 [1985, p.2159-2166, eng] 43-999

Shestakov, V.L.
Effect of the structure of asphaltic polymer-impregnated concrete on its frost resistance and water impermeability [1988, p.652-655, eng] 43-3831

Shestakov, V.M.
Forecasting changes in geological media caused by technical operations [1988, p.84-102, rus] 43-736

Shesterkin, V.P.
Properties of the chemical composition of indigenous ice in the lower Amur River region [1987, p.28-38, rus] 43-3655

Shestov, V.A.
Regulating the thermal regime in highly mechanized placer mines in the North [1987, p.40-43, rus] 43-2287

Shevchuk, V.E.
Assembling bridge supports from ice platforms [1988, p.13-14, rus] 43-24

Shevyrtalov, E.P.
Flash flood of July 2, 1984, in the Kol'say River basin (1988, p.150-155, rus) 43-2423

Shi, Y.
Current trends and prospect for snow and ice research—IUGG XIX General Assembly 1987 Vancouver, Canada (1988, p.90-93, chi) 43-472
Snow cover effect of furrows for sowing and irrigation (1987, p 55-56, chi) 43-485

Shi, Y.F.
Progress in the study on basic features of glaciers in China in the last thirty years (1988, p.228-237, chi) 43-2862

Shibata, I.
Winter concrete work using air dome as a protective structure (1988, p.237-253, eng) 43-4055

Shibata, K.
Winter city planning: Sapporo's long-term perspectives and major projects (1988, p.207-219, eng) 43-4244

Shibata, T.
Wind effect on the distribution of snow depth on a large dome (1989, p.51-58, eng) 43-3551

Shibatani, R.
Snowmelt runoff processes in a small precambrian watershed (1988, p.94-107, eng) 43-4120

Shibuya, M.
Comparison between the results of heat transfer analysis and the observed values on a refrigerated LPG inground tank (1988, p.331-337, eng) 43-94

Shields, D.
Measuring the creep of ice in place (1988, p.703-713, eng) 43-656

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Strength of compacted frozen fill after thawing (1989, p.274-281, eng) 43-2109

Shifrin, S.A.
Energy-efficient regimes for thermal treatment of concrete in extended constructions under winter conditions (1988, p.75-79, rus) 43-2434

Shih, L.Y.
Numerical modeling of pack ice interaction with ships (1988, p.735-745, eng) 43-2969

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Conditional standards of ice qualities of a ship (1938, 51p, eng) 43-3857

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Antenna pattern degradation by snow accretion on the reflector surface (1988, p.871-874, eng) 43-2278

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Surface textures of quartz grains obtained from an iceberg and submarine sediments in Lützow-Holm Bay, Antarctica (1988, p.129-139, jpn) 43-840

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Development of a track snow-melting system using well water as heat source (1988, p.343-348, eng) 43-3820

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Frost damage of concrete cover and protection from corrosion of reinforcing bar at splash zone (1988, p.289-302, eng) 43-4058

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Radar backscattering from snow-covered ice (1986, p.321-328, eng) 43-4646
Theoretical models for polarimetric microwave remote sensing of earth terrain (1989, p.61-81, eng) 43-4422

Shinde, S.B.
Natural ice rubble studies (1983, 2 vols., eng) 43-4587

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Distribution of periglacial landforms in the Langtang Valley, Nepal Himalaya (1989, p.209-220, eng) 43-3463

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Hydraulic conveying of snow by pipes (1989, p.55-63, jpn) 43-4521
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Air-sea-ice observation system of Hokkaido University and preliminary results of the 1988 experiment (1988, p.651-660, eng) 43-2963

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Mathematical thermal model of lake freezing and its testing (1988, p.18-24, eng) 43-2126

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Interaction of ice floes with cylindrical piles (1988, p.180-184, rus) 43-4157

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Model studies of reinforced concrete supports of offshore drilling structures for low temperature and ice effect (1986, p.134-148, rus) 43-730

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Long range forecasting of river freezeup in Kazakhstan (1988, p.93-98, rus) 43-1786

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Calculating the maximum volume of avalanches (with Swiss Alps for example) (1988, p.110-113, rus) 43-3265
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Calculation of dynamical load of single drifting ice on pier and other hydraulic structures (1987, p 65-72, chi) 43-487

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Studies on the heating of frozen massif during the underground mining of placer deposits (1988, p 82-85, rus) 43-2784

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Intercomparison of synthetic- and real-aperture radar observations of Arctic sea ice during winter MIZEX '87 (1988, p.1419-1422, eng) 43-1890
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Radiometric analysis of the level of tropospheric refraction of radio waves in polar regions (1988, p.90-95, rus) 43-2726

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Shore erosion of reservoirs of Angara River in permafrost (1988, p 59-64, rus) 43-2216

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Physical properties and dielectric models of snow cover in the UHF range (1988, p.83-97, rus) 43-1383

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Determining the accuracy of existing methods for calculating the distribution of glaciation in mountain basins according to altitude (1988, p.117-120, rus) 43-2688

Shumilov, IU.V.
Problems in monitoring the cryolit.'ozone (1987, p.103-106, rus) 43-4231

Shur, IU.L.
Upper surface layer of permafrost and thermokarst (1988, 213p., rus) 43-2134

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Characteristics of external mass transfer on the Malyy Azau glacier, Elbrus Mountain (1987, p.91-95, rus) 43-235

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Thermal calculation of processes and facilities of mining industry in the North (1987, 81p, rus) 43-2259

Shusherina, E.P.
Study on deformation features of frozen coarse sand (1987, p.227-237, rus) 43-3387

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Parameterization of the dynamics of sea ice cover in climatological studies (1988, p.128-136, rus) 43-2444

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Regulation of the thermal regime in northern mines and pits; resource-saving systems (1988, 192p., rus) 43-2152

Shvets, L.P.
Conditions for avalanche formation in the Southern and Central Urals (1987, p.425-428, rus) 43-2553

Shvetsov, P.F.
Geocryological systems and an approach to their classification (1987, p.17-25, rus) 43-3369

Shyam Sunder, S.
Multiaxial differential model of flow in orthotropic polycrystalline ice (1989, p.223-235, eng) 43-4444

Siddalingaiah, H.
Reflectances of glaciers as calculated using Landsat-5 thematic mapper data (1988, p.311-321, eng) 43-544

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Device for reaming holes in ice (1988, p.173-175, eng) 43-1374

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Peculiarities and regularities of river ice breakup in Yakutia (1988, p.14-21, rus) 43-2344

Sidorova, T.L.
Meteorological conditions in the formation of water and snow flows (1988, p.41-47, rus) 43-3254

Siegenthaler, U.
Changes in the high-latitude ocean as possible causes of atmospheric CO2 variations (1985, p.37-38, eng) 43-1154

Sievers, J.
Glaciological map of Filchner-Ronne Ice Shelf, Antarctica (1988, p.150-155 + map, eng) 43-1958

Sihvola, A.
Polarizability and effective permittivity of layered and continuously inhomogeneous dielectric spheres (1989, p.37-60, eng) 43-4421

Silaev, A.V.
Space-time distribution of atmospheric ice nucleating agents above different parts of the Ukraine (1988, p.142-153, rus) 43-1084

Silifonkin, V.I.
Automatic field device for measuring heat flow and temperature in soils (1988, p.95-101, rus) 43-1607
Studies of thermophysical properties of rocks and soils by KAMAK standards (1988, p.83-89, rus) 43-1605

Sills, A.
Energy balance of the intertidal zone of western Hudson Bay I: ice-free period (1989, p.327-345, eng) 43-4560
Energy balance of the intertidal zone of western Hudson Bay II: ice-dominated periods and seasonal patterns (1989, p.346-366, eng) 43-4561

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Early Martian environments: the antarctic and other terrestrial analogs (1989, p.147-153, eng) 43-4580

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Perennially ice-covered Lake Hoare, Antarctica: physical environment, biology and sedimentation (1989, p.305-320, eng) 43-3701
Sand/ice interactions and sediment deposition in perennially ice-covered antarctic lakes (1988, p.217-220, eng) 43-1643

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Statistical forecasting of wet avalanches in the Caucasus Mountains (1988, p.112-115, rus) 43-3838

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Morphological and structural peculiarities of the SP-22 drifting ice island (1989, p 77-86, eng) 43-2050

Simons, G.A.
Laser ignition of Arctic oil spills (1987, p.355-365, eng) 43-3242
Laser ignition of oil spills. Phase 1 concept development. Final report (1985, 89p. + appends, eng) 43-3243

Simons, T.J.
Winter circulation in Lake Ontario (1985, p.423-433, eng) 43-1006

Simpkin, P.
Beaufort Sea geophysical survey: scoping study (1985, 68p. + appends., eng) 43-282

Simsons, A.
Abnormally enriched elemental concentrations in urban snow (1987, p.79-88, eng) 43-1291

Sinclair, P.C.
Characterization of a modified hexagonal silver iodide ice nucleus aerosol (1989, p.722-726, eng) 43-4547

Singeetham, S.P.
Application of a modified subsea wellhead system on Molikpaq, a mobil Arctic caisson rig in the Canadian Beaufort Sea (1988, p.403-408, eng) 43-713
Development of hybrid subsea wellhead system for arctic application (1988, p.105-110, eng) 43-2127

Singh, R.P.
Dielectric properties and microwave remote sensing (1984, p.97-101, eng) 43-1929

Singh, S.K.
Transfer function approach for a structure subjected to ice crushing (1989, p.420-430, eng) 43-3745

Singh, S.N.
Local heat-transfer characteristics of glaze-ice accretions on an NACA 0012 airfoil (1988, p.1136-1141, eng) 43-2028

Singleton, W.J.
Device for reaming holes in ice (1988, p.173-175, eng) 43-1374

Sinha, N.K.
Close-loop controlled tensile strength testing method for multi-year sea ice (1989, p.1-6, eng) 43-2602
Crack-enhanced creep in polycrystalline material: strain-rate sensitive strength and deformation of ice (1988, p 4415-4428, eng) 43-1792
Mechanical properties of shelf ice (1987, p.67-78, eng) 43-903
Preliminary observations on compressive strength, deformation and Poisson's ratio of iceberg ice (1987, p 413-429, eng) 43-918
Proceedings of the eighth International Conference on Offshore Mechanics and Arctic Engineering, 1989. Volume 4 (1989, 476p, eng) 43-2601
Use of foil strain gauges in ice over a wide loading rate (1989, p.145-158, eng) 43-2363

Siniakov, L.N.
Strength of thawed and frozen soils of dam cores under conditions of triaxial independent loading by tension and compression (1988, p.27-33, eng) 43-1087

Siniavskii, A.G.
Technical service department during subzero temperatures (1988, p.11-13, rus) 43-3540

Sin'kevich, S.A.
Structure of firn sequences of the Svea-Kongsvegen glaciers in West Spitsbergen and their glaciological zonation (1988, p.78-83, rus) 43-3260

Sinton, W.M.
Near-infrared photometry of the Galilean satellites (1989, p.82-97, eng) 43-2326

Sirén, M.
Mobility of different forest machines in snow (1985, p.229-239, swe) 43-375

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Methods of determining service life of equipment in the Far North (1987, p.29-32, rus) 43-105

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Accuracy of characteristics of snow cover at stations in the mountain-glacial basin of Aktru (Altay Mountains) (1988, p 81-87, rus) 43-2353

Sjoberg, W.F.
Station climatic summaries, Antarctica, Australia and Oceania (1987, 48p., eng) 43-3520

Sjökvist, K.
Need of winter knowledge in the construction industry (1985, p.54-71, swe) 43-361

Sjölind, S.-G.
Constitutive model for ice as a damaging visco-elastic material (1987, 3p., eng) 43-1107

Skaer, H.B.
Low temperature and biological electron microscopy (1987, p.177-233, eng) 43-3982

Skarstein, O.B.
Norwegian land-use policy and building design to relation to climate (1988, p.245-250, eng) 43-4246

Skarzińska, K.M.
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Microstructural changes in clays due to freezing (1989, p 573-582, eng) 43-3130
Some problems of freezing the rock mass (1989, p 379-390, eng) 43-3114

Skjegstad, P.
Acoustic remote sensing instruments for monitoring of polar drift ice (1988, p.485-493, eng) 43-642

Skjoldal, H.R.
Life at the ice edge (1989, p.60-67, eng) 43-2446

Sklash, M.G.
Isotopic and geochemical study of snowmelt runoff in a small Arctic watershed (1986, p.15-30, eng) 43-835

Skobeeva, E.I.
Changes in glacial and climatic conditions of Spitsbergen in the Subboreal period (1987, p.108-112, rus) 43-239

Skogland, T.
Respiratory burst after freezing and thawing of soil: experiments with soil bacteria (1988, p.851-856, eng) 43-2570

Skognes, K.
Ice drift and under ice currents in the Barents Sea (1989, p 65-76, eng) 43-3713

Skorbilin, N.A.
Studies of soil freeze-thaw from meteorological data in western Siberia (1988, p.122-134, rus) 43-1611

Skripkin, B.K.
Construction materials for low-storied housing in the North and Siberia (1989, 152p., rus) 43-3633

Skripnik, O.N.
Stochastic concept of flooding data in the form of a system of random values (1988, p 21-29, rus) 43-1770

Skuba, V.N.
Results of developmental studies on flow technology for placer mines in the North (1988, p 5-12, rus) 43-2780

Skudrzyk, F.J.
Disintegration of frozen granular materials using high pressure water jets (1989, p.320-334, eng) 43-2113
Experimental underground placer mining on Wilbur Creek (1987, p 89-119, eng) 43-3082
Underground placer mining in Siberia (1988, p.81-90, eng) 43-2197

Skvarca, P.
New front of Filchner Ice Shelf (1988, p.20-24, spa) 43-2598

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Role of freezing and thawing processes in thinning of soils (1987, p.17-21, eng) 43-4426

Skvortsova, T.N.
Meteorological and aerological conditions of the Novaya Zemlya bora (1989, p.88-96, eng) 43-3233

Slagoda, E.A.
Petrographic characteristics of recent shore deposits of the Laptev Sea (1988, p.11-21, rus) 43-520

Slater, J.E.
Trends in snow surveying in Canada (1987, p.231-253, eng) 43-1299

Slater, J.R.
Design of river intakes in cold climates (1984, p.1113-1127, eng) 43-674

Slaughter, C.W.
Proceedings of the Alaska Forest Soil Productivity Workshop, 1987 (1988, 120p., eng) 43-1142

Slepak, M.E.
Rheological regularities in frozen soil mechanics and their application in engineering calculations (1988, p.219-232, eng) 43-2665

Slepokurov, E.I.
Survey of concretes resistant to cryogenic saline corrosives (1989, p.32-33, rus) 43-3864

Sleptsov, A.E.
Basis of parameters for torpedoing permafrost when using pillar-free technology (1988, p.84-89, rus) 43-3865
Estimation of the maximum roof span for initial sagging in permafrost ground (1988, p.406-411, eng) 43-1488
Main parameters for torpedoing long-term frozen rocks in pillarless mining (1989, p.255-259, eng) 43-4468
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Waste management practices in Antarctica (1989, p.122-130, eng) 43-2095
Water quality changes caused by extension of the winter navigation season on the Detroit-St. Clair river system (1988, 56p., eng) 43-1201

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Region 28, permafrost region (1988, p.263-270, eng) 43-4294
Water resources of the North Slope, Alaska (1987, p.233-252, eng) 43-2372

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Studies of the pollution of snow-ice covers of the Arctic seas (from the "Sever" expedition data) (1987, p.246-255, rus) 43-28

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Arctic construction: working group report (1987, p.311-314, eng) 43-866
Corps of Engineers research in Arctic and Arctic-related environmental sciences (1987, p.81-87, eng) 43-848

Smertin, O.S.
Forecasting the temperature regime of warehouses, under construction in permafrost on a multilayer foundation (1987, p.30-34, rus) 43-2286

Smiraglia, C.
Medial moraines of Ghiacciaio dei Forni, Valtellina, Italy: morphology and sedimentology (1989, p 81-84, eng) 43-4144

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Forecasting changes in geological media caused by technical operations (1988, p 84-102, rus) 43-736

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Impact of external factors on marine hydraulic structures (1986, 178p., rus) 43-728

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Rational design of lock mechanical devices operating under ice conditions (1986, p.307-321, eng) 43-276

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Sea ice volume in Arctic waters outside the USSR (1987, p.24-28, rus) 43-888

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Peculiarities of the morphology of glacial dislocations on the Kara Sea coast (1987, p.273-278, eng) 43-131

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Improving the technology and machinery for drilling in permafrost (1988, p.15-16, rus) 43-3671
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Observations of the "thermal offset" in near-surface mean annual ground temperatures at several sites near Mayo, Yukon Territory, Canada (1988, p.99-104, eng) 43-177

Smith, C.E.
Technology assessment and research program for offshore minerals operations: 1988 report (1988, 177p., eng) 43-3642

Smith, D.C., IV
Numerical study of mesoscale ocean eddy interaction with a marginal ice zone (1988, p.12,461-12,473, eng) 43-722

Smith, D.W.
House in cold climates—current technologies (1989, p.27-40, eng) 43-2086
Proceedings, Vol.3 (1984, p.1021-1201, eng) 43-667

Smith, G.A.
Antarctic benthic and sea-ice microalgal interactions: food chain processes and physiology (1988, p.174-175, eng) 43-1640

Smith, I.M.
Class A prediction of Arctic caisson performance (1988, p.589-612, eng) 43-1469

Smith, I.N.
On the surging potential of polar ice streams: Part 2. Ice streams and physical characteristics of the Ross Sea drainage basin, West Antarctica (1985, 81p., eng) 43-1716
Surging potential of polar ice streams: Part 1. Sliding and surging of large ice masses: a review (1985, 67p, eng) 43-880

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Air instead of water used in sub-arctic line testing (1988, p.11-12, eng) 43-4531

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Pangnirtung water reservoir geotechnical aspects (1988, p.633-658, eng) 43-1330

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Arctic snowmobile development: lightweight materials research for structure and suspension systems (1988, 32p., eng) 43-2150
Significance of climate change for the permafrost environment (1986, p.67-81, eng) 43-2584

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Comment on "Monitoring the unfrozen water content of soil and snow using time domain reflectometry" by Jean Stein and Douglas L. Kane (1985, p.1055-1058, eng) 43-4494
Comment on "Water movement into seasonally frozen soils" by Douglas L. Kane and Jean Stein (1985, p.1051-1054, eng) 43-4493
Detailed observations on the nature of frost heaving at a field scale (1989, p.306-312, eng) 43-3826
Measurement of the unfrozen water content of soils: comparison of NMR and TDR methods (1988, 11p., eng) 43-1844
Significance of climatic change for the permafrost environment (1988, p.18-23, eng) 43-1719

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Rainstorm-induced event sedimentation at the tidewater front of a temperate glacier (1988, p 409-412, eng) 43-175
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Analysis of sea ice drift in a coastal ice zone (1989, p.168-177, eng) 43-3722
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On determination of maximum hailstone sizes from hailpad observations (1989, p.71-76, eng) 43-4259
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Abundance and production of ice algae in Resolute Passage, Canadian Arctic (1988, p.251-263, eng) 43-1376
Biosynthesis and photosynthate allocation patterns of Arctic ice algae (1989, p.591-605, eng) 43-3698
Population dynamics of bacteria in Arctic sea ice (1989, p 63-76, eng) 43-1967
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Hindcast study of iceberg drift on the Labrador Coast (1984, 161p., eng) 43-448
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Constructing a 5-meter contour map and determining volumetric change from digital data, West Gulkana Glacier, Alaska (1988, p.11-18, eng) 43-2789
Smith, T.R.
Preliminary results concerning the effects of notch acuity and pre-strain on the fracture toughness of equiaxed freshwater ice (1989, p.23-29, eng) 43-2605
Smith, W.O.
Chlorophyll *a* distribution in the vicinity of an advancing ice edge: Antarctic Marine Ecosystem Research at the Ice-Edge Zone, 1986 (1988, p.163-164, eng) 43-1635
Smith, W.O., Jr.
Phytoplankton standing crops within an antarctic ice edge assessed by satellite remote sensing (1988, p.12,487-12,498, eng) 43-723
Smoke/Obscurants Symposium, 12th, Laurel, MD, Apr. 19-21, 1988
Proceedings. Vol.2: Unclassified section (1988, 738p, eng) 43-3428
Smorygin, G.I.
Theory and methods of producing artificial ice (1988, 280p, rus) 43-1439
Snegirev, A.M.
Electrical resistivity logging of permafrost in dry wells (1987, 102p, rus) 43-312
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Indentation and arrest stress intensity factors of first year columnar sea ice (1988, p.502-511, eng) 43-2949
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Viscoelastic response of a floating ice plate to a steadily moving load (1988, p.409-430, eng) 43-3291
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Assessment of trafficability and vessel manoeuvring and structural performance in a mixed old ice regime (1988, 56p. + tables, eng) 43-2149
Snieder, J.
Forward reflection coefficient of snow at 35 GHz (1986, p.353-369, eng) 43-4649
Snow, E.
Winter operations call for advance preparation (1988, p.36-37, eng) 43-1852
Snow plowing basics
Snow plowing basics (1988, p 42-43, eng) 43-2137
Snow Property Measurement Workshop, Lake Louise, Alberta, Canada, Apr. 1-3, 1985
Snow Property Measurement Workshop, Lake Louise, Alta., Apr. 1-3, 1985 (1987, 524p, eng) 43-1286
Snow shed sheds snow slide
Snow shed sheds snow slide (1989, p.15-16, eng) 43-2774
Snow survey of Great Britain, 1987-88
Snow survey of Great Britain, 1987-88 (1988, 22p., eng) 43-1730
Snow Symposium, 5th, Hanover, NH, Aug. 13-15, 1985
Proceedings, Vol.1 (1986, 369p., eng) 43-4621
Snow Symposium, 7th, Hanover, NH, Aug. 11-12, 1987
Proceedings (1989, 136p., eng) 43-3871
Snyder-Conn, E.
Drilling fluids and the arctic tundra of Alaska: assessing contamination of wetlands habitat and the toxicity to aquatic invertebrates and fish (1988, p 683-697, eng) 43-19
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HVS-aided validation of pavement behavior at low temperatures (1987, p.168-197, eng) 43-1852
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Corrosion resistance and mechanical strength of construction steels in the climatic range of subzero temperatures (1987, p.82-86, rus) 43-117
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Evaluation of the stability of pile supports for reinforced-concrete bridges against action of frost-heave forces (1985, p.60-66, rus) 43-1658
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Thermo-capillary and thermo-crystallizing flow of water films in capillaries (1988, p.58-59, rus) 43-553
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Proceedings of the eighth International Conference on Offshore Mechanics and Arctic Engineering, 1989 Volume 4 (1989, 476p., eng) 43-2601
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Freezing-and-thawing durability of concrete incorporating condensed silica fume (1988, p.257-274, eng) 43-4056
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Application of satellite data to monitoring snow cover and runoff in Greenland (1988, p.225-236, eng) 43-2016
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Solberg, A.
Digital simulation of aircraft longitudinal motions with tailplane icing (1983, 47p., eng) 43-1053
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Iceberg scouring and sea bed morphology on the eastern Weddell Sea shelf, Antarctica (1989, p 43-57, eng) 43-4388
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Automation of a water flume using microcomputer based data acquisition for snow and wind engineering (1988, p.162-175, eng) 43-4126
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Formation of a solid nucleus in supercooled liquid, Pt.2 (1980, p 99-109, eng) 43-4533
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Discussions on environmental protection in the North (1987, 176p., rus) 43-716
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Heating systems for large volume buildings (1989, p.82-86, rus) 43-3861
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Fossil-pingo lake peatlands in the Sanjang Plain (1988, p.76-83, chi) 43-470
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Correlations between road salt use and winter intensity (1986, 16p., eng) 43-2756

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Recent variations of Blue Glacier, Olympic Mountains, Washington, U.S.A. (1989, p.1-21, eng) 43-2476

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Nutrient regimes in the marginal ice zone of the Greenland Sea in summer (1988, p.195-204, eng) 43-455

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Expedition Arctic V/1a, 1b, and 2 with RV *Polarstern* 1988 (1989, 197p., ger) 43-3077

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Urey Prize lecture: water on Mars (1989, p.229-288, eng) 43-4390

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Minimizing snow accumulation around the entrance of a building: an experimental case study (1989, p.243-255, eng) 43-3569

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Multifrequency passive microwave observation of saline ice grown in a tank (1988, p.1687-1690, eng) 43-1896

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Dielectric withstand and breaking capacity of SF6 circuit breakers at low temperatures (1988, p.1029-1035, eng) 43-1559

St. John, J.
Local ice pressures measured in thick level ice in Antarctica. Final report (1986, 174p., eng) 43-976

St. Lawrence, W.
Evaluation of the spray ice barrier at the CIDS Antares site during 1985, using time-lapse photography (1988, p.135-136, eng) 43-3648

Staenz, K.
Dependence of snow melting and surface-atmosphere interactions on the forest structure (1988, p.1-8, eng) 43-1377
Improvement in NOAA-AVHRR snowcover determination for runoff prediction (1988, p.433-435, eng) 43-1522

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Ice forces on a circular pier due to water level changes, with partial flooding (1986, p.105-113, eng) 43-264

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Gas vacuolate bacteria from the sea ice of Antarctica (1989, p.1033-1036, eng) 43-2834

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Measurements of the concentration of falling snow (1987, p.389-410, eng) 43-1304

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Evaluation of the transmission levels required to defeat thermal imaging systems operating in winter weather (1986, p.3-10, eng) 43-4622
SNOW III WEST field experiment report. Volume 1 (1988, 170p., eng) 43-2121
Use and application of PRESTO in Snow-III West (1986, p.11-24, eng) 43-4623

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Radiative energy budget in the cloudy and hazy Arctic (1989, p.1002-1018, eng) 43-4288
Radiative energy budget in the cloudy and hazy Arctic (1989, p.1002-1018, eng) 43-4402

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Stanley Associates Engineering Ltd.
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Sewage waste discharge to the Arctic marine environment (1987, 5 sections, eng) 43-2380

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Ice jams at a lake: the situation at Hay River, Northwest Territories, Canada (1988, p.157-167, eng) 43-3029
Probability analysis of historical ice jam flood data for a complex reach: a case study (1988, p.115-137, eng) 43-2168

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Millimeter wavelength radar propagation measurements at SNOW IV (1989, p.103-153, eng) 43-4306

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Dating of ice by radioactive isotopes (1989, p.123-139, eng) 43-3684

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Snow/ice/frozen ground properties working group report (1987, p.163-166, eng) 43-855

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Some replica possibilities for electron-microscope investigations of ice crystal morphology (1988, p.1431-1436, eng) 43-2309

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Anthropogenic warming in North Alaska? (1988, p.942-945, eng) 43-3469

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Estimating concrete frost resistance during production (1988, p 35-37, rus) 43-3849

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Recent glacier-volcano interactions on Mt. Redoubt, Alaska (1988, 18p., eng) 43-790

Su, L.
Some results of *in-situ* measurement of freezing pressure and earth pressure in frozen shafts (1988, p.295-301, eng) 43-90

Suarez, J.A.
Variations of Rio Plomo glaciers, Andes Centrales Argentinos (1989, p.143-151, eng) 43-3181

Subbotin, V.V.
Role of sea ice in the dynamics of the Arctic climatic system (1988, p.82-97, rus) 43-762

Suchkov, V.E.
Glaciers of Paramushir Island, Kuril Islands (1988, p.126-129, rus) 43-948

Sucksdorff, Y.
Heat and moisture properties in frozen sandy soil; measurements and modeling (1989, p.323-340, eng) 43-3109

Suda, T.
Prediction of road icing on national highway Routes 8 and 17 (1988, p.155-163, jpn) 43-1324

Suetova, I.A.
Map of antarctic isostatic rise after deglaciation (1989, p.30-33, rus) 43-4540
Morphometric maps of the antarctic bedrock (1988, p.62-65, rus) 43-795

Sugarenko, G.G.
Technological plans for mechanizing the removal of perennially frozen placer deposits with the use of the GPKS machine (1988, p.37-43, rus) 43-2781

Sugawara, M.
Melting of snow immersed in MgCl2 aqueous solution (1989, p.95-100, eng) 43-4204
Pipe fracture by freezing in curved water pipes (3rd report, freezing behavior of 45-degree curved and straight pipes) (1988, p.984-992, jpn) 43-4485
Runoff analysis of the Urumqi River in China's Xinjiang Province (1989, p.35-72, jpn) 43-3542

Sugawara, N.
Effect of wind on the minimum flashover voltage of iced insulators in foul weather (1987, p.615-623, eng) 43-1594

Sugden, D.E.
Late-glacial and Holocene glacier fluctuations and environmental change on South Georgia, southern ocean (1989, p 210-228, eng) 43-3166
Limited modification of mid-latitude landscapes by ice sheets: the case of northern Scotland (1987, p.531-542, eng) 43-703
Modeling the growth and decay of the Antarctic Peninsula Ice Sheet (1989, p.119-134, eng) 43-3162

Sugimoto, A.
Relationship between *delta*D and *delta*O-18 values of falling snow particles from a separate cloud (1988, p 205-213, eng) 43-2244

Sugrue, J.G.
Thermal mapping of road surface temperature (1983, p.212-213, eng) 43-1695

Sugumaran, V.
Disintegration of frozen granular materials using high pressure water jets (1989, p.320-334, eng) 43-2113

Sui, J.X.
Temperature, salinity, and density profiles in a fast ice sheet in Liaodong Bay (1989, p.218-224, eng) 43-3727

Sui, X.Z.
Frost destruction and its prevention of reservoir revetment in plain area (1988, p 493-501, eng) 43-2948
Study on ice static pressure on ice cover in reservoir (1988, p.483-492, eng) 43-947

Sukhanov, I.P.
Avalanche hazard in the region of the Salang Pass (1987, p.428-434, rus) 43-2554
Snow conditions in avalanche hazard zones of the Salang Pass (1987, p.275-282, rus) 43-2530

Sukhorukov, S.V.
Low-temperature strength of truss joints with unshaped parts (1987, p.106-111, rus) 43-2459

Sullivan, C.W.
Phytoplankton standing crops within an antarctic ice edge assessed by satellite remote sensing (1988, p.12,487-12,498, eng) 43-723
Temperature dependence of inorganic nitrogen uptake and assimilation in antarctic sea-ice microalgae (1989, p.443-446, eng) 43-4189

Sun, Q.X.
Application of two non-linear fluid models to glacier flows (1988, p.231-240, eng) 43-1328
On two special Rivlin-Ericksen fluid models generalizing Glen's flow law for polycrystalline ice (1988, ?p, eng) 43-119

Sun, Y.
Radar observation on the sort of sea ice (1989, p.1084-1095, eng) 43-3805

Sun, Z.C.
Field investigation of frazil ice jam in Yellow River (1988, p.157-175, eng) 43-2170
Laboratory study of transverse velocities and ice jamming in a river bend (1988, p.189-197, eng) 43-3032

Sundberg, D.C.
Single fiber measurements for remote optical detection of TNT (1989, 7p, eng) 43-3870

Sundberg, D.D.
Development of a membrane for *in-situ* optical detection of TNT (1988, 6p, eng) 43-1842

Sunder, S.S.
Constitutive modeling of polycrystalline ice (1989, p.431-442, eng) 43-3746
Differential flow model for polycrystalline ice (1989, p.45-62, eng) 43-1578
Ice-structure interaction (1988, p 38-44, eng) 43-3644

Suomi, V.E.
Cloud and ice in the planetary scale circulation and in climate. Final report 1 Jan. 1977-30 Jan. 1983 (1984, 117p, eng) 43-1076

Suprenant, B.A.
Laying masonry in cold weather (1988, p 388-391, eng) 43-3987

Surikov, V.V.
Productivity of bulldozer-ripper assemblies under winter conditions (1988, p.11-13, rus) 43-1018

Surkov, P.M.
Interaction of the wheel of pneumatic vehicles with changing environments (1988, p.114-116, rus) 43-2343

Surova, T.G.
Changes in glacial and climatic conditions of Spitsbergen in the Subboreal period (1987, p.108-112, rus) 43-239

Suslov, V.F.
Glaciology of mountainous regions (1988, 136p, rus) 43-2669

Suslov, V.F. *(cont.)*
Setting up the second phase of the automated information system of the National Water Inventory "Hydrology-glaciers" (1988, p.120-125, rus) 43-2689

Suter, J.R.
Late Quaternary sea-level fluctuations and depositional sequences, southwest Louisiana continental shelf (1987, p.199-219, eng) 43-3406

Sutherland, L.A.
Avalanche risk assessment by backcountry skiers (1987, p.679-684, eng) 43-1275

Sutherland, L.L.
Intercomparison of synthetic- and real-aperture radar observations of Arctic sea ice during winter MIZEX '87 (1988, p 1419-1422, eng) 43-1890

Suzdal'tseva, O.N.
Mapping of avalanche hazard by the "weighted value" method (1987, p.193-198, rus) 43-2518

Suzuki, K.
Variations in the concentration of chemical constituents of a stream water during the snowmelt season (1984, p.137-148, eng) 43-2400

Suzuki, M.
Examination of the terminal velocity of falling snowflakes (1988, p.63-71, jpn) 43-1907

Suzuki, S.
Freezing and nonfreezing water in charged membranes (1988, p.175-183, eng) 43-1073

Suzuya, J.
Characteristics of snow and snow-induced building damage in Japan (1989, p 59-68, eng) 43-3552

Svec, O.J.
New concept of frost-heave characteristics of soils (1989, p.271-279, eng) 43-4447
On measuring the shear strength of ice (1988, p.76-88, eng) 43-3025

Svendsen, L.M.
Energy balance on outlet glaciers from the Inland Ice, West Greenland (1987, p.99-105, eng) 43-752

Svensson, C.
Experience from dimensioning frost protection in roads by VTI method (1989, p.839-844, eng) 43-3152

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Ice-wedge casts and relict polygonal patterns in Scandinavia (1988, p.57-67, eng) 43-1005
Recent frost fissuring in a coastal area of southwestern Sweder (1988, p.271-277, eng) 43-930

Svensson, U.
Mathematical model of border-ice formation in rivers (1989, p.179-189, eng) 43-2367
Numerical model of ice accretion on structures (1988, p.436-445, eng) 43-3015
Numerical model of water droplet trajectories (1989, p.671-680, eng) 43-3767

Sveshnikov, V.K.
Development problems in the Soviet far north (1988, p.275-293, eng) 43-4249

Svetashov, V.G.
Avalanche danger on the Northern Portal-Zakki settlement road (District of the Transcaucasian main highway via the Roksk crossing) (1988, p 27-35, rus) 43-2562

Svetinskii, B.V.
New achievements in foundation construction on peat and weak ground (according to materials of the Baltic International Conference) (1988, p.28-30, rus) 43-815

Svoboda, J.
Succession in marginal Arctic environments (1987, p.373-384, eng) 43-187

Swamidas, A.S.J.
Dynamics of ship/ice interaction (1988, p.89-100, eng) 43-614
Finite element analysis of porous soil under asymmetric loading (1989, p 699-706, eng) 43-3221
Ice force estimation during local impact of a ship's plate (1988, p.101-112, eng) 43-615
Impact strength of iceberg and artificial snow ice (1985, p.365-380, eng) 43-1532

Swank, P.R.
Baltimore stresses snowfighter safety (1988, p.31-32, eng) 43-1851

Swanson, R.H.
Applying hydrologic principles to the management of subalpine forests for water supply (1987, p.79-85, eng) 43-576
Effect of *in situ* evaporation on perceived snow distribution in partially clear-cut forests (1988, p.87-92, eng) 43-4000
Snow retention in a large cutblock (1987, p.491-496, eng) 43-1309
Watershed management pilot project in Alberta (1986, p.87-92, eng) 43-3907

Swart, P.
Information systems planning study (1987, 48p., eng) 43-4591

Sweeney, S.
Ultimate loads for corrugated-steel barrel-type shell structures (1989, p.1038-1049, eng) 43-4413

Sweeten, J.G.
Simulation model of Boulder's alpine water supply (1985, p.63-71, eng) 43-4269

Swift, C.T.
Multifrequency passive microwave observation of saline ice grown in a tank (1988, p.1687-1690, eng) 43-1896

Swift, D.J.P.
Transgressive stratigraphy at sequence-bounding unconformities some principles derived from Holocene and Cretaceous examples (1987, p.241-260, eng) 43-3408

Swift, S.
Beaufort Sea geophysical survey: scoping study (1985, 68p. + appends., eng) 43-282

Swigart, W.
Inspection of the Tanana River pipeline bridge (1983, p.362-374, eng) 43-3419

Swithinbank, C.
Antarctica (1988, 278p, eng) 43-412
Glaciological map of Filchner-Ronne Ice Shelf, Antarctica (1988, p.150-155 + map, eng) 43-1958
Ice runways near the South Pole (1989, 42p., eng) 43-4598

Sykes, J.F.
Evaluation of constitutive laws for sea ice with application to Adam's Island (1989, p.367-376, eng) 43-3741
Route selection through a dynamic ice field using the maximum principle (1988, p.339-356, eng) 43-1800
Sensitivity and uncertainty analysis of an iceberg structure collision model (1989, p.586-595, eng) 43-3760

Sykes, R.B., Jr.
Lake effect snow situations: anabatic; anachorisms; anachronisms; and/or, anomalisms (1988, p.5-6, eng) 43-4111
Lake effect snowfalls—an update (1988, p.197-202, eng) 43-4131

Symonds, G.
MIZEX: Ice floe trajectories through the Greenland Sea (1985, 68p., eng) 43-286

Symons, A.
Designing, commissioning and installing an ice detection system in Wales. problems and solutions (1986, 11p., eng) 43-2763

Symons, L.
Designing, commissioning and installing an ice detection system in Wales: problems and solutions (1986, 11p., eng) 43-2763

Symposium on Glacier Fluctuations and Climatic Change, Amsterdam, June 1-5, 1987
Proceedings (1989, 418p., eng) 43-3176

Symposium on Ice Dynamics, Hobart, Australia, Feb. 14-20, 1988
Proceedings (1989, 226p., eng) 43-3326

Sytinskii, A.D.
Relationship of dynamics of the border zone of the antarctic ice cover with tides (1989, p.137-142, eng) 43-2059

Szarejko, Z.
Oscillations of surface ablation and heat transfer in the near-ground air layer with Karkonosze and hindu Kush Mountains as examples (1986, p.153-165, eng) 43-2832

Szczepaniak, S.
Some problems of freezing the rock mass (1989, p.379-390, eng) 43-3114

Sze, W.K.
Finite element simulation of frost heave in soils (1988, p.73-80, eng) 43-63

Szepessy, G.
Model studies on ice control structure (1988, p.53-58, eng) 43-2979

Szeto, K.K.
Mesoscale circulations forced by melting snow, Parts 1 and 2 (1988, p.1629-1650, eng) 43-36

Szidarovszky, F.
Computational ice-divide analysis of a cold plane ice sheet under steady conditions (1989, p.170-177, eng) 43-3354
Granular shear flows as models for flow avalanches (1987, p.381-394, eng) 43-1247

Szilder, K.
Influence of meteorological variables on the construction of ice platforms (1988, p.410-424, eng) 43-3013
Optimizing the growth thermodynamics of artificial floating ice platforms (1989, p.99-115, eng) 43-1441
Simple numerical model for simulating the climate and energy balance of the arctic tundra in summer (1989, p.263-271, eng) 43-4221

Tabata, M.
Frost damage of concrete from the view point of pore structures of hardened cement paste (1988, p.92-114, eng) 43-4049

Tabler, R.D.
Ablation rates of snow fence drifts at 2300-meters elevation in Wyoming (1985, p.1-12, eng) 43-4263
Estimating dates of the snow accumulation season (1988, p.35-42, eng) 43-3994
Model studies of snowdrifts formed by livestock shelters and pond embankments (1985, p.167-170, eng) 43-4283
Portable ten-meter instrument mast (1984, p.168-171, eng) 43-4328
Slide rule for snow fence design (1987, p.162-165, eng) 43-3942
Snow fence technology: state of the art (1989, p.297-306, eng) 43-3574

Tabrizi, A.H.
Modeling of surface blowing as an anti-icing technique for aircraft surfaces (1988, p.343-348, eng) 43-1122

Tago, M.
De-icing heat-transfer characteristics along a circular cylinder immersed in a cold airstream with seawater spray (1989, p.123-128, eng) 43-4209
Ice accretion characteristics along a circular cylinder immersed in a cold air stream with seawater spray (1989, p.81-90, eng) 43-2488

Taguchi, Y.
On confined compressive strength of urea-doped ice (1988, p.92-98, eng) 43-2912

Tahan, H.E.
Simple model for collision of floating bodies (1989, p.309-314, eng) 43-2640

Tairaku, T.
Experimental study on testing method for frost resistance of autoclaved lightweight concrete (1988, p.384-401, eng) 43-4063

Takabe, H.
NOAA data processing system (1989, p.73-87, jpn) 43-3704
Report on the ACR observation by the 28th Japanese Antarctic Research Expedition (1989, p.53-72, jpn) 43-3703

Takada, M.
Rationalization of cold-weather concreting using non-freezing agent (1988, p.168-191, eng) 43-4052

Takada, N.
Frost damage of concrete cover and protection from corrosion of reinforcing bar at splash zone (1988, p.289-302, eng) 43-4058

Takagi, S.
Approximate analytical solution of a Stefan's problem in a finite domain (1988, p.245-266, eng) 43-154

Takahashi, H.
Farm land development on hillside in Abashiri District—4 Damages caused by snowmelt (1986, p.1527-1536, jpn) 43-297

Takahashi, J.
Variability of ice growth characteristics in Lake Haruna, Japan (1988, p.209-218, eng) 43-2994

Takahashi, S.
Bare ice field in east Queen Maud Land, Antarctica, caused by horizontal divergence of drifting snow (1988, p.156-160, eng) 43-1959
Characteristics of heat and water fluxes on glacier and ground surfaces in the West Kunlun Mountains (1989, p.89-98, eng) 43-3446
Characteristics of local circulation in the glacier area in the West Kunlun Mountains, 1987 (1989, p.99-104, eng) 43-3447
Heat and water balances on glaciers and ground surfaces at high altitudes in the West Kunlun Mountains, China (1989, p.147-152, eng) 43-4212
Meteorological conditions of the West Kunlun Mountains in the summer of 1987 (1989, p.67-76, eng) 43-3443
Radiation balance in the Gozha Glacier region, in the West Kunlun Mountains (1989, p.83-87, eng) 43-3445
Recent advances in automatic snow and ice observations. Part 1 (1988, p.231-236, jpn) 43-2704

Takahashi, T.
Properties and classification of selected volcanic ash soils from Kenai Peninsula, Alaska (1988, p.395-413, eng) 43-2371
Statistical properties of the annual maximum series and a new approach to estimate the extreme values for long return periods (1989, p.25-34, eng) 43-3548
Supercooled cloud tunnel studies on the growth of snow crystals between -4 and -20 C (1988, p.841-855, eng) 43-2356
Wind effects on snow loads (1989, p.158-167, eng) 43-3561

Takala, J.
Consideration of frost heave in the design of road embankment (1989, p 699-708, eng) 43-3140

Takallou, H.B.
Performance of rubber-modified asphalt pavements in cold regions (1989, p 81-91, eng) 43-2091

Takamatsu, N.
Origin of salts in pond waters of the Labyrinth in southern Victoria Land, Antarctica: a study on lithium and boron abundances (1988, p.103-112, eng) 43-839

Takano, Y.
Solar radiative transfer in cirrus clouds Pt. I. single-scattering and optical properties of hexagonal ice crystals; Pt. II: theory and computation of multiple scattering in an anisotropic medium (1989, p.3-36, eng) 43-4420

Takashima, H.
Fracture mechanics approach to various Arctic steel structures and their reliability analysis (1988, p.757-768, eng) 43-660

Takei, I.
Development of a new relaxational process having shortened relaxation time and phase transition in KOH-doped ice single crystal (1989, p.54-57, eng) 43-3828

Takeichi, K.
Study on preventing measure against frost action of existing road tunnels with insulation method (1989, p.721-730, eng) 43-3142

Takekuma, K.
Comparative resistance tests in ice on offshore structure models and a ship model between two ice model basins [1988, p.570-579, eng] 43-2955
Ice model basin at Nagasaki Research and Development Center [1988, p.44-49, eng] 43-971

Takeuchi, H.
Development of solids circulating heat collector from air in cold regions [1989, p.135-140, eng] 43-4211

Takeuchi, S.
Results of tests for a smaller snow vehicle [1988, p.218-237, jpn] 43-843

Takeuchi, T.
Deformation of floating ice sheets of variable thickness under in-plane compressive loading [1989, p.385-407, eng] 43-3743
Seasonal variations of physical and chemical conditions of Lake Saroma [1988, p.400-409, eng] 43-3012

Taki, M.
Transient stress intensity factors of cracked plates under moving thermal load [1988, p 65-70, eng] 43-978

Talabard, P.
Sharp cone testing of creep properties of frozen soils and ice [1989, p.282-296, eng] 43-2110

Talbot, M.H.
Oceanic environment of George VI Ice Shelf, Antarctic Peninsula [1988, p.161-164, eng] 43-1960

Talsma, H.
Influence of freezing and freeze-drying on the stability of liposomes dispersed in aqueous media [1988, p.129-139, eng] 43-1569

Tamaki, A.
Fundamental research on supercooling phenomenon on heat transfer surfaces [1989, p.79-84, eng] 43-4201

Tamás, K.
Snow load and snow load design in Hungary [1989, p.35-39, eng] 43-3549

Taming winter weather
Taming winter weather [1988, p.24-28, eng] 43-1849

Tamplon, F.F.
Metallic enclosures (for buildings erected under severe climatic conditions) [1988, 248p, rus] 43-838

Tamura, I.
Improvement of the seasonal performance factor of variable compression heat pump system for cold regions [1989, p 221-226, eng] 43-4216

Tan, F.
Study of nonfreezable and freezable waters in hydrated aldolase by differential scanning calorimetry [1988, p.1093-1096, eng] 43-1196

Tanaka, H.
Thermal effect on high-rise buildings in very cold regions· full scale and model studies [1989, p.117-122, eng] 43-4208

Tanaka, K.L.
Resurfacing history of Mars: a synthesis of digitized, Viking-based geology [1988, p.665-678, eng] 43-1762

Tanaka, M.
Application of the freezing method to the undersea connection of a large diameter shield tunnel [1988, p.383-388, eng] 43-100
Direct shear test at a frozen/unfrozen interface [1988, p.181-185, eng] 43-75

Tanaka, S.
Elasto-plastic analysis of total ice force and local ice pressure acting on a circular pile [1988, p.351-360, eng] 43-2935
Structural design of new type three legged ice barrier [1988, p.591-600, eng] 43-2957

Tang, P.W.
Streamflow modelling in the Tobique Basin [1987, p 90-107, eng] 43-393

Tang, Q.
Analysis and forecasting of low runoff in the Northwest [1988, p.28-35, chi] 43-465

Tang, T.C.
Flow resistance for partially ice-covered channels: laboratory simulation study [1988, p.131-141, eng] 43-2987

Tangborn, W.V.
Influence of snowmelt in evaluating small hydropower generation potential [1983, p.100-108, eng] 43-4357

Tanigami, T.
Properties of gels obtained by freezing/thawing of poly(vinyl alcohol)/water/dimethyl sulfoxide solutions [1989, p.2709-2718, eng] 43-3483

Taniguchi, T.
Vertical structures of the atmospheric electrical potential gradient and the behavior of the precipitation charges during snowfalls near the ground surface [1988, p.473-488, eng] 43-1171

Tanno, T.
Report on the construction of the substructure of the new Tokachi Bridge: pneumatic-caisson method, winter mass concreting [1988, p.222-236, eng] 43-4054

Tarakanov, A.G.
Rock glaciers in valleys of the Inner Tien Shan and Terskey Alatau [1987, p.130-133, rus] 43-243
Structure and evolution of slope rock glaciers (Inner Tien Shan and the Terskey Alatau ridge) [1988, p.70-76, rus] 43-571

Tarakanov, L.V.
Geological premises of intensifying the exploration for placer deposits on Arctic plains and the shelf [1988, p.103-107, rus] 43-689

Taran, A.G.
Effects of water speed and temperature on icing in thermal siphons [1988, p.629-634, eng] 43-2001

Tarasov, I.IU.
Evaluation of the regions of the Far North of the USSR for establishing stations for monitoring environmental background [1987, p.285-291, eng] 43-132

Tareeva, A.M.
Surface heat balance of the Adishi glacier [1988, p.66-70, rus] 43-2573

Targulian, IU.O.
Characteristic features of the embedment of steel-tube piles in permafrost of the Tyumen oblast [1987, p.92-95, rus] 43-212
Improved types of piles for construction on permafrost soils in the north of West Siberia [1988, p.171-176, eng] 43-140

Tarnawski, V.R.
Winter performance of residential heat pump [1988, p.271-278, eng] 43-1319

Tarusov, A.V.
Structure of firn sequences of the Svea-Kongsvegen glaciers in West Spitsbergen and their glaciological zonation [1988, p.78-83, rus] 43-3260
Study of accretion variability in arctic glaciers for the period 1656-1980 [1988, p.85-89, rus] 43-2574

Tasaka, M.
Freezing and nonfreezing water in charged membranes [1988, p.175-183, eng] 43-1073

Tate, C.L.
Utilization of Unmanned Aerial Vehicles in the ALBE Thrust [1986, p.249-257, eng] 43-4639

Tatinclaux, J.C.
Development of a river ice prow [1988, 26p., eng] 43-1199
Development of a river ice-prow. Part 2 [1988, p.44-52, eng] 43-2978
Model tests on an icebreaker at two friction factors [1989, p.774-784, eng] 43-3776
Ship model testing in level ice: an overview [1988, 30p., eng] 43-1402

Tatsuta, M.
Ice forces on framed structure [1988, p.385-394, eng] 43-2938

Tattari, S.
Application of transfer function and conceptual pulse models to the study of groundwater level fluctuations [1988, p.35-46, eng] 43-4381

Taylor, A.
Automatic well temperature measuring system installed at Cape Allison C-47, offshore well, Arctic Islands of Canada. Part 1. Concept and deployment [1989, p 89-94, eng] 43-2591
Automatic well temperature measuring system installed at Cape Allison C-47, offshore well, Arctic Islands of Canada. Part 2. Data retrieval and analysis of the thermal regime [1989, p.95-101, eng] 43-2592
Constraint to the Wisconsinan glacial history, Canadian Arctic Archipelago [1988, p.15-18, eng] 43-2322
Recovery of precise offshore permafrost temperatures from a deep geotechnical hole, Canadian Beaufort Sea [1989, p.119-123, eng] 43-2842

Taylor, B.J.
Observations of ice floe stress in the Eastern Arctic [1989, p.44-53, eng] 43-3711

Taylor, C.H.
Effect of a small wetland on runoff response during spring snowmelt [1985, p.137-154, eng] 43-1694
Snowmelt runoff processes in a small precambrian watershed [1988, p.94-107, eng] 43-4120

Taylor, D.
Case histories of snow loads on roofs [1989, p.510-511, eng] 43-3598
Roof snow loads in deep snow regions [1989, p.85-94, eng] 43-3555

Taylor, D.A.
Snow loads on multi-level flat roofs in Canada [1987, p.133-141, eng] 43-3936

Taylor, M.J.
Physico-chemical principles in low temperature biology [1987, p.3-71, eng] 43-3980

Taylor, R.B.
Ice-dominated shores of Lougheed Island: type examples for the Northwest Queen Elizabeth Islands, Arctic Canada [1987, p.33-48, eng] 43-3200

Taylor, S.
Ice-water partition coefficients for RDX and TNT [1989, 10p., eng] 43-3869
Measurement and interpretation of electrical freezing potential of soils [1988, 9p., eng] 43-1562

Technical Conference (on) Management of Subalpine Forests: Building on 50 Years of Research, Silver Creek, CO, July 6-9, 1987
Management of subalpine forests. building on 50 years of research [1987, 253p., eng] 43-573

Telegina, I.V.
Morphometric maps of the antarctic bedrock [1988, p.62-65, rus] 43-795

Telford, J.W.
Example of the behavior of an aircraft with accumulated ice: latent instability [1988, p.1093-1108, eng] 43-1420

Tenhunen, J.D.
Irradiance and temperature effects on photosynthesis of tussock tundra *Sphagnum* mosses from the foothills of the Philip Smith Mountains, Alaska [1989, p.251-239, eng] 43-4074

Teatiukov, M.P.
Changes of landscape and geochemical structure due to geological surveys [1988, p.12-28, rus] 43-1536

Teplukhin, G.N.
Effects of structural elements on cold resistance of structural steels [1987, p.20-26, rus] 43-2451

Terekhin, L.N.
Transport and unloading of ballast materials during subzero temperatures [1989, p.28-29, rus] 43-3535

Terekhova, T.A.
Calculation of stress-deforming conditions in flat foundations using electronic computers [1985, p.104-110, rus] 43-1665

Terent'ev, V.B.
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Tesaker, E.
Ice problems in intakes to power plants [1988, p.81-91, eng] 43-2982
Modeling of open water area in lake ice due to submerged power plant outlet [1988, p.72-80, eng] 43-2981

Tesche, T.W.
Numerical simulation of snow transport, deposition, and redistribution [1988, p.93-104, eng] 43-4001

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Possibility of using overland air cushion vehicles in the construction of electrical networks [1988, p.24-28, rus] 43-558

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Evaluation of chemical undermining in foundations of the Zeya and Sayano-Shushenskaya dams [1987, p.38-42, rus] 43-1391

Teubner, M.D.
Analysis of thermal pile design using computer modeling techniques [1984, p.1101-1112, eng] 43-673

Theakston, F.H.
Automation of a water flume using microcomputer based data acquisition for snow and wind engineering [1988, p.162-175, eng] 43-4126

Theakstone, W.H.
Observations at a steep, high-altitude Norwegian glacier, Charles Rabots Bre, 1970-1985 [1987, p.155-163, eng] 43-1681
Temporal variations of isotopic composition of glacier-river water during summer: observations at Austre Okstindbreen, Okstindan, Norway [1988, p.309-317, eng] 43-1987

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Lloyd's mirror at 250 megahertz: footnote on antarctic telemetry [1988, p 270-273, eng] 43-1646

Therriault, J.C.
Photoadaptation of sea-ice microalgae in springtime: photosynthesis and carboxylating enzymes [1988, p.177-185, eng] 43-2839
Photosynthetic responses of arctic sea-ice microalgae to short-term temperature alteration [1989, p.437-442, eng] 43-4289

Theutenberg, B.J.
Development and cooperation in the Arctic [1988, p.303-316, eng] 43-3290

Thibaudeau, P.
Topoclimatic zones and ice dynamics in the caves of the northern Yukon, Canada [1988, p.215-220, eng] 43-1031

Thibodeau, S.L.
Experience with drillship operations in the U.S. Beaufort Sea [1988, p.35-48, eng] 43-710

Thiede, J.
Scientific cruise reports of Arctic Expeditions ARK IV/1, 2 & 3 [1989, 146p, eng] 43-4191

Thiger, I.
Atmospheric icing of masts [1989, p.705-711, eng] 43-3770

Thomann, P.
Erosion of the Pelton-runners of the Stalden penstock of the Kraftwerke Mattmark AG [1988, p.151-160, ger] 43-4442

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Blending sequential scanning multichannel microwave radiometer and buoy data into a sea ice model [1989, p.10,907-10,920, eng] 43-4527
Estimating sea ice concentration from satellite passive microwave data and a physical model [1988, p.1677-1683, eng] 43-1895

Thomas, K.
Search for refractory interplanetary dust particles from preindustrial aged antarctic ice (1988, p.599-605, eng) 43-1761

Thomas, M.A.
Effect and mechanism of episodic sea level events: the record preserved within the Late Wisconsinan-Holocene incised valley-fill sequences (1988, p.399-406, eng) 43-1151

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Community structure in soil Acari along a latitudinal transect of tundra sites in northern Alaska (1988, p.113-138, eng) 43-453

Thinning and grounding-line retreat on Ross Ice Shelf, Antarctica (1988, p.165-172, eng) 43-1961

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Freeze protection of solar irradiated paved surfaces using integral phase-change material (1988, p.195-200, eng) 43-3819

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New construction material for offshore application (1988, p.35-46, eng) 43-153

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Lifesaving equipment for cold weather regions with particular reference to the Arctic. Part 1 (1988, p.14-17, eng) 43-1460

Lifesaving equipment for cold weather regions with particular reference to the Arctic. Part 2 (1988, p.14-15, eng) 43-1461

Ramming automated monitoring system (1986, var. p., eng) 43-3361

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Soil bacterial changes upon snowmelt: laboratory studies of the effects of early and late meltwater fractions (1987, p.269-274, eng) 43-1867

Thompson, L.G.
Wisconsin/Würm glacial stage ice in the subtropical Dunde Ice Cap, China (1988, p.517-523, eng) 43-4566

Thompson, L.S.
Constructing a 5-meter contour map and determining volumetric change from digital data, West Gulkana Glacier, Alaska (1988, p.11-18, eng) 43-2789

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Continued glaciological work north-east of Jakobshavn, West Greenland (1987, p.84-87, eng) 43-749

Geophysical investigations at the inland ice margin of the Påkitsoq basin, central West Greenland (1987, p.114-121, eng) 43-744

Glaciological investigations at the margin of the inland ice north-east of Jakobshavn, West Greenland (1987, p.102-108, eng) 43-742

Ice-sampling programme in the Thule area, North Greenland (1987, p.81-84, eng) 43-748

Stable isotope studies on the Greenland ice-sheet margin (1987, p.108-114, eng) 43-743

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Application of satellite data to monitoring snow cover and runoff in Greenland (1988, p.225-236, eng) 43-2016

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Route selection through a dynamic ice field using the maximum principle (1988, p.339-356, eng) 43-1800

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Ultimate extreme ice feature: antactic icebergs (1987, p.369-371, eng) 43-914

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Geotechnical characteristics of an ice-thrust mudstone, Wabamun Lake area, Alberta (1989, p.227-234, eng) 43-3825

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Thorn, C.
Nivation: a geomorphic chimera (1988, p.3-31, eng) 43-320

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Snow and ice control in North America (1986, 18p., eng) 43-2761

Thornes, J.E.
Thermal mapping of road surface temperature (1983, p.212-213, eng) 43-1695

Thorning, L.
Electromagnetic reflection survey 1986 at the Inland Ice margin of the Påkitsoq basin, central West Greenland (1987, p.87-95, eng) 43-750

Geophysical investigations at the inland ice margin of the Påkitsoq basin, central West Greenland (1987, p.114-121, eng) 43-744

Greenland ice cap aeromagnetic survey 1985: magnetic measurements over the southern end of the Greenland ice cap (1987, p.86-90, eng) 43-741

Thorsteinsson, I.
Nature and restoration of denuded areas in Iceland (1987, p.518-525, eng) 43-201

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Reykjavik, Iceland: a northern capital (1988, p.191-204, eng) 43-4243

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Need for winter data in Road and Traffic Research. R & D activities at the Swedish Road and Traffic Research Institute (1985, p.75-87, swe) 43-363

Thunbo Christensen, F.
Interaction between floating ice sheets and vertical structures due to water level fluctuations (1986, 252p., eng) 43-879

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Activity and osmotic coefficients of NaCl in concentrated solutions from 0 to -40 C (1988, p.411-414, eng) 43-1567

Thurtell, G.W.
Reducing dew and frost on the domes of net pyrradiometers (1989, p.528-531, eng) 43-4405

Thwaites, R.J.
Growth rate of crystals within the surface-snow/firn layer in Wilkes Land, East Antarctica (1988, p.121-125, eng) 43-1955

Measured velocities and ice flow in Wilkes Land, Antarctica (1989, p.192-197, eng) 43-3357

Thyer, N.H.
Winter precipitation, snowpack and atmospheric conditions in the southern Canadian Rockies (1987, p.435-454, eng) 43-1306

Thyssen, F.
Ekström Ice Shelf, Antarctica (1988, p.180-183, eng) 43-1963

Ice thickness and bedrock elevation in western Neuschwabenland and Berkner Island, Antarctica (1988, p.42-45, eng) 43-1942

Ice thickness and sea depth derived from reflection-seismic measurements on the central part of Filchner-Ronne Ice Shelf, Antarctica (1988, p.14-18, eng) 43-1937

Special aspects of the central part of Filchner-Ronne Ice Shelf, Antarctica (1988, p.173-179, eng) 43-1962

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Drift of *Mikhail Somov* in the Balleny ice pack (1988, p.110-121, rus) 43-3844

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Twenty-second Soviet Antarctic Expedition. Studies of the 1976/77 season (1988, 147p., rus) 43-3839

Unloading of the *Mikhail Somov* near Mirnyy Station in the absence of shore ice (1988, p.98-102, rus) 43-3842

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Measurement of the unfrozen water content of soils: comparison of NMR and TDR methods (1988, 11p., eng) 43-1844

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Unfrozen water contents of undisturbed and remolded Alaskan silt as determined by nuclear magnetic resonance (1988, 17p., eng) 43-1998

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Ice forces on multi-legged structures (1987, p.35-51, eng) 43-442

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Scale effects in ice (1988, p.183-199, eng) 43-4182

Transfer function approach for a structure subjected to ice crushing (1989, p.420-430, eng) 43-3745

Working group on ice forces. 4th state-of-the-art report (1989, 385p., eng) 43-2812

Timerev, A.A.
Penetration of solar radiation in the snow-firn layer on Vavilov Glacier (Severnaya Zemlya Archipelago October Revolution Island) (1989, p.64-70, eng) 43-2048

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Underwater appearance of the Arctic (1988, p.74-76, rus) 43-4096

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Generic icing effects on forward flight performance of a model helicopter rotor (1989, p.63-85, eng) 43-4343

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Approximate solution to the problem of freezing-thawing of rocks given a surface layer of insulation (1987, p.260-280, rus) 43-2429

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Air/ocean/ice models: working group report (1987, p.139-142, eng) 43-851

Tishchenko, IU.
Ice navigating ships (1989, p.28-29, rus) 43-3533

Tison, J.L.
Deuterium concentration and growth rate of antarctic first-year ice (1988, p.1385-1388, eng) 43-2032

Structure and stability of the former subglacial drainage system of the Glacier de Tsanfleuron, Switzerland (1989, p.119-134, eng) 43-3085

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Rock glaciers of the Kungey Ala Tau (Northern Tien Shan) (1987, p.196-212, rus) 43-3384

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Thermo-aerodynamic safeguard for cooling towers against moisture and freezing (1988, p.52-55, rus) 43-4100

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Buildings and utilities in very cold regions: overview and research needs (1987, p.299-303, eng) 43-864

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Vapor retarders for membrane roofing systems (1989, p.31-37, eng) 43-2692

Vents and vapor retarders for roofs (1987, p.80-90, eng) 43-545

Vibration analysis of a DEW Line station (1988, p.1513-1518, eng) 43-6

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Thermal analysis of heated lockwalls for ice control (1988, p.23-33, eng) 43-2976

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Comparison of trends of iceberg scour marks with iceberg trajectories and evidence of paleocurrent trends on Saglek Bank, northern Labrador Shelf (1988, p.1374-1383, eng) 43-1499

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Snow accumulation and ablation on adjacent forested and clearcut sites in southeastern British Columbia (1986, p.101-111, eng) 43-3909
Translating snow hydrology research results into guidelines for forest managers. gaps between theory and practice (1988, p.13-22, eng) 43-3992

Toikka, M.
Compact direct-reading microwave instrument for measuring snow properties (1989, p.75-80, eng) 43-3494

Toikka, M.V.O.
Microwave dielectric properties of low-salinity sea ice (1988, p.419-420, eng) 43-1518

Tokarev, A.A.
Some characteristics of the development and descent of avalanches in the Gromotukha and Malaya Ul'ba River basins (Western Altai) (1987, p.51-59, rus) 43-3657

Tokarski, A.K.
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Natural and surface tension driven convection in open cavities (1989, p.215-220, eng) 43-4215

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Reactive species responsible for inactivating the ice-nucleating activity of *Pseudomonas fluorescens* KUIN-1 by an ascorbic acid-Cu(II) ion system (1988, p.2015-2020, eng) 43-1140

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Tidal entrances in the Okhotsk coast, Japan (1988, p.103-111, eng) 43-2984

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Design and construction of an ice-in-tank diurnal ice storage cooling system for the PX building at Fort Stewart, GA (1988, 53p., eng) 43-1313

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Effect of surcharge on the frost heaving of shallow foundations (1988, p.129-133, eng) 43-70

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Tonoli, G.
Ground freezing solves a tunnelling problem at Agri Sauro, Potenza, Italy (1988, p.395-401, eng) 43-102

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Laboratory study of dissolved noble gas anomaly due to ice formation (1988, p.796-799, eng) 43-1552

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Cryogenic protection of gas producing and transporting geotechnical systems of West Siberia (1989, p.855-861, eng) 43-3154

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Terrain models—a tool for natural hazard mapping (1987, p.629-638, eng) 43-1270

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Role of alternating cyclones and anticyclones in triggering sea ice fracture in the Canadian arctic basin (1988, p.633-642, eng) 43-2961

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Chemical characteristics of pond waters in the Labyrinth of southern Victoria Land, Antarctica (1989, p.255-264, eng) 43-3700
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Experimental study of melting of ice about horizontal cylinders (1989, p.45-50, eng) 43-4198

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Geochemical studies in a remote Scottish upland catchment 2. Streamwater chemistry during snow-melt (1989, p.231-248, eng) 43-4618

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Experimental results on the tensile strength of atmospheric ice (1989, p.405-410, eng) 43-2651

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Freeze-thaw related stability problems for a road in a steep silt slope (1989, p 645-654, eng) 43-3135

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Research in ice engineering (1988, p.3-10, eng) 43-787

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Snow as an acoustically porous material [1986, p.343-352, eng] 43-4648

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Cloud track winds in the polar regions from sequences of AVHRR images [1989, p.695-703, eng] 43-4066

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Frost and dimensioning of road structure [1988, p.27-33, fin] 43-1797

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Full-scale measurements of the dynamic properties of a channel marker [1988, p.549-560, eng] 43-2953

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Cold weather concreting for oil production plant [1988, p.31-33, eng] 43-349

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Warming up to winter [1988, p.62-65, eng] 43-2313

U.S. Arctic Research Commission
Arctic research for an Arctic nation. Report of the U.S. Arctic Research Commission to the President and the Congress of the United States of America for the period 1 October - 30 September 1988 [1989, 39p, eng] 43-2765
Logistic support of Arctic research [1988, 20p, eng] 43-1696

U.S. Army Corps of Engineers
Corps of Engineers Structural Engineering Conference, St. Louis, Missouri, June 27-July 1, 1988 [1989, 2 vols., eng] 43-4406

U.S. Army Corps of Engineers. North Pacific Division
Metal buildings for Air Force facilities in Alaska: a report [1989, 66p., eng] 43-3529

U.S. Army Toxic and Hazardous Materials Agency (USATHAMA)
Proceedings of the 13th Annual Environmental Quality R&D Symposium, Williamsburg, VA, Nov. 15-17, 1988 [1988, 575p., eng] 43-1809

U.S. Coast Guard
Report of the International Ice Patrol in the North Atlantic, Season of 1986 [1988, 71p., eng] 43-1817

U.S. Congress. Office of Technology Assessment
Oil production in the Arctic National Wildlife Refuge: the technology and the Alaskan oil context [1989, 123p., eng] 43-2590

U.S. Interagency Arctic Research Policy Committee
Arctic research in the United States, Vol.3 [1989, 72p., eng] 43-4482

U.S. Marine Corps cold weather combat operations study
U.S. Marine Corps cold weather combat operations study [1980, var.p., eng] 43-439

U.S. National Oceanic and Atmospheric Administration. Office of the Federal Coordinator for Meteorological Services and Supporting Research
Federal meteorological handbook, No.1: Surface observations [1988, 12 chapters, eng] 43-981

U.S. Naval Polar Oceanography Center
Antarctic ice charts 1985-1986 [1987, 426p, eng] 43-1675

U.S. Naval Support Force Antarctica
Operation Deep Freeze 89 end of season report [1989, Var. p., eng] 43-2442

U.S. Navy
Cold weather handbook for surface ships [1988, c 236p, eng] 43-3620

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Characteristic evaluation of steel roof sheet for snow sliding. Part 2: secular changes of steel roof sheets for snow sliding [1988, p.207-215, jpn] 43-2701

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Snowmelt runoff estimation using snow-cover extent data and its application to optimum control of dam water level [1988, p.439-440, eng] 43-1524

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Rationalization of cold-weather concreting using non-freezing agent [1988, p.168-191, eng] 43-4052

University Corporation for Atmospheric Research. Office for Interdisciplinary Earth Studies
Arctic interactions: recommendations for an Arctic component in the International Geosphere-Biosphere Programme [1988, 45p., eng] 43-1831

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Computation of water budget of a snow bound river basin [1988, p.103-106, eng] 43-2885

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Colorado fights frost heave with insulation [1989, p.81-82, eng] 43-4083

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Step frequency radar experiments on the antarctic sea ice [1988, p.1703-1706, eng] 43-1900

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On internal friction and cohesion in unconsolidated ice rubble [1989, p.237-247, eng] 43-4445

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Microbial biomass, photosynthesis and chlorophyll a related pigments in the ponds of the McMurdo Ice Shelf, Antarctica (1989, p.125-131, eng) 43-4184

Vincentsen, L.J.
Dynamic ice loads on the Great Belt Western Bridge (1989, p.453-466, eng) 43-3748

Vinje, T.
Upward looking sonar ice draft series (1989, p.178-187, eng) 43-3723

Vinje, T.E.
Icebergs in the Barents Sea (1989, p.139-145, eng) 43-2620

Vinnikov, L.P.
New methods of determining spacial shifts of glacier surfaces (1987, p.179-183, rus) 43-255

Vinogradov, A.M.
Time dependent settlement of ice and earth offshore structures (1989, p 263-268, eng) 43-2635

Vinogradov, O.G.
Investigation of ice properties by cyclic testing (1988, p.121-122, eng) 43-4175

Vinogradov, V.N.
Avalanche activity on Ratmanov Island (1987, p 412-418, rus) 43-2550

Vinogradov, V.V.
Remote sensing of sea surface temperature. (Satellite and airborne techniques of remote sensing of sea surface temperature based on infrared radiation) (1988, 222p., rus) 43-2858

Vinson, T.S.
Performance of rubber-modified asphalt pavements in cold regions (1989, p.81-91, eng) 43-2091

Vinterkunskap och vinterdata (konferens), Örnsköldsvik, Sweden, Mar. 26-28, 1985
Winter knowledge and winter data (1985, 329p., swe) 43-355

Viraraghavan, T.
Anaerobic filter treatment of septic tank effluent at low temperatures (1989, p.131-140, eng) 43-2096
Effects of low temperature on physicochemical processes in water quality control (1988, p.101-110, eng) 43-871

Vishnevskaia, L.M.
Measuring piezometric level in severe climatic conditions (1987, p.48-51, rus) 43-1392

Vishnevskii, P.F.
Highest water levels in Dniester River and its tributaries in the Ukrainian SSR (1988, p.36-48, rus) 43-1772

Visintin, A.
New model for supercooling and superheating effects (1986, p.141-157, eng) 43-3481
Supercooling and superheating effects in phase transitions (1985, p.233-256, eng) 43-3480

Viskanta, R.
Double diffusive convection due to melting (1988, p.2077-2089, eng) 43-1162
Freezing of salt solutions on a vertical wall (1987, p.181-195, eng) 43-4532
Freezing of water-saturated porous media in the presence of natural convection: experiments and analysis (1989, p.425-432, eng) 43-4617
On the supercooling during freezing of water saturated porous media (1989, p.163-172, eng) 43-3283
Phase change heat transfer during melting and resolidification of melt around cylindrical heat source(s)/sink(s) (1989, p.43-49, eng) 43-4373

Vislobitskii, P.A.
Effects of water speed and temperature on icing in thermal siphons (1988, p.629-634, eng) 43-2001

Visser, R.C.
Offshore development in Cook Inlet, Alaska (1989, p.435-442, eng) 43-2655
Offshore development in Cook Inlet, Alaska (1989, p 1012-1022, eng) 43-3798

Viswanathan, R.
Remote sensor observations of supercooled liquid water (1989, 63p., eng) 43-3607

Vita, C.L.
Unified geotechnical engineering systems approach applied to Arctic pipeline planning and design (1983, p.291-299, eng) 43-3416

Vitek, J.D.
Rock glacier bibliography (1987, p.305-344, eng) 43-3059
Rock glaciers (1987, 355p., eng) 43-3041
Rock glaciers: a review of the knowledge base (1987, p.1-26, eng) 43-3042

Vivian, R.
Ice-rock interfaces and subglacial erosion (1988, p.207-218, fre) 43-1165

Vladimirskii, S.R.
Problems of using tie-rods in overlapping metallic bridge spans (1988, p.14-15, rus) 43-25

Vlasov, N.V.
Possibility of reducing deformation in structures of the open distributive facilities in Chita (1985, p 25-31, rus) 43-1652

Vlasov, S.A.
Experimental studies of water adsorption on thin films of ice-forming substances (1988, p.124-132, rus) 43-1432

Vlasov, S.V.
Studies of the pollution of snow-ice covers of the Arctic seas (from the "Sever" expedition data) (1987, p.246-255, rus) 43-28

Vodolazkin, V.M.
Permafrost compressibility during thawing and construction problems (1987, p.221-227, rus) 43-3386

Vodovatova, S.N.
Special features of the methods of analysis of hydrochemical elements and pollutants in the waters of the polar regions (1989, p.103-114, eng) 43-4371
Studies of the pollution of snow-ice covers of the Arctic seas (from the "Sever" expedition data) (1987, p 246-255, rus) 43-28

Voevodin, V.A.
Annotated bibliography of the Soviet literature on glaciology for 1984 (1987, p.185-228, rus) 43-256
Wind effect on ice compressions in the arctic seas (1988, 10p., eng) 43-4439

Voevodova, Z.I.
Environmental pollution caused by atmospheric wastes associated with geological surveys (1988, p.57-67, rus) 43-1540

Vogel, W.
Heating of railway switches by CFF during snowstorms (1988, p.33-35, fre) 43-1877

Vogelmann, A.M.
Effects of dirty snow in nuclear winter simulations (1988, p.5319-5332, eng) 43-210

Voight, B.
Relation to describe rate-dependent material failure (1989, p.200-203, eng) 43-2315

Voitkovskii, K.F.
New data on the water vapor diffusion coefficient in snow (1988, p.76-81, rus) 43-3306
Snow cover stability on slopes and avalanche dynamics (1987, p.337-351, eng) 43-1243

Voituriez, B.
Satellite observations of sea ice (1989, 22p., fre) 43-4020

Volchok, I.P.
Development of composite cold-resistant and durable steels (1987, p.5-10, rus) 43-2448

Volenko, B.S.
Selecting methods of counteracting the icing of lighters (1987, p.64-68, rus) 43-34

Volianik, N.V.
Silicification of loess soils (1985, 94p., rus) 43-41

Volkov, F.E.
Alkalinization—the new chemical method of stabilizing water saturated loess and clayey soils (1988, p.15-29, rus) 43-599
Static-penetration determination of the bearing capacity of piles in plastic-frozen soils (1988, p.194-198, eng) 43-145

Volkov, V.L.
Structure of medium-scale ice drift over the arctic shelf (1989, p.105-110, rus) 43-3601

Volkova, M.V.
Influence of origin and age of geological formations on glaciation and topography (1987, p.24-30, rus) 43-223

Volodicheva, N.A.
Snow avalanches in the volcanic regions of Kamchatka (1987, p.384-391, rus) 43-2546

Volodin, G.S.
Compaction of a layer of loose soil by artificial thawing (1989, p.19-20, rus) 43-4464

Voloshin, A.S.
Transient stress intensity factors of cracked plates under moving thermal load (1988, p.65-70, eng) 43-978

Voloshina, A.P.
Climatic and meteorological characteristics of glaciated areas of the Akshiyrak Range (1988, p.184-193, rus) 43-960
Some results of glacier mass balance research on the glaciers of the Polar Urals (1988, p.200-211, eng) 43-2580
Studying mass balance of glaciers of the Polar Urals (1987, p.44-51, rus) 43-226

Volpe, A.
Ground freezing solves a tunnelling problem at Agri Sauro, Potenza, Italy (1988, p.395-401, eng) 43-102

Volynets, A.Z.
Heat transfer and structure formation during processes of freezing the eutectic-forming systems (1988, p 44-46, rus) 43-549

Vompe, G.A.
Brittle destruction of reservoirs and improvement of their durability (1987, p.94-99, rus) 43-2457

Vorob'ev, A.A.
Block joining the assembly measuring snow-water reserves from cosmic ray neutrons to the automatic meteorological station (1987, p 49-51, rus) 43-1043

Vorob'ev, B.M.
Radar characteristics of wet and dry hailstones in the ultra-high frequency range (1988, p.133-141, rus) 43-1433

Vorob'ev, P.K.
Study on the accumulative capacity of aeration zones in peat deposits of reclaimed swamps (1988, p.99-113, rus) 43-2470

Vorob'ev, V.V.
BAM. Studies and protection of environment. Present state and outlook of scientific research (1987, 167p., rus) 43-1435

Vorob'eva, T.I.
Content of heavy metals in glaciers of the Central Caucasus (Adylsu, Ullukol) and Central Pamirs (the Pamir firn field) (1988, p.76-92, rus) 43-2567

Vorokov, Z.V.
Avalanche distribution in the Caucasus (1987, p.627-628, eng) 43-1269

Voronkevich, S.D.
Problems of rational use, management and preservation of geological media (1988, p.103-116, rus) 43-737

Voronov, E.T.
Problems in safety technology in the management of underground mining explorations under permafrost conditions, with regard to the temperature factor (1987, p.44-48, rus) 43-2288

Vorotiukhina, I.I.
Estimation of the natural level of microelement content in soils of one of the south taiga landscapes (1987, p.342-350, rus) 43-29

Vortisch, W.
Relative differences between glacially crushed quartz transported by mountain and continental ice—some examples from North America and East Africa (1988, p.810-826, eng) 43-665

Voskoboinikova, N.N.
Integrated evaluation of deer pasture land in oil and gas development fields (1988, p.68-76, rus) 43-1541

Voskresenskii, A.I.
Monitoring atmospheric precipitation and the length of snow persistence in the Arctic (1988, p.96-105, rus) 43-1176
Monitoring of the Arctic climate (1988, 205p., rus) 43-1174
Monitoring of the Arctic climate (1988, p.6-23, rus) 43-1175

Vostokova, T.A.
Role of mineral particles in the formation of the chemical composition of the active layer of Spitsbergen glaciers (1988, p.62-71, rus) 43-3257

Vostretsov, R.N.
Ice temperature measurement in deep holes of Antarctica using a heat sensor embedded in the hole bottom (1989, p.129-136, eng) 43-2058
Paleoclimatic interpretation of the results of thermometry of holes to a depth of 900 m at Vostok Station (1989, p.119-123, eng) 43-2056
Steady-state distribution of temperature in the central part of Antarctica (1989, p.87-94, eng) 43-2051

Voytek, M.A.
Photosynthesis by antarctic microalgae (1988, p.176-177, eng) 43-1642

Vozin, V.F.
Environmental impact of hydroelectric power plants in the Far North (1987, 103p, rus) 43-42

Vruno, D.M.
Cold weather concreting in the St Paul-Minneapolis area (1989, p.41-49, eng) 43-2087

Vsesoiuznaia konferentsiia "Teoriia pochvennogo kriogeneza," 5th, Pushchino, Feb. 6-10, 1989
All-Union conference "Soil cryogenesis theory," 5th, Pushchino, Feb. 6-10, 1989. Abstracts (1989, 114p., rus) 43-3976

Vsesoiuznoe soveshchanie po lavinam, 2nd, IAglabad, USSR, May 1985
All-Union Conference on Avalanches, 2nd, Yangiabad, USSR, May 1985. Proceedings (1987, 439p., rus) 43-2493

Vtiurin, B.I.
Ice wells in the Schirmacher Oasis area (1987, p.103-107, rus) 43-238
Snow-ice deposits in karst hollows of the Khipstinskii Mountains (1988, p.148-153, rus) 43-954

Vulliet, L.
Set of constitutive models for soils under slow movement (1988, p.1022-1041, eng) 43-2204

Vychuzhanina, M.V.
Ice nucleus measurements in the Kashka-Dar'ya River basin (1988, p.14-18, rus) 43-2711

Vysokolov, A.I.
Results of full-scale trials of an ice class river dry cargo ship (1982, 5p, eng) 43-3170

Vysokovskii, V.L.
Nonlinear method of designing foundation platforms for elevators (1985, p 88-97, rus) 43-1663

Wackerman, C.C.
Intercomparison of synthetic- and real-aperture radar observations of Arctic sea ice during winter MIZEX '87 (1988, p.1419-1422, eng) 43-1890
Sea ice type classification of SAR imagery (1988, p.425-428, eng) 43-1521

Wada, J.
Snowfall and freeze forecasting system for national highway management in winter (1986, 16p, eng) 43-2760

Waddington, E.D.
Descent of glaciers: some early speculations on glacier flow and ice physics (1988, p.342-348, eng) 43-1991
Simple method for determining the response time of glaciers (1989, p.343-352, eng) 43-3193
Stable-isotope pattern predicted in surge-type glaciers (1988, p 657-668, eng) 43-1127

Wadhams, P.
Basin-scale ice motion and deformation in the Weddell Sea during winter (1989, p.178-186, eng) 43-3355
Development of sea ice in the Weddell Sea (1989, p.92-96, eng) 43-3341
Modelling antarctic fast-ice growth (1989, p.3-8, eng) 43-4133
Observations of wind-generated waves in antarctic sea ice (1988, p.1292-1299, eng) 43-1069
Sea ice in the Arctic Ocean and industrial development: a glaciologist's experience (1989, 23p., eng) 43-4018
Sea-ice investigations during the Winter Weddell Sea Project (1987, p 88-89, eng) 43-2749

Waegter, J.
Design loads for detachable platforms subjected to iceberg impact loads (1988, p 221-234, eng) 43-623
Design procedures for detachable platforms located in iceberg infested areas (1988, p.451-462, eng) 43-2944
Technical and economic feasibility of platform systems in iceberg infested areas (1989, p 918-929, eng) 43-3789

Wagenbach, D.
Environmental records in alpine glaciers (1989, p.69-83, eng) 43-3681
Laboratory experiments on the formation of solar radiation induced melt layers in dry snow (1988, p.31-40, eng) 43-2596
On the geometry, flow and age of firn and ice at the Colle Gnifetti core drilling site (Monte Rosa, Swiss Alps) (1988, p.1-19, eng) 43-2594

Wagner, J.J.
Great Arctic outbreak and East Coast blizzard of February 1989 (1988, p.305-318, eng) 43-4433

Wagner, M.J.
Pipeline construction in arctic & sub-arctic regions (1983, p.500-524, eng) 43-3422

Wahl, H.E.
Climate of Yukon (1987, 323p., eng) 43-3081

Wahl, K.L.
Runoff in the Upper Colorado River Basin, water years 1983-85, and comparisons with forecasts of runoff to Lake Powell (1987, p.31-40, eng) 43-3925

Wainwright, P.F.
Analysis of sediment data from the Beaufort Sea Shorebase Monitoring Program, 1982-1984 (1988, 78p. + appends., eng) 43-1702

Wakabayashi, M.
Study on the toughness of large-heat input weld metal for low temperature-service TMCP steel (1988, p.1-9, eng) 43-1845

Wakatsuchi, M.
Experimental study on rapid frazil ice production in wind-generated polynyas (1988, p.179-188, eng) 43-2991

Wake, A.
Double-diffusive convection under sea ice (1988, p.89-95, eng) 43-149

Wake, C.
Snow accumulation studies in the Central Karakoram, Pakistan (1987, p.19-33, eng) 43-386

Wakonigg, H.
Follow-up measurements in the Pasterze area (Glockner Group) in 1986 (1987, p.191-197, ger) 43-1684

Waksman, D.
Freeze protection of solar irradiated paved surfaces using integral phase-change material (1988, p.195-200, eng) 43-3819

Walczak, P.
Determination of roughness coefficient of the underside of ice cover (1988, p.122-130, eng) 43-2986

Waldvogel, A.
Aerosol and hydrometeor concentrations and their chemical composition during winter precipitation along a mountain slope 2. Enhancement of below-cloud scavenging in a stably stratified atmosphere (1988, p.2741-2750, eng) 43-2318
Hail research and hail suppression (1987, p 87-109, eng) 43-2250
On determination of maximum hailstone sizes from hailpad observations (1989, p.71-76, eng) 43-4259

Walford, M.E.R.
Synthetic-aperture radio-echo experiment at Storglaciären, Sweden (1989, p.43-47, eng) 43-4139

Walker, D.A.
Road dust and its environmental impact on Alaskan taiga and tundra (1987, p.479-489, eng) 43-196

Walker, H.J.
Permafrost and coastal processes (1988, p.35-42, eng) 43-1722

Walker, J.C.F.
Descent of glaciers: some early speculations on glacier flow and ice physics (1988, p.342-348, eng) 43-1991

Walker, K.M.
Multitemporal Landsat multispectral scanner and thematic mapper data of the Hubbard Glacier region, Southeast Alaska (1988, p.373-376, eng) 43-833

Walker, T.D.
Seasonal occurrence of chroococcoid cyanobacteria at an antarctic coastal site (1989, p.193-196, eng) 43-1834

Wallrich, M.
Investigation of the frictional connection on roads in winter, taking into account the care of roads (1985, 116p, ger) 43-1054

Walsh, J.
Comments on the characteristics of *in situ* snow at millimeter wavelengths (1986, p.317-320, eng) 43-4645
Over-the-horizon target detection from a floating platform (1989, p.221-228, eng) 43-2630

Walsh, J.E.
Numerical simulation of North Atlantic sea ice variability, 1951-1980 (1985, p.43-46, eng) 43-1155

Walsh, M.
River ice and salmonids (1986, p D-4.1-D-4.26, eng) 43-2280

Walsh, M.E.
Analytical method for determining tetrazene in soil (1988, 22p., eng) 43-1397
Development of an analytical method for the determination of explosive residues in soil. Part II: Additional development and ruggedness testing (1988, 46p, eng) 43-4594
Development of analytical methods for military-unique compounds (1988, p.370-380, eng) 43-1811
Improved RP-HPLC method for determining nitroaromatics and nitramines in water (1988, 36p., eng) 43-1841

Walsh, M.R.
Preliminary design guide for arctic equipment (1989, 35p, eng) 43-3894

Walter, B.A.
Role of the St. Lawrence polynya in the downwind modification of the planetary boundary layer over the Bering Sea ice pack (1988, p 61-64, eng) 43-1494

Walters, R.A.
Columbia Bay, Alaska, an 'upside down' estuary (1988, p.607-617, eng) 43-2696
Small-amplitude, short-period variations in the speed of a tide-water glacier in south-central Alaska, U.S.A. (1989, p.187-191, eng) 43-3356

Wand, U.
Stable isotope and hydrogeochemical studies of Beaver Lake and Radok Lake, MacRobertson Land, East Antarctica (1988, p.99-111, eng) 43-4517

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Introduction of Nowcasting system development in China (1987, p.331-334, eng) 43-2253
Preliminary study on artificial and natural hailstones (1987, p.357-360, eng) 43-2255

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Effects of permafrost on groundwater in Huola Basin, northern Daxinganling Ridge (1988, p.143-150, chi) 43-2849

Wang, C.
Avalanches in Tianshan Mountains, China, and their control (1987, p.13-24, chi) 43-477
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Frost hazard of roads in marshlands of the Sanjiang Plain (1988, p.409-417, chi) 43-2855

Wang, C.Y.
Freezing around a vertical cylinder immersed in porous media incorporating the natural convection effect (1989, p.297-302, eng) 43-4226

Wang, J.A.
Effect of ice formation on the elastic moduli of cement paste and mortar (1988, p.874-885, eng) 43-1444

Wang, J.C.
Development of apparatus used for water migration test in soil (1988, p.189-196, chi) 43-2852

Wang, L.W.
Progress in the study of instruments for glaciology and geocryology (1988, p.362-363, chi) 43-2883

Wang, P.
Snow and ice chemistry of mountain glaciers in China (1988, p.269-272, chi) 43-2867

Wang, P.K.
Experimental study of the scavenging of aerosol particles by natural snow crystals (1989, p.1650-1655, eng) 43-4418
Theoretical determination of the efficiency of aerosol particle collection by falling columnar ice crystals (1989, p.1656-1663, eng) 43-4419

Wang, Q.J.
Characteristics of Bohai ice load analysing method (1989, p 606-612, eng) 43-3762
Dual rigidity of an anti-ice structure (1988, p.561-569, eng) 43-2954

Wang, R.S.
Dynamic model of sea ice forecast in the Bohai Sea (1988, p.282-292, eng) 43-3001

Wang, S.
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Dynamic response of an icebeam with flooding water effect (1989, p.311-320, eng) 43-3736

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Cause analysis of flooded ice in the lower reaches of Huanghe and its preventive measures (1987, p.111-116, chi) 43-495
Variations of existing glaciers in the southwestern mountain region of Xizang (Tibet) (1988, p.513-516, eng) 43-4565

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Wang, Y.G.
Analysis of law of variation of stage at Hequ reach of the Yellow River in the ice period (1988, p.142-151, eng) 43-2982

Wang, Y.L.
Relation between the growth of seasonal depth hoar and the avalanches in China (1988, p.173-180, chi) 43-2851

Wang, Y.Q.
Control of frost heave in geotechnical engineering (1989, p.739-742, eng) 43-3225

Wang, Z.
Cause and prevention of freezetube breakage (1988, p.303-310, eng) 43-91
Earthwork for snow drift control in the highway in Tianshan Mountains and its effect (1987, p 40-42, chi) 43-481

Wang, Z.L.
Research on snow cover, snowdrifts and avalanches in China (1988, p.273-278, chi) 43-2868

Wang, Z.T.
Inventory of regional glaciers in China (1988, p 262-268, chi) 43-2866

Wang, Z.X.
Some dynamics studies on Urumqi Glacier No.1, Tianshan Glaciological Station, China (1989, p.70-73, eng) 43-3336

Wangel, G.
Winter knowledge and winter data: R & D needs of the Swedish Defence, current activities (1985, p.72-74, swe) 43-362

Ward, T.J.
Application of a snowmelt and rainfall sediment yield model to New Mexico watersheds (1987, p 98-102, eng) 43-4

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Cloud track winds in the polar regions from sequences of AVHRR images (1989, p.695-703, eng) 43-4066

Warren, S.G.
Optical properties of antarctic snow (1988, p.247-248, eng) 43-1644

Washburn, D.S.
Snow control on floating ice sheets (1989, p.161-169, eng) 43-2099

Watanabe, H.
Rationalization of cold-weather concreting using non-freezing agent (1988, p.168-191, eng) 43-4052

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Seasonal variations of ice algal standing crop near Syowa Station, East Antarctica, in 1983/84 (1987, p.143-164, eng) 43-3160

Watanabe, M.
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Watanabe, S.
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Distribution of periglacial landforms in the Langtang Valley, Nepal Himalaya (1989, p.209-220, eng) 43-3463
Studies of snow accumulation and ablation on perennial snow patches in the mountains of Japan (1988, p.560-581, eng) 43-2276

Wateren, D.F.M. van der
Model of glacial tectonics, applied to the ice-pushed ridges in the central Netherlands (1985, p.55-74, eng) 43-3

Watkins, W.R.
Scattering, turbulence, and refractive effects at SNOW III West (1986, p.113-127, eng) 43-4631

Watling, E.T.
Facilities operations and maintenance (1987, p.53-55, eng) 43-3295

Watt, G.S.
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Viscoelastic response of a floating ice plate to a steadily moving load (1988, p.409-430, eng) 43-3291

Wayper, R.Y.
Ice thickness in McMurdo Sound (1987, p.94-96, eng) 43-2752

Webb, P.N.
Recycled marine microfossils from basal debris-ice in ice-free valleys of southern Victoria Land (1988, p.87-88, eng) 43-1618

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Search for refractory interplanetary dust particles from preindustrial aged antarctic ice (1988, p.599-605, eng) 43-1761

Webber, P.J.
Restoration and vegetation succession in circumpolar lands. the conference (1987, p.343-344, eng) 43-183

Wedvich, G.
Acoustic remote sensing instruments for monitoring of polar drift ice (1988, p.485-493, eng) 43-642

Weeks, W.F.
Alaska synthetic aperture radar (SAR) facility project (1987, p.593-596, eng) 43-781
Numerical simulations of the profile properties of undeformed first-year sea ice during the growth season (1988, p.12,449-12,460, eng) 43-721
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Wehrley, D.R.
Illinois waterway, Marseilles Dam major rehabilitation (1989, p.114-122, eng) 43-4407

Wei, W.
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Fracture of S2 columnar freshwater ice floating double cantilever beam tests (1988, p.152-161, eng) 43-2918

Welck, E.J.
Radiation balance of alpine tundra, Plateau Mountain, Alberta, Canada (1989, p.126-134, eng) 43-4086

Weil, M.L.
Radiation studies in the Arctic (1988, p 271-276, eng) 43-3075

Weinbeck, R.S.
Probing lake-effect snowbands using a portable radiosonde unit (1988, p.7-12, eng) 43-4112

Weir-Jones, I.
Solutions to instrumentation problems experienced in offshore programmes (1988, p.435-446, eng) 43-638

Weiss, A.D.
Great Arctic outbreak and East Coast blizzard of February 1989 (1988, p.305-318, eng) 43-4433

Welch, R.M.
Reflected fluxes for broken clouds over a lambertian surface (1989, p.1384-1395, eng) 43-3519

Weller, G.
Alaska synthetic aperture radar (SAR) facility project (1987, p.593-596, eng) 43-781

Wells, D.
Seasonal and historical analysis of the M.V. *Arctic* vessel performance and trafficability data base, 1983-87 (1988, 80p., eng) 43-2148
Vessel performance and trafficability program, 1987; Milestone report No 6: early winter vessel performance assessment (1987, 33p., eng) 43-2139

Wells, J.T.
Effects of sea-level rise on deltaic sedimentation in south-central Louisiana (1987, p.157-166, eng) 43-3403

Wels, C.
Changes in stream chemistry during snowmelt runoff in two headwater catchments (1988, p 60-73, eng) 43-4117

Welsh, J.P.
Measurements of the properties and brightness temperature of saline ice and snow (1988, p 623-632, eng) 43-2960
Wind-generated polynyi off the coasts of Bering Sea islands (1989, p.1053-1062, eng) 43-3802

Welsh, L.E.
Ground snow loads for the 1990 national building code of Canada (1989, p.40-49, eng) 43-3550

Wen, B.H.
Sea-ice characterization measurements needed for testing of microwave remote sensing models (1989, p.149-158, eng) 43-3510

Wendland, W.M.
Seasonal ground frost occurrence developing a statistically-based predictive model (1988, p.186-198, eng) 43-1368

Wendler, G.
On the blowing snow in Adelie Land, eastern Antarctica (1989, p 261-279, eng) 43-3188
Research results from antarctic automatic weather stations (1988, p.45-61, eng) 43-1404

Wendling, P.
Calculated radiative effects of Arctic haze during a pollution episode in spring 1983 based on ground-based and airborne measurements (1985, p 2181-2193, eng) 43-1002

Wenger, R.B.
Special design features take the chill out of wastewater treatment (1989, p.50-51, eng) 43-4076

Werner, J.B.
Development of an advanced anti-icing/deicing capability for U.S. Army helicopters, Vol.I. design criteria and technology considerations. Final report for period 30 June 1973-30 June 1975 (1975, 253p., eng) 43-1789
Development of an advanced anti-icing/deicing capability for U.S. Army helicopters, Vol.II: ice protection system application to the UH-1H helicopter. Final report for period 30 June 1973-30 June 1975 (1975, 220p., eng) 43-1790

Wessels, E.
Determination of global ice load on Adams Island by use of *in-situ* ice stress measurements (1988, p 679-690, eng) 43-654
Field measurements of stresses and deformations in a first-year ice cover adjacent to a wide structure (1988, p.726-734, eng) 43-1803
Ice forces on fixed and floating conical structures (1989, p.231-257, eng) 43-2820

West, R.
Sea-ice characterization measurements needed for testing of microwave remote sensing models (1989, p.149-158, eng) 43-3510

Westermann, P.H.
Stress and strain instruments developed for field measurements of ice (1989, p.159-165, eng) 43-3511

Western Snow Conference
Proceedings of the 51st annual meeting, Vancouver, Washington, Apr. 19-21, 1983 (1983, 160p., eng) 43-4346
Proceedings of the 52nd annual meeting, Sun Valley, ID, Apr. 17-19, 1984 (1984, 192p, eng) 43-4309
Proceedings of the 53rd annual meeting, Boulder, CO, Apr. 16-18, 1985 (1985, 183p, eng) 43-4262
Proceedings of the 54th annual meeting, Phoenix, AZ, Apr 15-17, 1986 (1986, 198p, eng) 43-3897
Proceedings of the 55th annual meeting, Vancouver, BC, Canada, Apr. 14-16, 1987 (1987, 184p. + appends., eng) 43-3921
Proceedings of the 56th annual meeting, Kalispell, Montana, Apr. 19-21, 1988 (1988, 191p., eng) 43-3990

Weyrick, P.B.
Dynamic ice breakup control for the Connecticut River near Windsor, Vermont (1988, p.245-258, eng) 43-2018
Options for management of dynamic ice breakup on the Connecticut River near Windsor, Vermont (1988, 16p., eng) 43-5
Study of dynamic ice breakup on the Connecticut River near Windsor, Vermont (1987, p.163-177, eng) 43-399

Whalley, E.
Energies of the phases of ice at low temperature and pressure relative to ice Ih (1988, p.919-924, eng) 43-437
Negative octahedral snowflakes or Tyndall figures in tetrahydrofuran clathrate hydrate (1988, p.711-712, eng) 43-1491
Transformation of ice VIII to amorphous ice by "melting" at low temperature (1989, p.2390-2392, eng) 43-2903

Whalley, W.B.
(Delta)D-(delta)O18 relationships and the thermal history of basal ice near the margins of two glaciers in Lyngen, north Norway (1988, p 265-268, eng) 43-1979
Effects of topographic and climatic controls on 19th and 20th century glacier changes in the Lyngen and Bergsfjord areas, north Norway (1989, p.153-172, eng) 43-3182
Thermal regime and geomorphology of plateau ice caps in northern Norway observations and implications (1988, p.983-986, eng) 43-1476

Wharton, R.A.
Early Martian environments: the antarctic and other terrestrial analogs (1989, p.147-153, eng) 43-4580

Wharton, R.A., Jr.
Perennially ice-covered Lake Hoare, Antarctica: physical environment, biology and sedimentation (1989, p.305-320, eng) 43-3701

Wheeler, K.
Interception and redistribution of snow in a subalpine forest on a storm-by-storm basis (1987, p.78-87, eng) 43-3930

Wheeler, P.A.
Evaluation of the isotopic snow measurement gage (1984, p.48-56, eng) 43-4315

Whillans, I.M.
Comparison of results from transit satellite tracking (1988, p.83-88, eng) 43-1949
Dynamics and mass balance of ice stream B (1988, p.112-113, eng) 43-1624
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Force budget: I Theory and numerical methods (1989, p.53-60, eng) 43-4141
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Mass balance of Ice Stream B, West Antarctica (1988, p.187-193, eng) 43-1965
Method for computing shallow ice-core depths (1988, p.355-357, eng) 43-1993

White, A.G.
Architecture of arctic regions a selected bibliography (1987, 7p, eng) 43-4387

White, D.C.
Antarctic benthic and sea-ice microalgal interactions: food chain processes and physiology (1988, p.174-175, eng) 43-1640

White, G.B.
Autonomous ocean profiler: a current-driven oceanographic sensor platform (1989, p.195-202, eng) 43-3515

White, J.W.C.
How do glaciers record environmental processes and preserve information (1989, p.85-98, eng) 43-3682

White, S.E.
Differential movement across transverse ridges on Arapaho Rock Glacier, Colorado Front Range, U.S.A. (1987, p.145-149, eng) 43-3051

White, W.A.
More on deep glacial erosion by continental ice sheets and their tongues of distributary ice (1988, p.137-150, eng) 43-2013

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Application of a snow accumulation-ablation model for areal distribution of shallow ephemeral snowpacks (1987, p.129-143, eng) 43-396

Whittaker, R.J.
Vegetation succession on the Storbreen Glacier foreland, Jotunheimen, Norway: a review (1987, p.385-395, eng) 43-188

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Critical speed data for an artificial floating ice sheet (1988, p.115-132, eng) 43-1754
Critical speed data for model floating ice roads and runways (1988, p.151-161, eng) 43-1382

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Character of the englacial and subglacial drainage system in the lower part of the ablation area of Storglaciären, Sweden, as revealed by dye-trace studies (1988, p.217-227, eng) 43-167

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Computer-aided structural modeling (CASM) (1989, p 526-540, eng) 43-4409

Wielicki, B.A.
Reflected fluxes for broken clouds over a lambertian surface (1989, p.1384-1395, eng) 43-3519

Wierzbicki, T.
Failure analysis of impacting ice floes (1989, p.275-285, eng) 43-2637
New results in ice load predictions using the fracture mechanics approach (1988, p.23-27, eng) 43-3498

Wigham, J.
Comparison of melt rate methods used in forecasting runoff from an Alberta mountain environment (1985, p.107-116, eng) 43-4274

Wight, C.A.
Photochemistry of solid ozone (1989, p.509-511, eng) 43-2202

Wilbik, J.
Snow damage to buildings in Poland, 1968-1987 (1989, p.81-84, eng) 43-3554

Wilbur, S.
Surging versus nonsurging glaciers a comparison using morphometry and balance (1988, 113p., eng) 43-1888

Wilford, D.J.
Large, adjustable tipping bucket gauge for measuring snowmelt (1984, p.176-179, eng) 43-4330

Wilkerson, L.A.
Central power generation system for U.S. Coast Guard polar icebreakers (1989, p 82-92, eng) 43-3973

Wilkniss, P.E.
Polar regions: research in a changing world (1989, p.160-164, eng) 43-2230
U.S. National Science Foundation polar research programs (1989, p.29-32, eng) 43-3220

Williams, C.J.
Cold room studies for snow and ice control on buildings (1989, p.232-242, eng) 43-3568
Field observations of wind deflection fins to control snow accumulation on roofs (1989, p.307-314, eng) 43-3575

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Measurement of impact forces on sea ice (1989, p.638-647, eng) 43-3764

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Icing of insulated pavements (1984, 8p., eng) 43-2697

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Topographic position effects on growth depression of California Sierra Nevada pines during the 1982-83 El Niño (1988, p.352-357, eng) 43-292

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Antarctica (1988, 278p., eng) 43-412

Williamson, R.B.
Assessing the durability of concrete in freezing and thawing (1989, p.29-35, eng) 43-2334

Willis, A.D.
Impressed current cathodic protection of a caisson structure for arctic conditions (1988, p.25-29, eng) 43-1671

Willmington, L.D.V.
Weather monitoring equipment and its practical use in the management of highway maintenance (1986, 6p., eng) 43-2764

Willmott, A.J.
Simple steady-state coupled ice-ocean model, with application to the Greenland-Norwegian Sea (1989, p.501-518, eng) 43-3293

Wilson, B.
Inexpensive remote snow-depth gauge: an assessment (1984, p.188-191, eng) 43-4333

Wilson, C.A.
Modeling climate change: an assessment of sea ice and surface albedo feedbacks (1989, p 8609-8622, eng) 43-3848

Wilson, D.G.
Formation of a solid nucleus in supercooled liquid, 1 (1988, p.281-300, eng) 43-1446

Wilson, D.L.
Chlorophyll a distribution in the vicinity of an advancing ice edge: Antarctic Marine Ecosystem Research at the Ice-Edge Zone, 1986 (1988, p 163-164, eng) 43-1635

Wilson, J.P.
Climatic variability and tree response within the forest-alpine tundra ecotone (1988, p.505-519, eng) 43-1670

Wilson, M.J.
Late-glacial and Holocene glacier fluctuations and environmental change on South Georgia, southern ocean (1989, p.210-228, eng) 43-3166

Wilson, R.A.
Canadian automatic snow depth sensor: a performance update (1988, p.178-181, eng) 43-4013
Use of acoustic ranging devices as snow depth sensors, an assessment (1987, p.203-207, eng) 43-403

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Late Wisconsin and Early Holocene glacial history, inner Ross Embayment, Antarctica (1989, p.151-182, eng) 43-3164
Soil development in the Beardmore Glacier region, Antarctica (1988, p 93-95, eng) 43-1620

Wilts, A.R.
Effects of frost action on soil aggregate stability (1988, p.435-439, eng) 43-823

Wiltse, M.A.
Use of geochemical stream-drainage samples for detecting bulk-minable gold deposits in Alaska (19[illegible]n., eng) 43-1692

Winchester, J.W.
Particulate sulfur and chlorine in Arctic aerosols, Spring 1983 (1985, p.2167-2173, eng) 43-1000

Winchester, L.W., Jr.
Phase function of two dimensional snow crystals (1986, p.101-109, eng) 43-4630

Winebrenner, D.P.
Sea-ice characterization measurements needed for testing of microwave remote sensing models (1989, p.149-158, eng) 43-3510

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Dynamic ride up and crushing of short ice ridges on conical structures (1989, p.287-291, eng) 43-2638
On the Relationship between global and local ice crushing loads (1989, p.481-491, eng) 43-3750

Winter maintenance—learning Finland's methods
Winter maintenance—learning Finland's methods (1988, p.22-26, eng) 43-2156

Winters, L.H.
Freezing degree-days and frost penetration under roads: a field study (1984, p 1151-1165, eng) 43-676

Winters, P.
Radio echo-sounding of Erebus Glacier Tongue (1989, p.15-30, eng) 43-3884

Wishart, D.M.
Reclamation of the Norman Wells pipeline (1988, p.11-27, eng) 43-2305

Wisniewski, E.
Glacial moraines of the antarctic ice sheet at its contact with Bunger Hills (1984, p.91-102, pol) 43-2358

Witney, K.
Solutions to instrumentation problems experienced in offshore programmes (1988, p.435-446, eng) 43-638

Wittebort, R.J.
Observation of molecular reorientation in ice by proton and deuterium magnetic resonance (1988, p.5668-5671, eng) 43-1133

Wojciechowski, B.
Freezing of aqueous solutions containing gases (1988, p.843-848, eng) 43-1570

Wojtowicz, U.B.
Changes in grain size distribution in loess soils submitted to freezing (1989, p 601-610, eng) 43-3132

Wold, B.
Historic glacier variations in Scandinavia (1989, p.109-128, eng) 43-3179
Mass balance measurements on Norwegian glaciers in 1985, 1986, and 1987 (1988, 46p., nor) 43-1698

Wold, K.
Specific weight of snow (1987, p.79-84, eng) 43-1220

Wolf, T.S.
Fire hydrant winter maintenance program for Anchorage (1989, p.179-187, eng) 43-2101

Wolff, E.W.
Diffusion and location of hydrochloric acid in ice: implications for polar stratospheric clouds and ozone depletion (1989, p.487-490, eng) 43-4430
Location of impurities in antarctic ice (1988, p.194-197, eng) 43-1966

Wolfgram, P.A.
ICE-MOSES experiment: mapping permafrost zones electrically beneath the Beaufort Sea (1988, p.265-290, eng) 43-1458

Wolk, A.A.
Induction icing (1988, p 61-64, eng) 43-1584

Woo, M.K.
Arctic lowlands (1987, p.583-628, eng) 43-2415
Meltwater movement in natural heterogeneous snow covers (1985, p.1710-1716, eng) 43-181
Soil heat flux, wetting front advance and ice layer growth in cold, dry snow covers (1987, p.497-524, eng) 43-1310
Study to model the effects of uranium mine tailings on a permafrost environment (1988, 41p., eng) 43-1970

Woo, S.
Acidic deposition and snowpack chemistry at a Sierra Nevada site (1985, p.76-87, eng) 43-4271
Snowmelt hydrograph separation: chemical and graphical methods compared (1986, p.158-161, eng) 43-3916

Wood, F.B.
Global alpine glacier trends, 1960s to 1980s (1988, p.404-413, eng) 43-2481

Wood, R.M.
Earthquakes, rivers and ice: scientific research at the Laguna San Rafael, southern Chile, 1986 (1988, p.392-405, eng) 43-2003

Woodhead, R.
Cold weather concreting for oil production plant (1988, p.31-33, eng) 43-349

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Drilling fluids and the arctic tundra of Alaska: assessing contamination of wetlands habitat and the toxicity to aquatic invertebrates and fish (1988, p 683-697, eng) 43-19

Woodwell, G.M.
Global climatic change (1989, p.36-44, eng) 43-2698

Woodworth-Lynas, C.M.T.
Iceberg scour investigations and sedimentology of the southeast Baffin Island continental shelf (1988, p.221-230, eng) 43-1032
Small scale modelling of iceberg scouring of the seabed (1989, p.133-145, eng) 43-3719

Wooldridge, P.J.
FT-IR spectroscopic study of proton transport and trapping in cubic ice (1988, 166p., eng) 43-1915

Woolner, K.S.
Winter ice interactions with an Arctic offshore structure (1986, p 49-73, eng) 43-261

Workshop on Extreme Ice Features, Banff, Alberta, Nov. 3-5, 1986
Workshop on extreme ice features, [Proceedings] (1987, 463p., eng) 43-899

Workshop on Hydraulics of River Ice/Ice Jams, 5th, Winnipeg, Manitoba, June 21-24, 1988
Proceedings (1988, 445p., eng) 43-2162

Workshop on Ice Properties, St. John's, Newfoundland, June 21-22, 1988
Proceedings (1988, 216p., eng) 43-4166

Workshop on Low Temperature Effects on Concrete, Sapporo, Japan, Sep. 5-9, 1988
Proceedings (1988, 417p., eng) 43-4044

Workshop on Scientific Drilling in the Arctic Ocean Planning for the 1990's, Ottawa, Ontario, June 23-24, 1988
Proceedings (1988, Var. p., eng) 43-2556

Wortley, C.A.
Design approach for piles subject to ice jacking (1988, p.65-85, eng) 43-148
Rebuilding infrastructure for pleasure boating (1989, p.188-201, eng) 43-2102
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Probability of winter environmental forces on arctic offshore structures (1989, p.105-112, eng) 43-2616

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Proceedings (1989, 136p., eng) 43-3871
SNOW IV field experiment data report (1989, 250p., eng) 43-4296

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Comparison of numerical methods for the prediction of two-dimensional heat transfer in an electrothermal deicer pad (1988, 138p., eng) 43-3968
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Winter ice interactions with an Arctic offshore structure (1986, p.49-73, eng) 43-261

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Role of extruded expanded polystyrene in Ontario's provincial transportation system (1987, p.10-22, eng) 43-1387

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Inexpensive remote snow-depth gauge: an assessment (1984, p.188-191, eng) 43-4333

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Constitutive modeling of polycrystalline ice (1989, p.431-442, eng) 43-3746
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Multiaxial differential model of flow in orthotropic polycrystalline ice (1989, p.223-235, eng) 43-4444

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Wisconsin/Würm glacial stage ice in the subtropical Dunde Ice Cap, China (1988, p.517-523, eng) 43-4566

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Effects of an ice cover on flow in a movable bed channel (1988, p.137-146, eng) 43-3027
Preliminary study of scour under an ice jam (1988, p.177-192, eng) 43-2171

Wuori, A.F.
Improved techniques for construction of snow roads and air strips (1988, 99p., eng) 43-1150

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Radioluminescence of ice containing MgCl2 and CaCl2 (1989, p.139-143, eng) 43-2778
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Preliminary research on weathering process in Casey Station, East Antarctic (1988, p.873-884, eng) 43-1468
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Character of the weather and climate in the West Kunlun Mountains area in summer, 1987 (1989, p.77-81, eng) 43-3444
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Characteristics of local circulation in the glacier area in the West Kunlun Mountains. 1987 (1989, p.99-104, eng) 43-3447
Radiation balance in the Gozha Glacier region, in the West Kunlun Mountains (1989, p 83-87, eng) 43-3445
Solar penetrating radiation in snow layers (1988, p.135-142, chi) 43-2848
Xie, Z.
Current trends and prospect for snow and ice research—IUGG XIX General Assembly 1987 Vancouver, Canada (1988, p 90-93, chi) 43-472
Wisconsin/Würm glacial stage ice in the subtropical Dunde Ice Cap, China (1988, p 517-523, eng) 43-4566
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Studies on catastrophes of glacial debris flow and glacial lake outburst floods in China (1988, p.284-289, chi) 43-2870
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Measurement of thermal ice thrust exerted by expanding ice cover in Taisetsu dam reservoir in Hokkaido, Japan (1988, p.473-482, eng) 43-2946
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Freezing-and-thawing durability of concrete incorporating condensed silica fume (1988, p.257-274, eng) 43-4056
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Mechanical properties of antarctic sea ice (1988, p.162-176, eng) 43-2919
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Air cushion vehicles for Arctic operation. Koleser, J., et al, (1988, p.59-71, eng) 43-1425
Evaluation of hovercraft for dispersant application (1988, 57p. + appends., eng) 43-1704
International Conference on Air Cushion Technology, Montreal, 1987. (1988, 381p., eng) 43-1747
Survey of hovercrafts in the USSR. Zelitskaya, P.V., (1988, p.5-16, eng) 43-1748
Planning surface transportation in northern Canada. Hume, V., (1988, p.17-21, eng) 43-1749
Tractive requirements for off-road ACV's. Yong, R.N., et al, (1988, p.23-51, eng) 43-1750

Various applications of hydraulic jets (Bertin & Cie). Cayla, J., (1988, p.67-91, eng) 43-1751
Ice removal from port Chicoutimi. Desgagnés, G., (1988, p.93-102, fre) 43-1752
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On variability of atmospheric CO2 at station Alert Higuchi, K., et al, (1985, p 2039-2044, eng) 43-987
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Air pollution
Theoretical investigation of the collection of aerosol particles by falling ice crystals. Miller, N.L., (1988, 235p., eng) 43-340
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Progress in Arctic air chemistry, 1980-1984. Rahn, K.A., (1985, p.1987-1994, eng) 43-982
Five years of air chemistry observations in the Canadian Arctic Barrie, L.A, et al, (1985, p.1995-2010, eng) 43-983
Aerosol pollution sources at Barrow, Alaska during winter 1979-80. Lowenthal, D.H., et al, (1985, p.2011-2024, eng) 43-984
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Estimates of sulfur fluxes entering the Arctic troposphere. Rosen, H., et al, (1985, p.2203-2207, eng) 43-1004
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Acidic deposition and snowpack chemistry at a Sierra Nevada site. Berg, N., et al, (1985, p.76-87, eng) 43-4271
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Ecotoxicology and climate. Bourdeau, P., ed, (1989, 392p., eng) 43-4453
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Daily range of air temperature on glacial and non-glacial surfaces of the Inyl'chek River basin. Bakirov, K.B., (1988, p.26-33, rus) 43-2386
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Atmospheric processes at the edge of the antarctic continent Kottmeier, C, et al, (1986, p 62-63, ger) 43-2663
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Soil temperature and advective changes in air temperature. Mietus, M., (1988, p.95-103, eng) 43-2769
Glacier and climate studies, West Gulkana Glacier and environs, Alaska, Vol.1. Marcus, M.G., ed, (1988, 142p., eng) 43-2788
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Commercial aviation icing research requirements. Koegebochn, L.P., (1981, 59p., eng) 43-1728
Anti-icing, deicing capability for U.S. Army helicopters part 1. Werner, J.B., (1975, 253p., eng) 43-1789
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Diffuse solar radiation—daily and monthly values as affected by snow cover. Kierkus, W.T., et al, (1989, p.143-147, eng) 43-2310
Analysis of Voyager images of Europa: plasma bombardment. Johnson, R.E., et al, (1988, p.423-436, eng) 43-2323
Geologic implications of spectrophotometric measurements of Europa. Buratti, B., et al, (1988, p.437-449, eng) 43-2324
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Near-infrared photometry of the Galilean satellites Tittemore, W.C., et al, (1989, p.82-97, eng) 43-2326
Analysis of long-period changes in some climate-forming factors of the northern European basin. Dement'ev, A.A., et al, (1988, p.107-117, rus) 43-2411
Tundra snow disappearance as climate change indicator. Foster, J.L., (1989, p.69-70, eng) 43-2477
Parameterization of snow albedo. Kondo, J., et al, (1988, p.216-224, jpn) 43-2702
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Summer radiation balance, West Gulkana Glacier. Miller, T.A., (1988, p.47-61, eng) 43-2793
Light scattering by inhomogeneous composite particles. Srivastava, V., (1989, 155p., eng) 43-2889
Ablation process of snow and ice on roads. Naruse, R., et al, (1988, p.294-303, eng) 43-2930
Semianalytic energy balance climate model with explicit sea ice and snow physics Harvey, L.D.D., (1988, p.1065-1085, eng) 43-3074
Arctic sea ice characteristics related to atmospheric processes. Barry, R.G., et al, (1989, p.9-15, eng) 43-3328
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Sea ice and surface albedo in models of climate change. Ingram, W.J., et al, (1989, p.8609-8622, eng) 43-3848
Surface of Io: a new model. Hapke, B., (1989, p.56-74, eng) 43-4334
Evidence for a mobile ice shell on Europa. Schenk, P.M., et al, (1989, p.75-100, eng) 43-4335
Radiative energy budget in the cloudy and hazy Arctic. Tsay, S.C., et al, (1989, p.1002-1018, eng) 43-4402
Winter albedo characteristics at St. Paul, Minnesota. Baker, D.G., et al, (1989, p.227-232, eng) 43-4404
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Energy balance of the intertidal zone of western Hudson Bay I: ice-free period Silis, A., et al, (1989, p.327-345, eng) 43-4560
On the geoecology of southern Tibet. Kuhle, M., et al, (1988, p.597-613, eng) 43-4571
Ice marginal ramps, an indicator of semi-arid piedmont glaciations. Kuhle, M., (1989, p.223-238, eng) 43-4576

Algae
Snow algae and their interaction with environments. Hoham, R.W., (1987, p.73-79, eng) 43-391
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Microalgae community on floating ice in Admiralty Bay. Ligowski, R., (1987, p.367-380, eng) 43-1375
Abundance and production of ice algae in Resolute Passage, Canadian Arctic. Smith, R.E.H., et al, (1988, p.251-263, eng) 43-1376
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Microalgae at the ice edge in the northern Weddell Sea. Fryxell, G.A., (1988, p 166-168, eng) 43-1636
Sea-ice pressure ridge microbial communities. Ackley, S.F., (1988, p.172-174, eng) 43-1639
Antarctic benthic and sea-ice microalgal interactions. Smith, G.A., et al, (1988, p.174-175, eng) 43-1640
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Population dynamics of bacteria in Arctic sea ice. Smith, R.E.H., et al, (1989, p.63-76, eng) 43-1967
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Life at the ice edge. Sakshaug, E., et al, (1989, p 60-67, eng) 43-2446
Bacteria in pack-ice north of Elephant Island (BIOMASS III, October 1986). Zdanowski, M.K., (1988, p.203-216, eng) 43-2770
Drifting sea ice algae north of Elephant I., Oct. 1986. Ligowski, R., et al, (1988, p.217-229, eng) 43-2771
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Weddell Sea ice edge zone nutrient distribution and hydrography. Nelson, D.M., et al, (1989, p.191-209, eng) 43-2886
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Central Andes rock glaciers: applied aspects. Corte, A.E., (1987, p.289-303, eng) 43-3058

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C-axis orientation and flow rate of ice. Azuma, N., et al, (1988, p 67-76, eng) 43-2910
On confined compressive strength of urea-doped ice Taguchi, Y., et al, (1988, p 92-98, eng) 43-2912
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Anomalous water
Thermo-capillary and thermo-crystallizing flow of water films in capillaries. Kiseleva, O.A., et al, (1988, p.58-59, rus) 43-553

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On thin ice: the failure of the National Science Foundation to protect Antarctica. Manheim, B.S., Jr., (1988, 112p., eng) 43-216
Fluctuations of ice shelves and outlet glaciers in Antarctica. Zakharov, V.G., (1988, p.41-51, rus) 43-935
Antarctic ice sheet response to changes. Robin, G. de Q., (1988, p.31-50, eng) 43-1095
Antarctic cryogenic sediments. Kellogg, T.B., et al, (1988, p.51-74, eng) 43-1096
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Loess sources and eolian deposits in Antarctica. Claridge, G.G.C., et al, (1988, p.33-45, eng) 43-2337
Operation Deep Freeze 89 end of season report. (1989, Var. p., eng) 43-2442
Microanalysis of thin sections of snow and firn in Antarctica. Han, J.K., et al, (1988, p.454-457 + 1 plate, chi) 43-2857
Compacted-snow runways: design and construction guidelines for Antarctica. Russell-Head, D.S., et al, (1989, 68p., eng) 43-3474
Arctic haze: air pollution in polar regions. Heintzenberg, J., (1989, p.50-55, eng) 43-3832
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Emerging meteorite: crystalline structure of the enclosing ice. Gow, A.J., et al, (1989, p 87-91, eng) 43-3079

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Improved techniques for construction of snow roads and airstrips. Lee, S.M., et al, (1988, 99p., eng) 43-1150

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N2O measurements of air extracted from antarctic ice cores: implication on atmospheric N2O back to the last glacial-interglacial transition. Zardini, D., et al, (1989, p.189-201, eng) 43-3974

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—East Antarctica

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Evolution of East Antarctica's ice sheet. Huybrechts, P., et al, (1988, p 52-59, eng) 43-1944

Ice-core drilling for paleoclimatic information at plateau remote. Mosley-Thompson, E., et al, (1987, p.78-79, eng) 43-2743

Polar Ice Coring Office activties in East and West Antarctica. Kuivinen, K.C., et al, (1987, p.84-85, eng) 43-2747

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Ekström Ice Shelf, Antarctica. Thyssen, F., et al, (1988, p.180-183, eng) 43-1963

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—Filchner Ice Shelf

Ice thickness and sea depth from seismic reflection measurements. Determann, J., et al, (1988, p 14-18, eng) 43-1937

Accumulation and ice-core studies on Filchner-Ronne Ice Shelf, Antarctica. Graf, W., et al, (1988, p 23-31, eng) 43-1939

Ice-motion determination by means of satellite positioning systems. Hinze, H., et al, (1988, p.36-41, eng) 43-1941

Glaciological map of Filchner-Ronne Ice Shelf, Antarctica. Swithinbank, C., et al, (1988, p.150-155 + map, eng) 43-1958

Special aspects of the central part of Filchner-Ronne Ice Shelf, Antarctica. Thyssen, F., (1988, p.173-179, eng) 43-1962

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—Georg von Neumayer Station

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—George VI Ice Shelf

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—Great Wall Station

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—Hatherton Glacier

Late Quaternary ice-surface fluctuations of Hatherton Glacier. Bockheim, J.G., et al, (1989, p.229-254, eng) 43-3167

—Hoare, Lake

Sand/ice interactions and sediment deposition in ice-covered lakes. Simmons, G.M., Jr., et al, (1988, p.217-220, eng) 43-1643

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Urey Prize lecture: water on Mars. Squyres, S.W., (1989, p.229-288, eng) 43-4390

—Howe, Mount

Ice runways near the South Pole. Swithinbank, C., (1989, 42p., eng) 43-4598

—Hurd Peninsula

Glaciological studies at Juan Carlos I base, 1987-1988. Eraso, A., (1988, 4p., spa) 43-414

Glaciological studies at Juan Carlos I. base, 1987-1988. (1988, 3p., eng) 43-1055

—King George Island

New place names for areas of King George I. Tokarski, A.K., (1981, p.141-145, eng) 43-1568

Inauguration of King Sejong, Korean antarctic research station. Huh, H.T., et al, (1989, p.141, eng) 43-2805

—Komsomolskaya Station

Isotope studies of ice cores from Komsomolskaya Station, Antarctica. Kotliakov, V.M., et al, (1988, p.97-102, rus) 43-3309

—Labyrinth

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—Law Dome

Analysis of trace elements in the BHQ ice core, Law Dome, Antarctica. Liu, Y.G., et al, (1988, p.297-300, eng) 43-1985

Review of ice rheology for ice sheet modelling. Budd, W.F., et al, (1989, p.107-144, eng) 43-2362

Dynamics of the Law Dome Ice Cap. Etheridge, D.M., (1989, p.46-50 eng) 43-3333

Isotropic and anisotropic flow relations for ice dynamics. Jacka, T.H., et al, (1989, p.81-84, eng) 43-3338

—Lewis Cliff

Iridium in volcanic dust from blue ice fields. Koeberl, C., (1989, p.317-322, eng) 43-2835

—Lützow-Holm Bay

Surface textures of grains from iceberg and submarine sediments in Lützow-Holm Bay. Shimizu, F., et al, (1988, p.129-139, jpn) 43-840

—Marguerite Bay

Preliminary results of marine geologic investigations, Marguerite Bay. Kennedy, D.S., et al, (1988, p.149-151, eng) 43-1632

Sedimentation and Quaternary glacial history of Marguerite Bay. Kennedy, D.S., et al, (1989, p.255-276, eng) 43-3168

—Marshall Valley

Early Martian environments: the antarctic and other terrestrial analogs. Wharton, R.A., et al, (1989, p 147-153, eng) 43-4580

—Mawson Coast

Ice regime and navigation conditions in 1987 along the Mawson Coast. Vanda, IU.A., (1989, p.74-78, rus) 43-4514

—McMurdo Ice Shelf

Modelling antarctic fast-ice growth. Crocker, G.B., et al, (1989, p.3-8, eng) 43-4133

Microbial biomass in ponds of McMurdo Ice Shelf. Howard-Williams, C., et al, (1989, p.125-131, eng) 43-4184

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Changes in photosynthetic metabolism of sea-ice microalgae. Palmisano, A.C., et al, (1988, p.176-177, eng) 43-1641
Requirements for ACV operations in Antarctica. Dibbern, J.S., (1988, p.133-146, eng) 43-1755
Ice thickness in McMurdo Sound. Leventer, A., et al, (1987, p 94-96, eng) 43-2752
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—McMurdo Station
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Hard-surface runways in Antarctica Mellor, M., (1988, 87p., eng) 43-1148
Improved techniques for construction of snow roads and airstrips. Lee, S.M., et al, (1988, 99p., eng) 43-1150
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Design of a replacement science laboratory for McMurdo Station, Antarctica. Haehnle, R.J., (1989, p.1-10, eng) 43-2084
Waste management practices in Antarctica. Sletten, R.S., et al, (1989, p.122-130, eng) 43-2095
Ice wharf at McMurdo Station. Barthelemy, J.L., et al, (1988, p.601-609, eng) 43-2958

—Miers Valley
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—Mill Glacier
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Unloading of the *Mikhail Somov* near Mirnyy Station in the absence of shore ice. Grigor'ev, IU.A., et al, (1988, p.98-102, rus) 43-3842

—Mizuho Plateau
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Snow surface drag of air movement on the Antarctic Plateau, Pt.2. Inoue, J., (1989, p.2219-2224, eng) 43-2492

—Mizuho Station
JARE glaciological research, Queen Maud Land, 1986. Nishio, F., et al, (1988, 49p., eng) 43-540
Closure rate of a 700 m deep bore hole at Mizuho Station, East Antarctica. Naruse, R., et al, (1988, p.100-103, eng) 43-1952
Science of ice. Maeno, N., (1988, 229p., rus) 43-2327
Temperature in a 700 m borehole at Mizuho Station. Okuhira, M., et al, (1988, p.277-285, jpn) 43-2328

—Molodezhnaya Station
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—Norvegia, Cape
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—Novolazarevskaya Station
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—Ongul Sound
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—Queen Maud Land
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—Radok Lake
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Ice-shelf flow at the boundary of Crary Ice Rise, Antarctica. Bindschadler, R.A., et al, (1988, p.8-13, eng) 43-1936
Thinning and grounding-line retreat on Ross Ice Shelf, Antarctica. Thomas, R.H., et al, (1988, p.165-172, eng) 43-1961
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—Ross Sea
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—Rutford Ice Stream
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—Scotia Sea
Bacteria in pack-ice north of Elephant Island (BIOMASS III, October 1986). Zdanowski, M.K., (1988, p.203-216, eng) 43-2770
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Data report for the Siple Coast Project. Bindschadler, R.A., et al, (1988, 102p., eng) 43-3235

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Chromatographic behavior of anions and the first row transition metal ions. Arbogast, J.K., (1988, 150p., eng) 43-413
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Frozen assets of the ice cores. Fifield, R., (1988, p.28-29, eng) 43-1805

Evolution of East Antarctica's ice sheet. Huybrechts, P., et al, (1988, p.52-59, eng) 43-1944

Ice sheet temperature distribution and surface paleotemperature changes. Putikov, O.F., (1989, p.28-36, eng) 43-2044

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Interpretation of the temperature profile, Vostok ice core. Ritz, C., (1989, p.138-144, eng) 43-3349

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Microbiological studies of ice cores from deep holes of Central Antarctica. Abyzov, S.S., et al, (1989, p.86-91, rus) 43-4546

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Numerical modelling of the southern ocean ice cover. Guretskii, V.V., (1987, 39p., rus) 43-1097

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Aerogeophysical survey yields new data in the Weddell Sea. LaBrecque, J., et al, (1988, p.69-70, eng) 43-1615

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Microalgae at the ice edge in the northern Weddell Sea. Fryxell, G.A., (1988, p.166-168, eng) 43-1636

Microheterotrophs in the ice edge zone: an AMERIEZ study. Garrison, D.L., et al, (1988, p.169-171, eng) 43-1637

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Sea-ice investigations during the Winter Weddell Sea Project. Ackley, S.F., et al, (1987, p.88-89, eng) 43-2749

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Development of sea ice in the Weddell Sea. Lange, M.A., et al, (1989, p.92-96, eng) 43-3341

Weather effect on Weddell Sea pack ice and the sea-ice budget. Limbert, D.W.S., et al, (1989, p.104-112, eng) 43-3343

Periodic motions in Weddell Sea pack ice. Rowe, M.A., et al, (1989, p.145-151, eng) 43-3350

Reflection of ocean waves related to ice edge dynamics. Squire, V.A., (1989, p.157-161, eng) 43-3352

Ice motion and deformation in the Weddell Sea. Wadhams, P., et al, (1989, p.178-186, eng) 43-3355

Recent biogenic sedimentation on the antarctic continental margin. Leventer, A.R., (1988, 27p., eng) 43-3521

Elastic properties of frazil ice from the Weddell Sea, Antarctica. Lange, M.A., et al, (1989, p.208-217, eng) 43-3726

Compressive strength of antarctic frazil ice. Richter-Menge, J.A., et al, (1989, p.269-278, eng) 43-3732

Properties of sea ice coastal regime in southeastern Weddell Sea. Ebcken, H., et al, (1989, p.8193-8206, eng) 43-3821

Scouring and bottom morphology on Weddell Sea shelf. Lien, R., et al, (1989, p.43-57, eng) 43-4388

Winter Weddell Sea Project 1986—Physical oceanography during leg V/2. Huber, B.A., et al, (1989, p.97-98, eng) 43-4435

Drifter/modeling program of the Winter Weddell Sea Project 1986. Martinson, D.G., (1989, p.100-102, eng) 43-4436

Passive microwave *in situ* observations of winter Weddell Sea ice. Camiso, J.C., et al, (1989, p.10,891-10,905, eng) 43-4526

Drift of a giant iceberg in the Weddell Sea. Komyshenets, V.I., et al, (1989, p.71-73, rus) 43-4543

—West Antarctica

Observed velocity fluctuations on a major antarctic ice stream. Stephenson, S.N., et al, (1988, p.695-697, eng) 43-339

Lithospheric thickness, antarctic deglaciation history, and ocean basin discretization effects in a global model of postglacial sea level. Peltier, W.R., (1988, p.325-346, eng) 43-785

Geophysical program at Upstream B camp, Siple Coast. Bentley, C.R., et al, (1988, p.109-110, eng) 43-1622

Further firn studies on the Siple Coast of West Antarctica. Alley, R.B., et al, (1988, p.111-112, eng) 43-1623

Dynamics and mass balance of ice stream B. Whillans, I.M., (1988, p.112-113, eng) 43-1624

Interaction between ice stream B and Ross Ice Shelf, Antarctica. Bindschadler, R.A., et al, (1988, p.113-115, eng) 43-1625

Surging potential of ice sheets. Jenssen, D., et al, (1985, 81p., eng) 43-1716

Formation of the west antarctic ice sheet. Lindstrom, D.R., (1988, 71-76, eng) 43-1947

Ice-thickness map of the west antarctic ice streams by radar sounding. Shabtaie, S., et al, (1988, p.126-136, eng) 43-1956

Mass-balance studies of ice streams A, B, and C, West Antarctica, and possible surging behavior of Ice Stream B. Shabtaie, S., et al, (1988, p.137-149, eng) 43-1957

Mass balance of Ice Stream B, West Antarctica. Whillans, I.M., et al, (1988, p.187-193, eng) 43-1965

BAS review of ice streams and ice shelves. Morris, E.M., (1989, p.17-36, eng) 43-2660

Transient behavior of ice stream B and Crary Ice Rise, West Antarctica. Bindschadler, R.A., et al, (1987, p.66-67, eng) 43-2735

Flow of ice streams B and C. Whillans, I.M., (1987, p.67-68, eng) 43-2736

Geophysical studies of the Siple Coast area. Bentley, C.R., et al, (1987, p.68-70, eng) 43-2737

Analysis of Siple Coast firn cores. Alley, R.B., et al, (1987, p.70-71, eng) 43-2738

Numerical study of the west antarctic ice sheet formation. Lindstrom, D.R., et al, (1987, p.71-73, eng) 43-2739

Polar Ice Coring Office activities in East and West Antarctica. Kuivinen, K.C., et al, (1987, p.84-85, eng) 43-2747

Subglacial geology of ice stream P, West Antarctica. Rooney, S.T., (1988, 165p., eng) 43-4524

—West Ice Shelf

Ice shelf topography and structure from space imagery. Stephenson, S.N., et al, (1989, p.162-169, eng) 43-3353

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Icebergs rework shelf sediments to 500 m off Antarctica. Barnes, P.W., et al, (1988, p.1130-1133, eng) 43-1835

Growth rate of crystals within the surface-snow/firn layer in Wilkes Land, East Antarctica. Dahe, Q., et al, (1988, p.121-125, eng) 43-1955

Ice sheet surface topography, eastern Wilkes Land. Goodwin, I.D., (1988, 100p., eng) 43-2144

Firn core data from eastern Wilkes Land. Goodwin, I.D., (1988, 74p., eng) 43-2145

Dating of Late-Pleistocene-Holocene sediments of east antarctic continental shelf. Domack, E.W., et al, (1989, p.277-287, eng) 43-3169

Ice velocity related to ice thickness in Wilkes Land. Young, N.W., et al, (1989, p.192-197, eng) 43-3357

Icebergs rework sediments on antarctic shelf. Barnes, P.W., et al, (1989, p.130-131, eng) 43-4438

—Winds, Bay

Unloading of the *Mikhail Somov* near Mirnyy Station in the absence of shore ice. Grigor'ev, IU.A., et al, (1983, p.98-102, rus) 43-3842

—Wordie Ice Shelf

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—Wright Valley

Evidence for the response of the antarctic ice sheet to climate warming. Prentice, M.L., et al, (1987, p.56-58, eng) 43-2731

Antennas

New England mountain icing climatology. Kyerson, C.C., (1988, 35p., eng) 43-1339

Atmospheric icing and broadcast antenna reflections. Ryerson, C.C., (1988, 13p., eng) 43-1400

Lloyd's mirror at 250 megahertz: footnote on antarctic telemetry. Bering, E.A., III, et al, (1988, p.270-273, eng) 43-1646

Antenna pattern degradation by snow accretion on the reflector surface. Shimba, M., et al, (1988, p.871-874, eng) 43-2278

Modification and deployment of hand-deployed long-life sonobuoys. Horsley, L.E., (1989, p.211-220, eng) 43-3518

Atmospheric icing of masts. Häggström, M., et al, (1989, p.705-711, eng) 43-3770

Final report on continued development of an ice thickness radar system. Iizuka, K., et al, (1986, var. p., eng) 43-4159

Antifreezes

Lethal freezing of Arctic char in the presence of ice. Fletcher, G.L., et al, (1988, p.369-378, eng) 43-1060

Process of making calcium acetate deicing agents. Gancy, A.B., (1984, 10 col., eng) 43-1070

Interaction of antinucleating chemical with ice nucleation bacterium. Watanabe, M., et al, (1988, p.1869-1871, eng) 43-1132

Inactivation of ice-nucleating bacteria by ascorbic acid/copper salt system. Obata, H., et al, (1988, p.2015-2020, eng) 43-1140

Crystal structure of an antifreeze polypeptide. Yang, D.S.C., et al, (1988, p.232-237, eng) 43-1498

Calcium chloride mixture (Verglimit) as an ice retardant for asphalt. Rainiero, J.M., (1988, p.44-53, eng) 43-2212

Depression of soil moisture freezing point as a thermodynamic parameter. Fedorov, V.I., (1989, p.239-249, eng) 43-3102

Arabinoxylans from rye and wheat seed that interact with ice. Kindel, P.K., et al, (1989, p.173-185, eng) 43-3541

Ice nucleation and antifreeze activity due to biological materials. Layton, R.G., et al, (1980, p.275-280, eng) 43-3948

Cold weather concreting using non-freezing agent. Takada, M., et al, (1988, p.168-191, eng) 43-4052

Melting inhibition and superheating of ice by an antifreeze glycopeptide. Knight, C.A., et al, (1989, p.505-507, eng) 43-4107

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Arctic: mankind's unique heritage and common responsibility. Roy, L., (1987, p.345-350, eng) 43-184

High arctic landscapes: comparison and reflexions. Rudberg, S., (1988, p.255-264, eng) 43-928

Arctic interactions: recommendations for an Arctic component in the International Geosphere-Biosphere Programme. (1988, 45p., eng) 43-1831

From the Barents to the Bering. Coming to grips with a circumpolar giant. Armstrong, T., (1988, p.4-5, eng) 43-2374
Arctic lowlands. Carter, L.D., et al, (1987, p.583-628, eng) 43-2415
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Accuracy of a map of the Arctic National Wildlife Refuge coastal plain. Felix, N.A., et al, (1989, p.475-478, eng) 43-4394
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Arctic Ocean
Snow and ice cover pollution in Arctic seas. Smagin, V.M., et al, (1987, p.246-255, rus) 43-28
Establishing stations for monitoring environmental background in the Far North. Krasovskaia, T.M., et al, (1987, p.285-291, eng) 43-132
Environmental assessment of the Alaskan continental shelf (1979, 107p., eng) 43-440
Problems in using floating production units in Arctic conditions. Korppoo, S., et al, (1988, p.507-521, eng) 43-644
Prospects and ways of developing oil and gas deposits in the arctic waters of the U.S.A. and Canada. Moskovich, E.F., (1988, 39p., rus) 43-759
Role of sea ice in the dynamics of the Arctic climatic system. Subbotin, V.V., (1988, p 82-97, rus) 43-762
Arctic and offshore research. (1988, 44p., eng) 43-763
Alaska synthetic aperture radar (SAR) facility project. Carsey, F., et al, (1987, p.593-596, eng) 43-781
Deep-sea research by the R/V *Polarstern* Expedition, 1987. (1988, p.665, 676-678, eng) 43-782
Morphometric characteristics of ice pressure ridges in the Arctic Basin. Grishchenko, V.D., (1988, p.46-55, rus) 43-803
Peculiarities of sea ice desalination in winter. Grishchenko, V.D., (1988, p.55-64, rus) 43-804
Prospects for modeling and predicting the large-scale ocean circulation and its mesoscale variability in the Arctic Ocean and Greenland Sea. Semtner, A.J., Jr., (1987, p.119-121, eng) 43-849
Air/ocean/ice models: working group report. Tipper, R.C., et al, (1987, p.139-142, eng) 43-851
Remote sensing of ice covered seas. Weeks, W.F., et al, (1987, p.327-332, eng) 43-868
Formulas for calculating volume of sea ice. Smirnov, V.I., (1987, p.24-28, rus) 43-888
Loss, decay, and recent drift of ice islands. Sackinger, W.M., et al, (1987, p.53-66, eng) 43-902
Ice feature maps of the Arctic Ocean. LeSchack, L.A., (1987, p.373-383, eng) 43-915
Origin of the permanent transarctic current in the Arctic Ocean. Beliakov, L.N., (1988, p.441-443, rus) 43-1092
isotopes in planktonic and benthic foraminifera from Ocean surface sediments. Aksu, A.E., et al, 01-709, eng) 43-1128
the Arctic climate. Voskresenskiĭ, A.I., ed, ., rus) 43-1174
and keel spacings of the ice bottom surface. et al. p.1-10, eng) 43-1574
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Circulation in the Arctic ... Lewis, E.L., (1989, p.5-7, eng) 43-2901
Properties of ice from Hobson's ice island. Frederking, R., et al, (1988, p.188-198, eng) 43-2921
Probabilistic study of ice island trajectories. Li, F.C., et al, (1988, p.405-414, eng) 43-2940
Expedition Arctic V/1a, 1b, and 2 with RV *Polarstern* 1988. Spindler, M., ed, (1989, 197p., ger) 43-3077
Problems of the Arctic and the Antarctic. Collection of articles, Vol.61. Krutskikh, B.A., ed, (1989, 103p., eng) 43-3226
Pollution of the waters of the northern seas and problems of its investigation. Potanin, V.A., et al, (1989, p.55-61, eng) 43-3229
Velocity spectra and cospectra and integral statistics over Arctic leads. Andreas, E.L., et al, (1979, p.1053-1070, eng) 43-3479
Polar Floats Program. Manley, T.O., et al, (1989, p.186-194, eng) 43-3514
Principles of calculating the temperature and melting of polluted snow-covered ice. Izmailov, V.V., (1989, p.44-53, eng) 43-4369
Wind effect on ice compressions in the arctic seas. Voevodin, V.A., et al, (1988, 10p., eng) 43-4439
Regime of the Arctic—distributional or integrative bargaining. Friedheim, R.L., (1988, p.493-510, eng) 43-4503
Modeling seasonal variations of sea level in the Arctic Ocean. Proshutinskiĭ, A.IU., (1988, p.57-65, rus) 43-4581

Argentina
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Features of cold artesian basins in Chinese permafrost areas. Lin, F., (1988, p.43-47, eng) 43-434

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Ground freezing 88, Vol.1. (1988, 405p., eng) 43-54
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State of the art: engineering design of shafts. Klein, J., (1988, p.235-243, eng) 43-33
State of the art: tunnelling using artificially frozen ground. Harris, J.S., (1988, p.245-253, eng) 43-84
Shaft linings in ground stabilized by freezing. Auld, F.A., (1988, p.255-262, eng) 43-85
Shaft lining and freeze wall deformation. Auld, F.A., (1988, p.263-272, eng) 43-86
Ground freezing with liquid nitrogen. Capitaine, P., et al, (1988, p.273-277, eng) 43-87
Cause and prevention of freezetube breakage. Wang, Z., (1988, p.303-310, eng) 43-91
Structure and stress analysis of seepage resistant linings in shafts sunk with the freezing method. Xu, X., et al, (1988, p.311-318, eng) 43-92
Construction of the Asfordby mine shafts through the Bunter Sandstone by use of ground freezing. Harvey, S.J., et al, (1988, p.339-348, eng) 43-95
Freezing a temporary roadway for transport of a 3000 ton dragline. Maishman, D., et al, (1988, p.357-365, eng) 43-97
Soil freezing for the construction of a drain pump chamber. Murayama, S., et al, (1988, p.377-382, eng) 43-99
Application of the freezing method to the undersea connection of a large diameter shield tunnel. Numazawa, K., et al, (1988, p.383-388, eng) 43-100
Two practical applications of soil freezing by liquid nitrogen. Orth, W., (1988, p.389-394, eng) 43-101
Ground freezing solves a tunnelling problem at Agri Sauro, Potenza, Italy. Balossi Restelli, A., et al, (1988, p.395-401, eng) 43-102
Handbook of soil mechanics and foundation engineering. (1982, 1505p., jpn) 43-299
Strength and creep testing for artificial ground freezing. Hampton, C.N., (1988, 242p., eng) 43-304
Experimental studies of artificial ground freezing systems. Alekseeva, O.I., (1988, p.101-108, rus) 43-533
Classification and laboratory testing of artificially frozen ground (1987). Discussion and author's closure. Youssef, H., (1988, p.137-140, eng) 43-874
Chilling tale: how ground freezing solved tunneling problems. Vasulka, C., et al, (1988, p.48-51, eng) 43-1449
Effects of soil freezing by applying thermopiles. Gorelik, IA.B., et al, (1988, p.14-29, rus) 43-1598
Effects of water speed and temperature on icing in thermal siphons. Vislobitskiĭ, P.A., et al, (1988, p.629-634, eng) 43-2001
Rescue bid for frozen 'mole' in London common. Reina, P., (1989, p.36, eng) 43-2078
Sectioning pipelines with ice locks. Kozitskiĭ, V.I., et al, (1988, p.42-43, rus) 43-2234
Thermal properties of mines in the North. Shurgin, B.V., ed, (1987, 81p., rus) 43-2259
Forecasting and thermal processes during mine excavation by soil freezing. Varenyshev, V.M., et al, (1987, p.14-17, rus) 43-2261
Frozen ground barriers and supply of cold for mine-shaft drilling. Korolev, I.O., (1987, p.27-30, rus) 43-2265
Heat transfer between freezing column and soil. Bondarev, E.A., et al, (1987, p.34-37, rus) 43-2267
Temperature control of frozen ground around mine shafts. Tiutiunnik, P.M., (1987, p.60-67, rus) 43-2271
Freeze crystallization: transportable design case history. Heist, J.A., et al, (1989, p.343-346, eng) 43-2359
Freezing and defrosting of cargo. Lepnev, M.I., et al, (1988, 141p., rus) 43-3063
Artificial permafrost test plot. Matala, H.J., et al, (1989, p.353-364, eng) 43-3111
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Cryogenic structure formation in unconsolidated water-saturated deposits. Ershov, E.D., et al, (1987, p.133-141, rus) 43-3378
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Effects of low temperatures on biological systems. Grout, B.W.W., ed, (1987, 500p., eng) 43-3979
Freezing and cellular organization. Grout, B.W.W., et al, (1987, p.147-173, eng) 43-3981
Low temperature and biological electron microscopy. Skaer, H.B., (1987, p.177-233, eng) 43-3982
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Theory and methods of producing artificial ice. Smorygin, G.I., (1988, 280p., rus) 43-1439
Exploration of the iceformation method applied to a diffuser. LaFleur, R.S., (1988, p.244-250, eng) 43-1464
Impact strength of iceberg and artificial snow ice. El-Tahan, H., et al, (1985, p.365-380, eng) 43-1532
Electrical properties of model ice. Inkpen, S., et al, (1989, p.201-209, eng) 43-2369
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Spray ice construction and simulation Allyn, N., et al, (1989, p.253-262, eng) 43-2634
Ice mechanical properties in relation to Arctic engineering activities. Sackinger, W.M., (1988, p.9-25, eng) 43-3021
Fracture experiments on freshwater and urea model ice. Bentley, D.L., et al, (1988, 152p., eng) 43-3040
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Strength of sea-ice freezing to bottom soils on shelves. Sadovskiĭ, A.V., et al, (1988, p.189-193, eng) 43-144
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Arctic Island abandonment: planning and implementation for Mukluk Island. Anderson, L.M., et al, (1988, p.49-60, eng) 43-711
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Beaufort Sea artificial island erosion data. Gillie, R.D., (1988, 30p. + appends., eng) 43-1818
Technology for offshore development: strengths and weaknesses. Hayley, D.W., (1989, p.140-148, eng) 43-3490
Spray ice barrier at concrete island drilling structure. St. Lawrence, W., (1988, p.135-136, eng) 43-3648
Measurements of load transmission through grounded ice rubble. Marshall, A.R., et al, (1989, p.575-585, eng) 43-3759
Chevron Beaufort test to use spray ice island. (1989, p.23, eng) 43-4084
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Quaternary paleoceanography of the Atlantic Ocean Barash, M.S., (1988, 270p., rus) 43-2811

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Aerosol pollution sources at Barrow, Alaska during winter 1979-80. Lowenthal, D.H., et al, (1985, p.2011-2024, eng) 43-984
Winter variability in arctic haze aerosols at Barrow, Alaska. Halter, B.C., et al, (1985, p.2033-2037, eng) 43-986
On variability of atmospheric CO2 at station Alert. Higuchi, K., et al, (1985, p.2039-2044, eng) 43-987
Atmospheric transport and deposition of trace elements onto the Greenland Ice Sheet. Davidson, C.I., et al, (1985, p.2065-2081, eng) 43-990
Arctic air pollution and large scale atmospheric flows. Iversen, T., et al, (1985, p.2099-2108, eng) 43-992
Transport and chemical composition of the summer aerosol in the Norwegian Arctic. Pacyna, J.M., et al, (1985, p.2109-2120, eng) 43-993
Some antecedents of Arctic haze episode, Mar. 1983. Raatz, W.E., (1985, p.2121-2126, eng) 43-994
Character of pollution aerosols over the Norwegian Arctic, 1983. Raatz, W.E., et al, (1985, p.2135-2142, eng) 43-996
Intrusions of stratospheric air into Alaska's troposphere, March 1983. Raatz, W.E., et al, (1985, p.2153-2158, eng) 43-998
Estimates of sulfur fluxes entering the Arctic troposphere. Rosen, H., et al, (1985, p.2203-2207, eng) 43-1004
Monitoring of the Arctic climate. Voskresenskiĭ, A.I., ed, (1988, 205p., rus) 43-1174
Monitoring of the Arctic climate. Voskresenskiĭ, A.I., (1988, p 6-23, rus) 43-1175
Monitoring atmospheric precipitation and the length of snow persistence in the Arctic. Briazgin, N.N., et al, (1988, p.96-105, rus) 43-1176
Pattern of pollutant transfer into the Arctic troposphere. Karimova, G.U., et al, (1988, p.168-181, rus) 43-1177
Polar atmospheric circulation and chemistry of recent (1957-1983) south polar precipitation. Legrand, M., et al, (1988, p.879-882, eng) 43-1554
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Effect of longwave radiation and ice microphysics on convection. Chen, S., et al, (1988, p.3897-3910, eng) 43-2361
Sea ice-atmosphere signal of the Southern Oscillation, Weddell Sea. Carleton, A.M., (1988, p.379-388, eng) 43-2897
Climate in the North: prospects for change. Hare, F.K., (1988, p.9-14, eng) 43-2899
Variations in the global water budget. Street-Perrott, A., ed, (1983, 518p., eng) 43-3035
Hydrological cycle as simulated by an atmospheric general circulation model. Mitchell, J.F.B., (1983, p 429-442, eng) 43-3039
Effects of Arctic aerosols on a GCM simulation Blanchet, J.P., (1988, p.373-383, eng) 43-3076
Weather effect on Weddell Sea pack ice and the sea-ice budget. Limbert, D.W.S., et al, (1989, p.104-112, eng) 43-3343
Local circulaltion in glacier area of Kunlun Mountains. Kang, X.C., et al, (1989, p.99-104, eng) 43-3447
Relationship between rain and snow acidity and air mass trajectory in eastern France. Colin, J.L., et al, (1989, p.1487-1498, eng) 43-4458
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On the nature of rapidly deepening Canadian East Coast winter storms. Stewart, R.E., et al, (1989, p 87-107, eng) 43-4461
Arctic sea-ice extent and anomalies, 1953-1984. Mysak, L.A., et al, (1989, p.376-405, eng) 43-4563
Frontogenetical forcing in the Midwest snowstorm of Jan. 1982. Moore, J.T., et al, (1988, p.2155-2171, eng) 43-4577

Atmospheric composition
Model for an oceanic salt pump. Broecker, W.S., et al, (1987, p.251-259, eng) 43-211
Time variations of the pollutant concentration background in different natural objects. Evseev, A.V., (1988, p.72-78, rus) 43-686
Discussions on environmental protection in the North. Solomonov, N.G., (1987, 176p., rus) 43-716
Progress in Arctic air chemistry, 1980-1984. Rahn, K.A., (1985, p.1987-1994, eng) 43-982
Five years of air chemistry observations in the Canadian Arctic. Barrie, L.A., et al, (1985, p.1995-2010, eng) 43-983
NASA Mars Project: evolution of climate and atmosphere. Clifford, S.M., et al, (1988, p.1585, 1595-1596, eng) 43-1052
North Atlantic deep water formation: information from ice cores. Oeschger, H., (1985, p 27-31, eng) 43-1153
Changes in the high-latitude ocean as possible causes of atmospheric CO2 variations Siegenthaler, U., (1985, p.37-38, eng) 43-1154
Climatic impact of a change in North Atlantic deep water formation. Rind, D., (1985, p 62-65, eng) 43-1160
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Chemical air mass systems in Alaska. Shaw, G.E., (1988, p.2239-2248, eng) 43-1204
Snowpack and snowmelt chemistry due to atmospheric composition. Semkin, R.G., et al, (1988, p.38-46, eng) 43-1358
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Critique of article on nitrate in antarctic snow. Laird, C.M., et al, (1988, p.233-240, eng) 43-2245
Atmospheric transport of organochlorines to the Arctic Ocean. Hargrave, B.T., et al, (1988, p.480-493, eng) 43-2246
Global climatic change. Houghton, R.A., et al, (1989, p.36-44, eng) 43-2698
Our frail planet in cold, clear view: the South Pole as global laboratory. Lopez, B., (1989, p 43-49, eng) 43-2729
Lead records in antarctic ice: changes in global atmospheric concentrations. Patterson, C., et al, (1987, p 85-87, eng) 43-2748
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Terrain models—a tool for natural hazard mapping. Toppe, R., (1987, p.629-638, eng) 43-1270
Distribution and forecasting of avalanches in northern Japan. Nakamura, T., et al, (1987, p.639-646, eng) 43-1271
Avalanche accidents in the Alps (1975-1985). Valla, F., (1987, p.647-652, fre) 43-1272
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Alpine Meadows avalanche trial: conflicting viewpoints of the expert witnesses. Penniman, D, (1987, p.665-677, eng) 43-1274
Avalanche risk assessment by backcountry skiers. Sutherland, L.A., et al, (1987, p.679-684, eng) 43-1275
Photography of avalanches in Kanaskis Country, Alberta. DeScally, F.A., et al, (1987, p.33-58, eng) 43-1288
Snow properties in actual field conditions and stability analysis. Fukue, M., (1987, p.111-136, eng) 43-1293
Formation of wet avalanches and their forecasting. Kondrashov, I.V., (1987, p.64-69, rus) 43-2500
Methods for forecasting avalanches of various genetic types. Abdushelishvili, K.L., et al, (1987, p.83-87, rus) 43-2503
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Conditions of avalanche formation in Kamchatka. Shalkhutdinov, R.Sh, (1987, p.398-404, rus) 43-2548
Avalanche formation along the highways of the Magadan Oblast'. Bulgakov, A.B, (1987, p.404-412, rus) 43-2549
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Avalanche formation in the Urals. Shvets, L.P., (1987, p.425-428, rus) 43-2553
Glaciology of mountainous regions. Getker, M.I., ed, (1988, 136p, rus) 43-2669
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Possible origin of the formation of slab avalanches. Sargaev, E.M., (1988, p 61-63, rus) 43-2680
Identifying avalanche zones of origin. Sargaev, E.M., (1988, p 63-65, rus) 43-2681
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Avalanche activity in the Zailiyskiy Alatau in 1965-1987. Kolesnikov, E.I., et al, (1988, p.101-106, rus) 43-3263
Winters of the greatest avalanche hazard in the Elbrus Mountain area. Olelnikov, A.D., (1988, p.106-110, rus) 43-3264
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Avalanche formation, movement and effects. Salm, B., ed, (1987, 686p., eng) 43-1214
Snow cover stability on slopes and avalanche dynamics. Voitkovskiĭ, K.F., (1987, p.337-351, eng) 43-1243
Continuum model for calculating snow avalanche velocities. Norem, H., et al, (1987, p.363-379, eng) 43-1246
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Laboratory experiments on the dynamics of powder snow avalanches. Hermann, F., et al, (1987, p 431-440, eng) 43-1252
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Catastrophic landslide deposits in the Karakoram Himalaya. Hewitt, K., (1988, p 64-67, eng) 43-473
Stone avalanche in the Bartuytsete glacier area (Central Caucasus). Dokukin, M.D., (1988, p 348-353, rus) 43-570
Snow properties and processes. Colbeck, S C., (1987, p 145-150, eng) 43-852
Swiss Federal Institute of Snow and Avalanche Research. Dickman, S., (1988, p.330-331, eng) 43-1144
Avalanche near Pralognan-la-Vanoise, France. Favre, J.P., (1988, p.32-37, fre) 43-2354
All-Union Conference on Avalanches, 2nd, Yangiabad, USSR, May 1985. Proceedings. (1987, 439p., rus) 43-2493
Snow avalanche research in the USSR. Bochin, N.A., et al, (1987, p.9-20, rus) 43-2494
Avalanche research in the USSR. Kanaev, L.A., et al, (1987, p.21-28, rus) 43-2495
Avalanche forecasting in the USSR. Kanaev, L.A., (1987, p.28-36, rus) 43-2496
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Time variability of avalanche activity in the USSR. Kakurina, E.G., (1987, p.124-130, rus) 43-2510
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Regional mapping of avalanche hazard. Getker, M.I., et al, (1987, p.180-193, rus) 43-2517
Mapping of avalanche hazard by the "weighted value" method. Sezin, V.M., et al, (1987, p.193-198, rus) 43-2518
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Avalanche mapping in Western Europe. Akif'eva, K.V., (1987, p.214-219, rus) 43-2521
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Economic analysis of snow avalanche research. Khurumova, L N, (1987, p.333-337, rus) 43-2537
Preventive avalanche triggering along railroads of the USSR. Gerber, A.R., (1987, p.337-339, rus) 43-2538
Preventive triggering of snow avalanches. Isaev, A.A., (1987, p.340-342, rus) 43-2539
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Snow avalanches in the volcanic regions of Kamchatka. Volodicheva, N.A., et al, (1987, p.384-391, rus) 43-2546
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Slope stability and erosion in Nepal. Kienholz, H., (1986, p.127-141, eng) 43-2830
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Backscattering

35-GHz helicopter-borne polarimeter radar. Hallikainen, M.T., et al, (1988, p.423-424, eng) 43-1520
Millimeter-wave backscatter measurements of various snow forms. Narayanan, R M, et al, (1988, p.451-452, eng) 43-1528
Enhanced radar scattering from water inclusions in ice Bamber, J.L., (1988, p.293-296, eng) 43-1984
Lidar detection of leads in Arctic sea ice. Schnell, R.C., et al, (1989, p.530-532, eng) 43-3359
Proceedings. Vol.2. Unclassified section. (1988, 738p, eng) 43-3428
Two-stream approximation to radiative transfer in falling snow. Koh, G., (1988, p.463-470, eng) 43-3429
Overview of obscuration in the cold environment. Berger, R.H., et al, (1988, p.537-555, eng) 43-3433
Radar backscatter characteristics of snow covered terrain at 94 gigahertz. Green, A.H., Jr., et al, (1984, p.115-119, eng) 43-3478
Sea-ice characterization measurements needed for remote sensing models. Winebrenner, D.P., et al, (1989, p.149-158, eng) 43-3510
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Millimeter wave snow data collection program description: Snowman I. Green, A.H., et al, (1986, p.273-290, eng) 43-4641
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Population dynamics of bacteria in Arctic sea ice Smith, R.E.H., et al, (1989, p.63-76, eng) 43-1967
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Gas vacuolate bacteria from the sea ice of Antarctica. Staley, J.T., et al, (1989, p.1033-1036, eng) 43-2834
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Environmental influences on the bearing capacity of a road. Final report, Pt.3: Synthesis. Dysli, M., et al, (1984, 118p., fre) 43-778
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Dimensioning frost protection in roads—demi-risk analysis by VTI method. Stenberg, L., (1989, p 831-837, eng) 43-3151
Characteristics of snow and snow-induced building damage in Japan. Suzuya, J, et al, (1989, p.59-68, eng) 43-3552
Snow damage to buildings in Poland, 1968-1987 Wilbik, J., et al, (1989, p.81-84, eng) 43-3554
Bearing capacity of season-freezing and thawing soils by horizontal stress change. Zhusupbekov, A.Z., (1989, p.953-961, eng) 43-3792

See also: Ice cover strength; Snow strength; Trafficability

Beaufort Sea

Beaufort Sea coastal erosion, sediment flux and shoreline evolution. Reimnitz, E., et al, (1988, 22p. + map, eng) 43-103
Survey of ice breakup processes, Canadian Beaufort Sea coastal zone. (1987, 15p. + appends. + maps, eng) 43-217
Winter ice interactions with an Arctic offshore structure. Wright, B., et al, (1986, p.49-73, eng) 43-261
Review of Kulluk's performance after three years' operations in the Beaufort Sea. Pilkington, G.R, et al, (1986, p.145-176, eng) 43-267
Effect of sea ice on Beaufort Sea coastal processes. (1987, 104p. + appends, eng) 43-281
Beaufort Sea geophysical survey: scoping study. Harper, J.R., et al, (1985, 68p. + appends., eng) 43-282
Construction of an arctic barrier island by alternating sea-ice pileup and overwash. Barnes, P.W., et al, (1988, p.180-182, eng) 43-513
Evidence for sea-ice impact on Icy Reef, Beaufort Sea coast. Reimnitz, E., et al, (1988, p.190-192, eng) 43-514
Current and future petroleum activities in Canada. Hnatiuk, J., et al, (1988, p.55-69, eng) 43-612
Beaufort Environmental Monitoring Project 1986-1987, final report. McKnight, B., (1987, 175p, eng) 43-664
Feasibility of submarine transportation of Arctic resources. Molyneux, W.D., et al, (1987, 15p, eng) 43-684
Experience with drillship operations in the U.S. Beaufort Sea. Hinkel, R.M., et al, (1988, p.35-48, eng) 43-710
Arctic Island abandonment planning and implementation for Mukluk Island. Anderson, L.M., et al, (1988, p.49-60, eng) 43-711
Subsea wellhead system for an Arctic caisson rig, Beaufort Sea. Fardy, K.J., et al, (1988, p.403-408, eng) 43-713
Marine science atlas of the Beaufort Sea: geology and geophysics. Pelletier, B.R., ed, (1987, 43p., eng) 43-870
Beaufort Gyre ice trajectories. Cornett, S., (1987, p.11-37, eng) 43-900
Multi-year ice statistics. Spedding, L.G., et al, (1987, p.81-120, eng) 43-904
Beaufort Sea Mesoscale Circulation Study—preliminary results Aagaard, K., et al, (1988, 171p., eng) 43-1284
Analysis of Seasat SAR sea-ice data from the Beaufort Sea. Partington, K.C., (1988, p.413-416, eng) 43-1516
Analysis of sediment data from the Beaufort Sea Shorebase Monitoring Program, 1982-1984. Wainwright, P.F., et al, (1988, 78p. + appends., eng) 43-1702
Permafrost on Arctic coasts of North America. Hunter, J.A., (1988, p.27-34, eng) 43-1721
Remarks on the Arctic Ocean and ice-drifting in Beaufort Sea. Jarlan, G., (1987, p.25-35, fre) 43-2066
Seafloor temperature and thermal conductivity Sellmann, P.V., et al, (1989, 19p., eng) 43-2123
Piezocone penetrometer profiles of bottom sediment. Moran, K., et al, (1989, p.88-97, eng) 43-2203

Beaufort Sea *(cont.)*
Observed strength distributions in some arctic clays. Jefferies, M.G., (1989, p.125-132, eng) 43-2618
Spray ice construction and simulation. Allyn, N., et al, (1989, p.253-262, eng) 43-2634
Floating and bottom founded unit for arctic drilling operations. Jolles, W.H., et al, (1989, p.443-450, eng) 43-2656
Beaufort Sea cased gloryhole drilling. Gilbert, D., et al, (1989, p.451-458, eng) 43-2657
Sea ice sediment entrainment and rafting in the Arctic. Kempema, E.W., et al, (1989, p.308-317, eng) 43-2690
Measurements of ridge sails in the Beaufort Sea. Sayed, M., et al, (1989, p.16-21, eng) 43-2706
Sea ice ridging in the Ross Sea, Antarctica, as compared with sites in the Arctic. Weeks, W.F., et al, (1989, p.4984-4988, eng) 43-2725
Global design load selection for arctic mobile drilling platform. Kamesaki, K., et al, (1988, p.371-384, eng) 43-2937
Probabilistic study of ice island trajectories. Li, F.C., et al, (1988, p.405-414, eng) 43-2940
Mackenzie environmetal monitoring project—Phase II, 1987 activities. (1988, 254p. (Pertinent p.132-133), eng) 43-3061
Beaufort environmental monitoring project, 1987-1988 final report. (1989, 136p., eng) 43-3062
Limit force loads and measurements of pack ice driving forces in the Beaufort Sea. Croasdale, K.R., et al, (1988, p.5-11, eng) 43-3496
Multi-year ice thickness in the Beaufort Sea. Dickins, D., (1989, p.54-64, eng) 43-3712
Beaufort Sea current measurements, Mar.-Aug. 1987. McCullough, D., et al, (1988, 42p., eng) 43-4035
1987 seasonal ice cycle in the Canadian Beaufort Sea. Borstad, G.A., et al, (1988, 57p. + append., eng) 43-4397
Climatic atlas of Alaskan coastal regions and shelf waters. Brower, W.A., Jr., et al, (1988, 3 vols., eng) 43-4476
Late Cenozoic history of the interior basins of Alaska and the Yukon. Carter, L.D., ed, (1989, 114p, eng) 43-4478
Chemical and structural properties of sea ice in the southern Beaufort Sea. Meese, D.A., (1989, 294p, eng) 43-4573

Bering Sea
Sea ice and meteorology of the Bering Sea, 1985. Pease, C.H., et al, (1985, 120p., eng) 43-424
Oceanographic conditions on the northern Bering Sea shelf. 1984-1985. Salo, S., et al, (1988, 55p., eng) 43-516
Outer Continental Shelf Environmental Assessment Program; comprehensive bibliography. (1988, 746p, eng) 43-1833
Meteorological and oceanic forcing of the Alaskan continental shelf seas. Overland, J.E., (1988, p.39-40, eng) 43-3501
Climatic atlas of Alaskan coastal regions and shelf waters. Brower, W.A., Jr., et al, (1988, 3 vols, eng) 43-4476
Two-dimensional coupled ice-ocean model of the Bering Sea Marginal Ice Zone. Kantha, L.H., et al, (1989, p.10,921-10,935, eng) 43-4528

Bibliographies
Annotated bibliography of the Soviet literature on glaciology for 1984. Kotliakov, V.M., et al, (1987, p.185-228, rus) 43-256
Development of A.I. Voeikov's ideas in geocryology. Gavrilova, M.K., (1987, p.229-234, rus) 43-257
Bibliography of snow and ice hazards on highways. Schweiger, A.J., comp, (1987, 110p., eng) 43-753
Radio echo-sounding as a glaciological technique—a bibliography. Macqueen, A.D., (1988, 37p., eng) 43-1806
Rock glacier bibliography. Vitek, J.D., et al, (1987, p.305-344, eng) 43-3059
Alaska geothermal bibliography. Liss, S.A., et al, (1989, 44p, eng) 43-3234
Icing technology bibliography. (1987, 149p., eng) 43-3411
Bibliography of remote sensing, mapping and characterization of sea ice. (1989, 114p., eng) 43-3467
Bibliography on building in cold climates. (1985, 7p, eng) 43-3506
The Arctic. King, H.G.R., comp, (1989, 275p., eng) 43-3605
Architecture of arctic regions: a selected bibliography. White, A.G., (1987, 7p., eng) 43-4387
Bibliography on roofing materials and coatings. (1989, 63p., eng) 43-4608

Bioenvironments
See also: Ecology; Ecosystems

Biology
See also: Cryobiology; Marine biology; Microbiology

Biomass
Polar seas—a biological comparison. Hempel, G., (1987, p.173-189, ger) 43-408
Particle flux in the Weddell Sea related to ice cover. Fischer, G., et al, (1988, p.426-428, eng) 43-418
Limnological investigations of Lake Unter-See Kaup, E.B., et al, (1988, p.101-111, rus) 43-797
Opal and carbon fluxes beneath ice-covered regions of McMurdo Sound. Dunbar, R.B., et al, (1988, p.132-134, eng) 43-1631
Chlorophyll *a* distribution near an advancing ice edge: AMERIEZ, 1986. Smith, W.O., et al, (1988, p.163-164, eng) 43-1635
Carbon fixed by nitrifying bacteria during ice cover in McMurdo Sound. Priscu, J.C., et al, (1988, p.171-172, eng) 43-1638
Antarctic benthic and sea-ice microalgal interactions. Smith, G.A., et al, (1988, p.174-175, eng) 43-1640
Productivity and nutrient cycling of Alaskan tundra. Chapin, F.S., III, et al, (1988, p 693-702, eng) 43-1926
Population dynamics of bacteria in Arctic sea ice. Smith, R.E.H., et al, (1989, p.63-76, eng) 43-1967
Nitrogen uptake in antarctic lakes. Priscu, J.C., et al, (1989, p.335-351, eng) 43-2404
Interannual fluctuations in primary production: meteorological forcing at two subalpine lakes. Goldman, C.R., et al, (1989, p.310-323, eng) 43-4291
Microbial biomass and activity in a subarctic soil ten years after crude oil spills. Sparrow, S.D., et al, (1988, p 304-309, eng) 43-4375

Biota
See also: Ecology

Bitumens
Low-temperature properties of paving asphalt cements. Kandhal, P.S., et al, (1988, 24p., eng) 43-793
Asphalt pavement modifiers. Epps, J., (1986, p.57-59, eng) 43-1500
Lime treatment of asphalt, Parts 1 and 2. Final report. Petersen, J.C., et al, (1987, 70p., eng) 43-1745
Mechanical properties of bitumen. Rosengren, A., (1986, 60p. + append., swe) 43-1878
Asphalt pavement crack control at Fairbanks International Airport. Esch, D.C., et al, (1989, p.59-69, eng) 43-2089
Performance of rubber-modified asphalt pavements in cold regions. Takallou, H.B., et al, (1989, p.81-91, eng) 43-2091
Calcium chloride mixture (Verglimit) as an ice retardant for asphalt. Rainiero, J.M., (1988, p 44-53, eng) 43-2212

Bituminous concretes
Cryogenic cracks on pavements. Kazantsev, V.V., (1985, p.53-60, rus) 43-1657
Development of fracture criterion for asphalt mixes at low temperatures. Dongre, R., et al, (1989, 35p., eng) 43-1822
Low-temperature cracking of asphalt pavements. Haas, R.C.G., et al, (1988, p.290-319, eng) 43-1857
Thermal rippling of asphalt concrete pavements. Roque, R., et al, (1988, p.464-483, eng) 43-1858
Deformation and low temperature features of recycled bituminous concretes. Hadipour, K., et al, (1988, p.615-645, eng) 43-1859
Freeze thaw cycles of asphalt concrete mixtures. Scherocman, J.A., et al, (1986, p.213-236, eng) 43-1860
Materials for pavements at low temperature. Roque, R., et al, (1987, p.130-167, eng) 43-1861
Use of low viscosity asphalts in cold regions. Janoo, V.C., (1989, p.70-80, eng) 43-2090
Effect of concrete structure on its frost resistance. Dvorkin, L.I., et al, (1988, p.652-655, eng) 43-3831
Evaluating thermo-stressed conditions of road asphalt at low temperatures. Gubach, L.S., (1989, p.101-105, rus) 43-3859

Blasting
Self-cooling filling dams. Guletskiĭ, V.V., et al, (1988, p.7-8, rus) 43-23
Drilling and blasting in permafrost at the Wilbur Creek mine. Ziegler, D.R., (1987, p.235-258, eng) 43-3083
Excavating a pit in frozen ground by detonating slit charges. Gorlov, K.V., et al, (1989, p.32-33, rus) 43-3527
Blasting and blast effects in cold regions. Part 3: explosions in ground materials. Mellor, M., (1989, 62p., eng) 43-3651
Parameters for torpedoing frozen rocks in pillarless mining. Sleptsov, A.E., et al, (1989, p.255-259, eng) 43-4468
Machinery for working in permafrost. Rastegaev, I.K., (1986, 215p., rus) 43-4480
See also: Explosion effects; Ice blasting

Blowing snow
Observation of relative humidity jump during snow drifting. Sato, A., et al, (1988, p.397-403, jpn) 43-460
System that monitors blowing snow in forest canopies. Schmidt, R.A., et al, (1987, p.227-230, eng) 43-583
Living snow fence project. (1975, 22p., eng) 43-882
Brief review of snow drifting research in south Sweden. Åkerman, J., (1985, p.42-48, swe) 43-1015
Higher frequency ambient noise in the Arctic Ocean. Lewis, J.K., et al, (1988, p.1444-1455, eng) 43-1209
Measurement of blowing snow properties using optical attenuation devices. Pomeroy, J.W., et al, (1987, p.347-388, eng) 43-1303
Turbulent transport of particles to snow-covered surfaces. Duan, B.Z., (1989, 148p., eng) 43-1924
Pulse-counting technique for the measurement of drifting snow. Tüg, H., (1988, p.184-186, eng) 43-1964
Blowing snow particle detector. Brown, T., et al, (1989, p.167-174, eng) 43-2365
Fence to protect transmission line towers from snow cornices. Nakahara, K., et al, (1988, p.225-230, jpn) 43-2703
Climate of Yukon. Wahl, H.E., et al, (1987, 323p, eng) 43-3081
On the blowing snow in Adelie Land, eastern Antarctica. Wendler, G., (1989, p.261-279, eng) 43-3188
Collection efficiency of a net-type blowing snow trap meter. Abe, O., (1989, p.247-254, jpn) 43-3471
Air temperature, wind speed and blowing snow. Sato, A., et al, (1989, p.255-262, jpn) 43-3472
Magnetic net-type blowing-snow collector. Abe, O., (1989, p.73-80, jpn) 43-3543
Blowing of snow by automobile traffic. Maevskiĭ, A.A., (1987, p.72-79, rus) 43-3659
Redistribution and sublimation loss of the snowpack in the alpine watershed James, E.D., et al, (1985, p.148-151, eng) 43-4278
Model studies of snowdrifts formed by livestock shelters and pond embankments. Jairell, R.L., et al, (1985, p.167-170, eng) 43-4283

Boats
See also: Ships

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Bolivia
—Cordillera Real
Glacier retreat in the Cordillera Real since 1928. Finsterwalder, R., (1987, p.143-153 + map, ger) 43-1680

Booms (equipment)
See also: Ice booms

Borehole instruments
Mechanical core drilling on antarctic ice shelves. Kudriashov, B.B., et al, (1988, p.57-61, rus) 43-794
Permafrost temperatures from a geotechnical hole in the Beaufort Sea. Taylor, A., et al, (1989, p.119-123, eng) 43-2842

Boreholes
Resurvey of bore hole at Dye 3, South Greenland. Hansen, B.L., et al, (1988, p.178-182, eng) 43-161
Geophysical surveys of oil and gas wells in permafrost. Solov'ev, I.G., et al, (1988, p.76-83, rus) 43-1604
Errors in temperature measurements in shallow boreholes. Deviatkin, V.N., et al, (1988, p.101-110, rus) 43-1608
Closure rate of a 700 m deep bore hole at Mizuho Station, East Antarctica. Naruse, R., et al, (1988, p.100-103, eng) 43-1952
Ice temperature measurement in deep holes of Antarctica using a heat sensor embedded in the hole bottom. Vostretsov, R.N., et al, (1989, p.129-136, eng) 43-2058
Temperature in a 700 m borehole at Mizuho Station. Okuhira, M., et al, (1988, p.277-285, jpn) 43-2328
Drilling through thawed layers of frozen rock. Maksimov, A.M., et al, (1989, p.1014-1019, eng) 43-2766
Scientific ocean drilling in ice-laden regions. Foss, G.N., et al, (1988, p.674-685, eng) 43-2964
Thermo-physical aspects of developing mineral resources. Arens, V.Zh., et al, (1988, 336p., rus) 43-3066
Dynamics of the Law Dome Ice Cap. Etheridge, D.M., (1989, p.46-50, eng) 43-3333
Anthropogenic warming in North Alaska?. Michaels, P.J., et al, (1988, p.942-945, eng) 43-3469
Past environmental long-term records from the Arctic. Dansgaard, W., et al, (1989, p.287-317, eng) 43-3693
In situ testing of river-ice strength using a hydraulic borehole jack. Demuth, M.N., et al, (1988, p.181-185, eng) 43-4128
Camp Century hole reopened. Hansen, B.L., et al, (1989, p.315-317, eng) 43-4452

Boring
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Botany
See also: Geobotanical interpretation; Paleobotany; Plants (botany); Vegetation

Bothnia, Bay
Ice-structure interaction model based on observations in the Gulf of Bothnia. Engelbrektson, A., (1989, p.504-517, eng) 43-3752

Bottom friction
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Bottom ice
Ice cover distribution in Vermont and New Hampshire Atlantic salmon rearing streams. Calkins, D.J., et al, (1988, p 85-96, eng) 43-2166
River cooling and frazil and anchor ice formation. Tsang, G., (1988, p.393-416, eng) 43-2182
Frazil and anchor ice and their role in ice cover development. Gosink, J.P., et al, (1989, 14p., eng) 43-4486

Bottom sediment
Acoustic properties of frozen near-shore sediments, southern Beaufort Sea, Arctic Canada. Kurfurst, P.J., et al, (1988, p.197-203, eng) 43-78

Iceberg scoring and sedimentology of Baffin I. continental shelf. Pereira, C.P.G., et al, (1988, p 221-230, eng) 43-1032
Preliminary study of scour under an ice jam Wuebben, J.L., (1988, p.177-192, eng) 43-2171
Piezocone penetrometer profiles of bottom sediment. Moran, K., et al, (1989, p.88-97, eng) 43-2203
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Deformation features of saline soils. Maslov, A.D., (1987, p.237-243, rus) 43-3388
Icebergs rework sediments on antarctic shelf. Barnes, P.W., et al, (1989, p.130-131, eng) 43-4438
Relation of deep sea oxygen isotopic record to global ice volume history. Prentice, M.L., (1989, 567p., eng) 43-4575

Bottom topography
Under-ice topography in the Arctic Basin McLaren, A.S., (1988, p.117-126, eng) 43-178
Geotechnical aspects of seabed pits in the Grand Banks area. Clark, J.I., et al, (1988, p.448-454, eng) 43-1051
Icebergs rework shelf sediments to 500 m off Antarctica. Barnes, P.W., et al, (1988, p.1130-1133, eng) 43-1835
Ice thickness and sea depth from seismic reflection measurements. Determann, J., et al, (1988, p.14-18, eng) 43-1937
Ice and bedrock survey of New Schwabenland and Berkner I. Hoppe, H., et al, (1988, p.42-45, eng) 43-1942
Ice-thickness map of the west antarctic ice streams by radar sounding. Shabtaie, S., et al, (1988, p.126-136, eng) 43-1956
Iceberg/seabed interaction events observed during the DIGS experiment. Lever, J.H., et al, (1989, p.205-220, eng) 43-2629
Scouring and bottom morphology on Weddell Sea shelf. Lien, R., et al, (1989, p.43-57, eng) 43-4388
Icebergs rework sediments on antarctic shelf. Barnes, P.W., et al, (1989, p.130-131, eng) 43-4438
Map of antarctic isostatic rise after deglaciation. Lazarev, G.E., et al, (1989, p.30-33, rus) 43-4540
25 years of surveys from the ice in Alasheyev Bight. Petrov, N.M., (1989, p 79-85, rus) 43-4545
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See also: Hygroscopic water

Boundary layer
Thermodynamics of phase boundaries between ice and water. Alts, T., et al, (1988, p 221-280, eng) 43-922
Features of freezing of water-saturated soils. Gorelik, IA.B., et al, (1988, p.40-53, rus) 43-1599
Continuum description of phase boundary thermodynamics of ice and water pt.4. Alts, T., et al, (1989, p.1-22, eng) 43-2241
Numerical model of the atmospheric boundary layer over a marginal ice zone. Kantha, L.H., et al, (1989, p.4959-4970, eng) 43-2723
Velocity spectra and cospectra and integral statistics over Arctic leads. Andreas, E.L., et al, (1979, p.1053-1070, eng) 43-3479
Effect of snow cover on the Regional Analysis and Forecast System (RAFS) low-level forecasts. Petersen, R.A., et al, (1989, p 253-257, eng) 43-4475
Icing rate in a horizontally inhomogeneous atmospheric boundary layer. Ivanova, L.A., et al, (1988, p.48-56, rus) 43-4586
See also: Interfaces; Turbulent boundary layer

Boundary value problems
Formulation of stationary problems in glacier mechanics. Larina, T.B., (1987, p.17-23, rus) 43-222
Model of the atmospheric boundary layer over sea ice during winter. Overland, J.E., (1988, p.69-72, eng) 43-1496
Boundary value problems of crust freezing. Mikhallov, V.A., (1989, p.365-370, eng) 43-3112
Numerical solutions for freezing and thawing of soils. Shen, M., et al, (1989, p.391-400, eng) 43-3115
Simple approach to air and water drag on sea ice. Myrhaug, D., (1989, p.466-476, eng) 43-3410
Supercooling and superheating effects in phase transitions. Visintin, A., (1985, p.233-256, eng) 43-3480
Fluctuating nature of permafrost boundary movements. Mel'nikov, P.I., et al, (1989, p.412-415, rus) 43-4383

Brazil
Sea level history and evolution of Brazilian coast. Dominguez, J.M.L., et al, (1987, p.115-127, eng) 43-3400

Breakup
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Bridges
Assembling bridge supports from ice platforms. Shevchuk, V.E., (1988, p.13-14, rus) 43-24
Problems of using tie-rods in overlapping metallic bridge spans. Vladimirskii, S.R., et al, (1988, p.14-15, rus) 43-25
Ice forces on inclined model bridge piers. Haynes, F.D., et al, (1984, p.1167-1173, eng) 43-677
Boxlike blocks in heated formwork. Velichko, V.P., et al, (1988, p.30-31, rus) 43-895
Ice engineering for civil work: baseline study. Carey, K.L., et al, (1983, 91p., eng) 43-1312
Imjin River ice boom. Perham, R.E., (1988, 10p., eng) 43-1398
Effect of frost heave on the stability of pile structures. Sobin, G.P., et al, (1985, p.60-66, rus) 43-1658
Dynamic ice breakup control for the Connecticut River near Windsor, Vermont. Petrick, M.G., et al, (1988, p.245-258, eng) 43-2018
Design of the Great Belt western bridge for ice forces. Christensen, F.T., et al, (1989, p.365-376, eng) 43-2647
Dynamic ice loads on the Great Belt Western Bridge. Christensen, F.T., et al, (1989, p.453-466, eng) 43-3748
Transverse static ice pressure on bridge piers. Löfquist, B., (1989, p.568-574, eng) 43-3758
Draining deicing pavings for bridge slabs. Abbruzzese, F., (1989, p.14-19, ita) 43-3978
Construction of the substructure of the new Tokachi Bridge. Ishikawa, H., et al, (1988, p 222-236, eng) 43-4054
Solutions to improve ice and snow control management on road, bridge, and runway surfaces. Kelley, J.R., (1988, p.152-161, eng) 43-4125
See also: Ice crossings; Pontoon bridges; River crossings

Brightness
Gas inclusions in lake ice and radioluminescent temperature of the ice sheet. Bordonskii, G.S., et al, (1985, p 60-66, eng) 43-662
Effects of ice structure on microwave signatures of sea ice. Bowline, C., (1986, p.64-67, eng) 43-1828
Measurements of the properties and brightness temperature of saline ice and snow. Welsh, J.P., et al, (1988, p 623-632, eng) 43-2960
Polar microwave brightness temperatures from Nimbus-7 SMMR. Comiso, J.C., et al, (1989, 82p., eng) 43-4155

Brines
Using brine freezing in combination with NATM under compressed air. Deix, F., et al, (1988, p 321-330, eng) 43-93
Desalting of brines by the spray-cone ice freezing technique. Sosnovskii, A.V., (1987, p.143-149, rus) 43-247
Determining the intensity of ice accretion from brines when using spray-cones. Sosnovskii, A.V., (1987, p.149-154, rus) 43-248
Studying the frost- and brine-corrosion resistance of steel-fiber concretes. Trofimov, B.IA., et al, (1988, p.71-75, rus) 43-565
Marine icing. Lozowski, E.P., (1988, p.43-66, eng) 43-2909
Distribution of brine drainage channels in sea ice. Kawamura, T., (1988, p.219-228, eng) 43-2995

Brittleness
Ways of improving structural-technological methods of preventing brittle failure of steel structure junctions and elements. Kudrin, V.G., et al, (1988, p.5-9, rus) 43-564
Brittle fracture of thin solids under compression. Gol'dshtein, R.V., et al, (1987, p.150-159, eng) 43-605
Fracture mechanics approach to various Arctic steel structures and their reliability analysis. Hagiwara, Y., et al, (1988, p.757-768, eng) 43-660
Asphalt pavement modifiers. Epps, J., (1986, p.57-59, eng) 43-1500
Strength of metals used at low temperatures. Solntsev, IU.P., ed, (1987, 168p., rus) 43-2447
Study of cold resistance of cemented steel for gears. Shchadrichev, E.V., et al, (1987, p.60-65, rus) 43-2454
Brittle destruction of reservoirs and improvement of their durability. Rozenshtein, I.M., et al, (1987, p.94-99, rus) 43-2457
Effects of prestrain on the compressive ductile-to-brittle transition in ice. Kuehn, G.A., et al, (1988, p.109-117, eng) 43-2914
Failure criteria for multi year ice. Masterson, D.M., et al, (1988, p.227-251, eng) 43-2925

Bubbles
Ice wells in the Schirmacher Oasis area. Vtiurin, B.I., (1987, p.103-107, rus) 43-238
Bubble characteristics in relation to freeze-thaw durability of concrete. Gutmann, P.F., (1988, p.361-366, eng) 43-1134
Ice captures methane in bubbles of ancient air. Gribbin, J., (1989, p.38, eng) 43-3285
Air bubbles in ice core from Spitsbergen. Kameda, T., et al, (1989, p.221-226, eng) 43-3464
Transformation of snow to ice and the occlusion of gases. Schwander, J., (1989, p.53-67, eng) 43-3680
Hyperfine bubble structures in ice grown by droplet accretion. Prodi, F., et al, (1980, p.373-384, eng) 43-3955
Thermal and size evolution of sea spray droplets. Andreas, E.L., (1989, 37p., eng) 43-4042
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Bubbling
Elements of floating-debris control systems. Perham, R.E., (1988, 54p. + appends., eng) 43-1808
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Ice control thermal/bubbler plumes: point source configuration. Baddour, R.E., (1988, p.59-71, eng) 43-2980

Building
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Building codes
System of standards in engineering geology. Baulin, V.V., et al, (1988, p.104-108, rus) 43-598
Adaptation of the building construction guidelines to the weight of snow. Primault, B., (1987, p.73-78, fre) 43-1219
Canada readying platform codes as development nears. Adams, P.F., (1988, p.42-43, eng) 43-1738
Designing structures for snow loads. Sack, R.L., (1989, p.303-315, eng) 43-1999
Building codes for avalanche hazard regions. Grakovich, V.F., et al, (1987, p.343-352, rus) 43-2540
Design formulas in building codes for avalanche-resistant structures. Andreev, IU.B., et al, (1987, p.357-362, rus) 43-2542
Conceptual design of multipurpose structure in ice covered sea. Inoue, K., et al, (1988, p.580-590, eng) 43-2956
Ground snow loads for the 1990 national building code of Canada. Newark, M.J., et al, (1989, p.40-49, eng) 43-3550
Standards for snow loads. Apeland, K., (1989, p 385-402, eng) 43-3583
Developing the Eurocode. Judge, C.J., (1989, p.403-412, eng) 43-3584
Changes coming in snow load design criteria. Tobiasson, W., (1989, p.413-418, eng) 43-3585
Snow loads on roofs in East European standards. Zuranski, J.A., (1989, p.419-428, eng) 43-3586
Codes and standards: perspective. O'Rourke, M., (1989, p.507-509, eng) 43-3597
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Frost-protected shallow foundations. Morris, R.A., (1988, 136p. + appends., eng) 43-4165
Architecture and urban design in Sweden. Eek, H., (1988, p.321-346, eng) 43-4251
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Buildings
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Using the permafrost soil stabilization method in foundation construction. Khrustalev, L.N., et al, (1988, p.181-184, eng) 43-142
Need of winter knowledge in the construction industry. Sjökvist, K., (1985, p.54-71, swe) 43-361
Ways of decreasing construction terms and man-hours for electrical substations. Gaft, S.IA., et al, (1988, p.43-44, rus) 43-562
Frost heave in refrigerated buildings. Chapuis, R.P., (1988, p.535-540, eng) 43-705
Arctic construction: working group report. Marvin, E.L., et al, (1987, p.311-314, eng) 43-866
Chemical soil stabilization and the environment. Sokolovich, V.E., (1988, p.233-236, eng) 43-1085
Arctic engineering principles applied to antarctic construction. Myers, G.D., (1988, p.18-19, eng) 43-1712
Foundation design on permafrost with heat pumps. Instanes, B., (1988, p.73-74, eng) 43-1727
Recommendations for design of building walls in arctic climate. (1986, 94p., rus) 43-1887
Unique new cold weather testing facility. Eaton, R.A., (1989, p.335-342, eng) 43-2114
Problems of mobile buildings in the North. (1986, 112p., rus) 43-2195
Low-temperature strength of steel truss junctions. Kozlov, A.G., et al, (1987, p.106-111, rus) 43-2459
Metal buildings for Air Force facilities in Alaska: a report. (1989, 66p., eng) 43-3529
Annual maximum snow depth and snow loads. Izumi, M., et al, (1989, p.25-34, eng) 43-3548
Snow damage to buildings in Poland, 1968-1987. Wilbik, J., et al, (1989, p.81-84, eng) 43-3554
Roof snow loads in deep snow regions. Taylor, D., (1989, p.85-94, eng) 43-3555
Snow load on gable roofs: results from snow load measurements on farm buildings in Norway. Höibö, H., (1989, p.95-104, eng) 43-3556
Simulation to predict snow sliding and lift-off on buildings. Lepage, M.F., et al, (1989, p.128-141, eng) 43-3559

Buildings (cont.)
Wind tunnel modeling of snow drifting—applications to snow fences. Isyumov, N., et al, [1989, p.210-226, eng] 43-3566
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Building design for heavy snow areas. Paine, J.C., [1989, p 483-492, eng] 43-3592
Perspective on analytical methods. Irwin, P.A., [1989, p 499-501, eng] 43-3594
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Air convection and hygrothermal performance of buildings. Ojanen, T., et al, [1989, 106p., fin] 43-3965
Snow survey water supply forecasting program. Palmer, P.L., [1988, p.43-51, eng] 43-3995
Thermal effect on high-rise buildings in cold regions. Lee, Y., et al, [1989, p.117-122, eng] 43-4208
Thermal engineering and structural foundations. Farouki, O.T., [1989, p.257-262, eng] 43-4220
Review of Harbin's challenge to winter. Liu, D., [1988, p.113-129, eng] 43-4240
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Modeling ice restraint forces in an ice boom. Perham, R.E., [1988, p.198-206, eng] 43-3033
Ice flow and blockage investigation of shrouded propellers. Laskow, V., [1988, var.p., eng] 43-3204

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Cables (ropes)
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Analysis of a caisson retained island. Evgin, E., et al, [1988, p 68-76, eng] 43-1277
Observed strength distributions in some arctic clays. Jefferies, M.G., [1989, p.125-132, eng] 43-2618

Calorimeters
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Calving
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Biotic provinces in modern Amundsen Sea sediments: implications for glacial history. Kellogg, D.E., et al, [1988, p.154-156, eng] 43-1633
New front of Filchner Ice Shelf. Skvarca, P., [1988, p.20-24, spa] 43-2598
Ice fronts and icebergs in the Ross and Weddell seas. Jacobs, S.S., [1987, p.91-94, eng] 43-2751
Calving ice walls. Hughes, T., [1989, p.74-80, eng] 43-3337
Drift of a giant iceberg in the Weddell Sea. Komyshenets, V.I., et al, [1989, p.71-73, rus] 43-4543

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Canadian Arctic islands; program and abstracts. [1988, 110p., eng] 43-1452
Statistical assessment of ice jam formation in Canadian rivers. Sarraf, S., [1988, p.327-344, eng] 43-2179
Forecasting of ocean waves and wind. Hodgins, S.L.M., et al, [1988, 356p., eng] 43-2258
Arctic climate change impacts: summary and proposals for action. [1986, 29p., eng] 43-2581
Proceedings. Climate change impacts in the Canadian Arctic. [1986, 171p., eng] 43-2582
Impacts of CO2 doubling on snow and ice in the Canadian Arctic. Barry, R.G., [1986, p.54-66, eng] 43-2583
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Post-glacial sea level changes in Atlantic Canada. Scott, D.B., et al, [1987, p.87-96, eng] 43-3398
Cold ocean hydrocarbon resources. Clark, J.I., [1989, p.119-139, eng] 43-3489
Winter policies, plans and designs: the Canadian experience. Pressman, N., [1988, p.35-64, eng] 43-4237

—Alberta
Snow pillows in the mountainous areas of Alberta Coles, G.A., et al, [1987, p.193-206, eng] 43-1296
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—Alberta—Dome Glacier
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Radiation balance of alpine tundra in Canadian Rockies. Bailey, W.G., et al, [1989, p.126-134, eng] 43-4086
Summer energy balance of alpine tundra in Canadian Rockies. Bowers, J.D., et al, [1989, p.135-143, eng] 43-4087

—Alberta—Sunwapta Pass
Rock glacier stream discharge in Canadian Rockies. Gardner, J.S., et al, [1987, p.161-174, eng] 43-3053

—British Columbia
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—Hudson Bay
Energy balance of the intertidal zone of western Hudson Bay I: ice-free period. Silis, A., et al, [1989, p.327-345, eng] 43-4560
Energy balance of the intertidal zone of western Hudson Bay II: ice-dominated periods and seasonal patterns. Rouse, W.R., et al, [1989, p.346-366, eng] 43-4561
Factors affecting fast-ice consolidation in southeastern Hudson Bay, Canada. Larouche, P., et al, [1989, p 367-375, eng] 43-4562

—Labrador
Hindcast study of iceberg drift on the Labrador Coast. Banke, E.G., et al, [1984, 161p., eng] 43-448
KRMS GEOSAT-LIMEX '87 quick look report. Farmer, L.D., et al, [1988, 47p., eng] 43-707
Radiocarbon date list 3: Labrador and northern Quebec, Canada. Andrews, J.T., comp, [1989, p.1-12, eng] 43-3426

—Labrador Sea
Sea ice remote sensing of the Canadian East Coast. McNutt, L., et al, [1988, p 421-422, eng] 43-1519

—Mackenzie River
Ice jams, release and surge wave propagation, Mackenzie River. Parkinson, F.E., et al, [1988, p.209-223, eng] 43-2173

—Newfoundland—Bonavista Peninsula
Glaciation of Bonavista Peninsula, northeast Newfoundland. Brookes, I.A., [1989, p.2-18, eng] 43-3358

—Newfoundland—Grand Banks
Geotechnical aspects of seabed pits in the Grand Banks area. Clark, J.I., et al, [1988, p.448-454, eng] 43-1051

—Northwest Territories
Economics of piped services in Northwest Territories hamlets. Feilden, R.E.K., et al, [1988, p.734-748, eng] 43-1335
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Environmental impact assessment and review in the North. Duffy, P.J.B., [1988, p.5-8, eng] 43-2304

—Northwest Territories—Adam's Island
Constitutive laws for sea ice at Adam's I. Montemurro, M.P., et al, [1989, p.367-376, eng] 43-3741

—Northwest Territories—Alert
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—Northwest Territories—Amundsen Gulf
Beaufort environmental monitoring project, 1987-1988 final report. [1989, 136p., eng] 43-3062

—Northwest Territories—Arctic Archipelago
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Heat flow profile across the Sverdrup Basin, Canadian Arctic Islands. Jones, F.W., et al, [1989, p.171-180, eng] 43-4604

—Northwest Territories—Axel Heiberg Island
Atmospheric transport of organochlorines to the Arctic Ocean. Hargrave, B.T., et al, [1988, p.480-493, eng] 43-2246

—Northwest Territories—Baffin Bay
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—Northwest Territories—Baffin Island
Ice-sheet dynamics of Baffin Island and Hudson Strait. Miller, G.H., et al, [1988, p.116-136, eng] 43-2012
Implications of warm weather during Canadian Arctic winter. Gilbert, R., et al, [1988, p.395-403, eng] 43-2480
Radiocarbon date list 5: Baffin Island, N.W.T., Canada. Andrews, J.T., comp, [1989, p.13-85, eng] 43-3427

—Northwest Territories—Banks Island
Ground ice in moraine of Banks Island. French, H.M., et al, [1988, p.19-30, eng] 43-3673

—Northwest Territories—Caribou Hills
Seeded species success and influence at abandoned oil rig in Canada. Younkin, W.E., et al, [1987, p.566-571, eng] 43-208

—Northwest Territories—Dismal Lakes
Glacial geology in uranium exploration, Dismal Lakes, NWT, Canada. Steele, K.G., [1988, p.183-194, eng] 43-1033

—Northwest Territories—Ellesmere Island
Structure and growth of Arctic ice shelves and ice islands. Jeffries, M.O., [1987, p.39-51, eng] 43-901
Surface waveforms on the Ellesmere Island ice shelves and ice islands. Holdsworth, G., [1987, p.385-403, eng] 43-916
Air pollution trends in the Canadian High Arctic. Barrie, L.A., et al, [1985, p.2055-2063, eng] 43-989
Mechanical and physical properties of old and brackish ice. Jeffries, M.O., et al, [1988, p.177-187, eng] 43-2920
Relative sea level chronology in Arctic Canada. Retelle, M.J., et al, [1989, p.113-125, eng] 43-4085
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—Northwest Territories—Great Slave Lake
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—Northwest Territories—Griper Bay
Oil spill under multi-year ice. [1983, 34p., eng] 43-3621

—Northwest Territories—Hay River
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—Northwest Territories—Lancaster Sound
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—Northwest Territories—Mackenzie River Delta
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—Northwest Territories—Nares Strait
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—Northwest Territories—Norman Wells
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Ice jam on Mackenzie River at Norman Wells. Rivard, G., [1985, 188p., eng] 43-3622

—Northwest Territories—Queen Elizabeth Islands
Ice-dominated shores of Canadian Arctic islands. Taylor, R.B., et al, [1987, p.33-48, eng] 43-3200

—Northwest Territories—Rankin Inlet
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—Northwest Territories—Resolute
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—Northwest Territories—Yellowknife
Land development in Yellowknife—a case history. King, G.D.S., [1988, p.689-699, eng] 43-1333

—Ontario—Turkey Lakes
Snowpack and snowmelt chemistry due to atmospheric composition. Semkin, R.G., et al, [1988, p.38-46, eng] 43-1358

—Quebec
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—Quebec—St. Lazare
Water escape fissures resembling ice-wedge casts in outwash. Burbridge, G.H., et al, (1988, p.33-40, eng) 43-3702

—Rocky Mountains
Snowpack and atmospheric conditions, southern Canadian Rockies. Thyer, N.H., et al, (1987, p 435-454, eng) 43-1306

—Saint Lawrence Estuary
Ice rafting along the shores of the upper Saint Lawrence Estuary. Dionne, J.C., (1987, p.67-96, fre) 43-3201
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—Saskatchewan—Blaine Lake
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Ice regime reconnaissance, Yukon River, Yukon. Gerard, R., et al, (1984, p.1059-1073, eng) 43-670
Ice cover and stream flow in the Yukon River, 1985/86. Alford, M.E., et al, (1988, 36p., eng) 43-1440

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Changes in the high-latitude ocean as possible causes of atmospheric CO2 variations. Siegenthaler, U., (1985, p.37-38, eng) 43-1154
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Chemical undermining in foundations of dams. Tetel'min, V.V., et al, (1987, p.38-42, rus) 43-1391
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Scanning electron microscopy of ice in cement paste. Monteiro, P.J.M., et al, (1989, p.306-314, eng) 43-2894
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Cements
Alkalinization—the new chemical method of stabilizing water—saturated loess and clayey soils. Volkov, F.E., et al, (1988, p.15-29, rus) 43-599
Influence of water-saturation techniques on temperature deformations of freezing concrete. Almazov, V.O., et al, (1986, p.162-169, rus) 43-733
Cold set concrete. Bunch, R., (1987, p.12-15, eng) 43-968
Chemical soil stabilization and the environment. Sokolovich, V.E., (1988, p.233-236, eng) 43-1085
Bubble characteristics in relation to freeze-thaw durability of concrete. Gutmann, P.F., (1988, p.361-366, eng) 43-1134
Effect of ice formation on the elastic moduli of cement paste and mortar. Wang, J.A., et al, (1988, p.874-885, eng) 43-1444
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Effect of low temperature and deicing chemicals on cement paste. Fujii, T., et al, (1988, p.66-91, eng) 43-4048
Frost damage to concrete and pore structure of cement paste. Kamada, E., et al, (1988, p.92-114, eng) 43-4049
See also: Soil cement

Chambers
See also: Cloud chambers; Cold chambers; Test chambers; Wind tunnels

Channels (waterways)
Capacity of ice-covered canals. Gladkov, E.G., et al, (1987, p.539-542, eng) 43-137
Flow resistance due to floating partial ice covers. Arisz, H., et al, (1987, p.178-191, eng) 43-400
Slushflow activity in the Rana district, North Norway. Hestnes, E., et al, (1987, p.317-330, eng) 43-1241
Ice formation in channels with year-round service. Batalova, N.N., (1988, p.89-93, rus) 43-1785
Ice cover distribution in Vermont and New Hampshire Atlantic salmon rearing streams. Calkins, D.J., et al, (1988, p.85-96, eng) 43-2166
Sand and gravel as canal subgrade to prevent frost heave. Zhu, Q., et al, (1988, p.400-408, chi) 43-2854
Measurements of ice-induced vibrations of channel markers. Nordlund, O.P., et al, (1988, p.537-548, eng) 43-2952
Full-scale measurements of the dynamic properties of a channel marker. Turunen, R., et al, (1988, p.549-560, eng) 43-2953
Laboratory study on ice formation in navigation channels. Ettema, R., et al, (1988, p.1-11, eng) 43-2974
Hydraulic conditions in open channels with ice cover. Majewski, W., et al, (1988, p.112-121, eng) 43-2985
Flow resistance for partially ice-covered channels. Arisz, H., et al, (1988, p.131-141, eng) 43-2987
Numerical model of ice regime analysis in a canal. Jin, G.H., et al, (1988, p.261-270, eng) 43-2999
Heat transfer between water and ice cover. Matoušek, V., et al, (1988, p.367-377, eng) 43-3009
Effects of an ice cover on flow in a movable bed channel. Wuebben, J.L., (1988, p.137-146, eng) 43-3027
Ice jams at a lake: the situation at Hay River, Northwest Territories, Canada. Gerard, R., et al, (1988, p.157-167, eng) 43-3029
Laboratory investigation of ice jam topography in a sinuous channel. Yoon, S.E., et al, (1988, p.168-179, eng) 43-3030
Microcomputer data for snow and wind engineering. Soligo, M.J., et al, (1988, p.162-175, eng) 43-4126
Ice formation in frequently transited navigation channels. Huang, H.P., (1989, 227p., eng) 43-4574

Charge transfer
Freezing of supercooled water drops in ionized air. Dubrovich, N.A., (1988, p.851-855, eng) 43-4548

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Chemical analysis
On the distribution of acidity within clouds as a function of droplet size. Rancourt, D.L., et al, (1987, p.54-60, eng) 43-389
Cryo-oscillations. Belousov-Zhabotinskii (BZ) oscillations in frozen and undercooled solution. Vajda, T., et al, (1988, p.661-665, eng) 43-831
Comment on the paper "The cometary breakup hypothesis re-examined". Boutron, C.F., (1988, p.215-220, eng) 43-876
Regarding the validity of polar trace metal data: a response. LaViolette, P.A., (1988, p.221-224, eng) 43-877
Characterization of aircraft-collected particles in Alaskan Arctic aerosol. Sheridan, P.J., et al, (1985, p.2159-2166, eng) 43-999
Structure and chemistry of snow samples. Page, Y., (1987, p.85-86, eng) 43-1221
Analytical method for determining tetrazene in soil. Walsh, M.E., et al, (1988, 22p., eng) 43-1397
Environmental Quality R&D Symposium, 13th, Nov. 1988. (1988, 575p., eng) 43-1809
Analysis of trace elements in the BHQ ice core, Law Dome, Antarctica. Liu, Y.G., et al, (1988, p.297-300, eng) 43-1985
Snow and ice chemistry of mountain glaciers in China. Wang, P., (1988, p.269-272, chi) 43-2867
Trace analysis of iron in water and snow. Golimowski, J., (1989, p.481-492, eng) 43-3247
Dating by physical and chemical seasonal variations and reference horizons. Hammer, C.U., (1989, p.99-121, eng) 43-3683
Trace metals and organic compounds in ice cores. Peel, D.A., (1989, p.207-223, eng) 43-3689
Ionic deposits in polar ice cores. Clausen, H.B., et al, (1989, p.225-247, eng) 43-3690
Long-term changes in deep ice core chemistry. Delmas, R.J., et al, (1989, p 319-341, eng) 43-3694
Long-term environmental records from antarctic ice cores. Lorius, C., et al, (1989, p.343-361, eng) 43-3695
Studies of polar ice: insights for atmospheric chemistry. McElroy, M.B., (1989, p.363-377, eng) 43-3696
Results of 1986 snow acidity sampling in California. Roos, M., (1988, p.162-165, eng) 43-4009
Evaporation preconcentration of trace elements in rainwater for inductively coupled plasma emission spectrometry. Nishikawa, M., et al, (1985, p.659-664, jpn) 43-4190
pH of mountain snowfall in Montana 1981-1984. Farnes, P.E., (1985, p.72-75, eng) 43-4270
Acidic deposition and snowpack chemistry at a Sierra Nevada site. Berg, N., et al, (1985, p.76-87, eng) 43-4271
Snowpack chemistry in southcentral British Columbia. Kotturi, M.S., et al, (1985, p 88-98, eng) 43-4272
Comparative chemistry of background and polluted snowfall in Scotland. Landsberger, S., et al, (1989, p.395-401, eng) 43-4342
Late-winter characteristics of the Fairbanks alluvial aquifer. Lilly, M.R., et al, (1987, p.127-140, eng) 43-4429

Chemical analysis *(cont.)*
Implications of hydrochloric acid in ice for ozone depletion. Wolff, E.W., et al, (1989, p.487-490, eng) 43-4430
Pesticides in Canadian arctic snow. Gregor, D.J., et al, (1989, p.561-565, eng) 43-4498
Past climate and environment: antarctic records. Lorius, C., (1984, p.21-24, fre) 43-4536
Lead determination in ice by laser atomic fluorescence spectrometry. Bolshov, M.A., et al, (1989, p.1758-1762, eng) 43-4537
Chemical and structural properties of sea ice in the southern Beaufort Sea. Meese, D.A., (1989, 294p., eng) 43-4573
Biogeochemical survey of streams in Alaskan mountains and foot-hills. Lock, M.A., et al, (1989, p.499-521, eng) 43-4603
Low concentration measurement capability in trace analysis. Grant, C.L., et al, (1989, 21p., eng) 43-4607
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Chemical composition
Regularities governing the formation of composition and properties of loess in southern East Siberia and northern Mongolia. Riashchenko, T.G., (1988, p.98-106, rus) 43-596
Octanol-water partition coefficients for organophosphonates. Britton, K.B., et al, (1988, 24p., eng) 43-1338
Radioactive fall-out on alpine glaciers from the Chernobyl nuclear accident. Ambach, W., et al, (1987, p.123-129, eng) 43-1678
Excess and deficit of sulfate in polar snow. Gjessing, Y., (1989, p.155-160, eng) 43-2082
Carbon cycle in anoxic marine sediments Alperin, M.J., (1989, 241p., eng) 43-2133
See also: Atmospheric composition; Frozen ground chemistry; Geochemistry; Ice composition; Snow composition; Soil chemistry; Soil composition; Water chemistry

Chemical ice prevention
Contribution of chemistry to road trafficability. Dalcq, P., et al, (1988, p.61-63, itz) 43-1064
Anti-icing/deicing capability for U.S. Army helicopters part 1. Werner, J.B., (1975, 253p., eng) 43-1789
Comparing chemical deicers. (1988, p.29-30, eng) 43-2157
CMA and salt mix cuts corrosion. (1988, p.32, eng) 43-2158
Deicing chemicals and snow control. (1988, 53p., eng) 43-2205
Comparative study of chemical deicers. McElroy, A.D., et al, (1988, p.1-11, eng) 43-2206
Comparison of calcium magnesium acetate and rock salt as deicers. McElroy, A.D., et al, (1988, p.12-19, eng) 43-2207
Effects of calcium magnesium acetate on pavements and motor vehicles. Slick, D.S., (1988, p.27-30, eng) 43-2209
Effect of deicing chemicals on reinforced concrete. Nadezhdin, A., et al, (1988, p.31-37, eng) 43-2210
Freeze protection of paved surfaces by phase-change material. Thomas, W.C., et al, (1988, p.195-200, eng) 43-3819
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Calcium magnesium acetate in winter maintenance. Fritzsche, C., (1989, p.78-79, eng) 43-4082
Wet de-icing salts in winter road maintenance. Steinhauser, L., (1989, p.139-141, ger) 43-4539
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Chemical properties
Atmospheric transport of organochlorines to the Arctic Ocean. Hargrave, B.T., et al, (1988, p 480-493, eng) 43-2246
As pure as the driven snow?. Davies, T., (1989, p.45-49, eng) 43-3287
Arctic haze: air pollution in polar regions. Heintzenberg, J., (1989, p.50-55, eng) 43-3832
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Relationship between rain and snow acidity and air mass trajectory in eastern France. Colin, J.L., et al, (1989, p.1487-1498, eng) 43-4458

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Chemistry
Evaporation of chemical agents from ice and snow. Leggett, D.C., (1988, 10p., eng) 43-425
Decontamination of chemical agents on the winter battlefield. Parker, L.V., (1988, 48p., eng) 43-427
Snow volume comparisons for atmospheric deposition monitoring. Marks, D., et al, (1988, p.124-135, eng) 43-4004

Chile
Glaciological research in southern Chile, 1986. Reed, D.J., et al, (1988; p 392-405, eng) 43-2003

—Casa Pangue Glacier
Trees on moraines as means to date glacial movement. Veblen, T.T., et al, (1989, p.144-155, eng) 43-4088

—Solar Glacier
Morphology, surface characteristics, and flow velocity of Solar Glacier, Patagonia. Aniya, M., et al, (1988, p 414-421, eng) 43-2482

China
On the zoning of snow damage in China. Hu, R., et al, (1987, p.1-12, chi) 43-476
Introduction of Nowcasting system development in China. Liang, B.J., et al, (1987, p.331-334, eng) 43-2253
Hail problem and some studies of hailstorms in China. Wang, A.S., (1987, p.361-364, eng) 43-2256
Seasonal snow resources and their recent secular variations in China. Li, P., (1988, p.1808-1812, eng) 43-2777
Seasonal depth hoar and avalanches in Western China. Wang, Y.L., (1988, p.173-180, chi) 43-2851
Prospects for glaciology in China in the year 2000. Xie, Z.C., (1988, p.215-220, chi) 43-2860
State of the art and prospects of geocryology in China. Cheng, G.D., et al, (1988, p.221-227, chi) 43-2861
Studies on glaciers in China in the last 30 years. Huang, M.H., et al, (1988, p.228-237, chi) 43-2862
Relation of glacier oscillation to climatic changes in China. Ren, B.H., (1988, p 244-249, chi) 43-2863
State of research on hydrology of glaciers in China in the last thirty years. Yang, Z.N., (1988, p.256-261, chi) 43-2865
Inventory of regional glaciers in China. Wang, Z.T., (1988, p.262-268, chi) 43-2866
Snow and ice chemistry of mountain glaciers in China. Wang, P., (1988, p.269-272, chi) 43-2867
Research on snow cover, snowdrifts and avalanches in China. Wang, Z.L., (1988, p.273-278, chi) 43-2868
Studies on ice conditions in rivers, lakes and seas in China. Chen, Z.T., (1988, p.279-283, chi) 43-2869
Glacial mud flows and outburst floods from icebound lakes in China. Xu, D.M., et al, (1988, p.284-289, chi) 43-2870
Review and prospects of regional geocryology in China. Cheng, G.D., (1988, p.296-299, chi) 43-2872
Research on periglacial geomorphology in China. Cui, Z.J., et al, (1988, p.304-311, chi) 43-2873
Theoretical study on thermodynamics of frozen ground in China. Ding, D.W., (1988, p.312-318, chi) 43-2874
Permafrost problems in road engineering. Huang, X.M., (1988, p.344-351, chi) 43-2880
Review and prospect of snow and ice remote sensing in China. Zeng, Q.Z., (1988, p.352-355, chi) 43-2881
Advances in glacier surveying and mapping in China. Chen, J.M., (1988, p.356-361, chi) 43-2882
Geophysical prospecting of glaciers and permafrost in China. Huang, Y.Z., (1988, p.364-368, chi) 43-2884
General view of ice mechanics in China. Shen, W., et al, (1988, p.378-389, eng) 43-3010

—Bohai Bay
Flexural properties of eastern Bohai one-year sea ice. Shen, W., et al, (1988, p.199-205, eng) 43-2922

—Bohai Gulf
Dynamic model of sea ice forecast in the Bohai Sea. Liu, X.S., et al, (1988, p.282-292, eng) 43-3001

—Bohai Sea
Experimental study on properties of multi-layer sea ice of Bohai Sea. Li, H.S., et al, (1989, p 43-46, eng) 43-2608
Elastic coefficients of Bohai Sea ice. Shen, W., et al, (1989, p.321-331, eng) 43-3737
Primary study of ice forces on the structures in Bohai Sea. Ji, X.H., et al, (1989, p.537-545, eng) 43-3755
Characteristics of Bohai ice load analysis method. Wang, Q.J., et al, (1989, p.606-612, eng) 43-3762

—Dunde Ice Cap
Wisconsin/Würm glacial stage ice in the subtropical Dunde Ice Cap, China. Thompson, L.G., et al, (1988, p.517-523, eng) 43-4566

—Gongba Glacier
Hydrologic characteristics of the Gongba Glacier in the Mount Gongga area. Cao, Z., (1988, p.57-65, chi) 43-468

—Harbin
Review of Harbin's challenge to winter. Liu, D., (1988, p.113-129, eng) 43-4240

—Heilongjiang Province
Study on ice static pressure on ice cover in reservoir. Sui, X.Z., (1988, p.483-492, eng) 43-2947

—Huola River
Interaction between permafrost and groundwater Wang, B.L., et al, (1988, p.143-150, chi) 43-2849

—Kunlun Mountains
Sino-Japanese Joint Glaciological Expedition to West Kunlun Mt. Zheng, B., et al, (1988, p 84-89, chi) 43-471
Surveying and mapping of Chongce Ice Cap in the West Kunlun Mountains. Chen, J.M., et al, (1989, p.1-5, eng) 43-3434
Thickness and subglacial topography of Chongce Ice Cap. Zhu, G.C., (1989, p.7-14, eng) 43-3435
Ice coring in Kunlun Mountains. Nakawo, M., et al, (1989, p.15-19, eng) 43-3436
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Characteristics of ice formation in the West Kunlun Mountains. Xie, Z.C., et al, (1989, p.29-35, eng) 43-3438
Mass balance of Chongce Ice Cap. Ageta, Y., et al, (1989, p.37-43, eng) 43-3439
Movement and variations of glaciers in Kunlun Mountains. Chen, J.M., et al, (1989, p.45-48, eng) 43-3440
Conditions of glacier development and some glacial features in the West Kunlun Mountains. Zhang, W.J., et al, (1989, p.49-58, eng) 43-3441
Microorganisms in glacier surfaces. Kohshima, S., (1989, p.59-65, eng) 43-3442
Summer meteorological conditions in Kunlun Mountains. Ohata, T., et al, (1989, p.67-76, eng) 43-3443
Summer weather and climate in Kunlun Mountains. Kang, X.C., et al, (1989, p.77-81, eng) 43-3444
Glacier radiation balance in Kunlun Mountains. Xie, Y.Q., et al, (1989, p.83-87, eng) 43-3445
Glacier heat and water fluxes in Kunlun Mountains. Takahashi, S., et al, (1989, p.89-98, eng) 43-3446
Local circulaltion in glacier area of Kunlun Mountains. Kang, X.C., et al, (1989, p.99-104, eng) 43-3447
Permafrost and ground water in Kunlun Mountains. Aoki, Y., et al, (1989, p.105-110, eng) 43-3448
Runoff in glacier region of Kunlun Mountains. Cao, Z.T., et al, (1989, p.111-117, eng) 43-3449
Hydrogeochemistry of surface waters in Kunlun Mountains. Sheng, W.K., (1989, p.119-122, eng) 43-3450
Stream types and floods in the Kunlun Mountains. Ai, S.T., (1989, p.123-127, eng) 43-3451
Glacial geomorphology of Kunlun Mountains. Ma, Q.H., et al, (1989, p.139-144, eng) 43-3453
Patterned ground in Kunlun Mountains. Iwata, S., et al, (1989, p.145-152, eng) 43-3454
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Features of permafrost in the West Kunlun Mountains. Li, S.D., et al, (1989, p.161-167, eng) 43-3456
Lacustrine deposits and lake evolution in Kunlun Mountains. Li, S.J., et al, (1989, p.169-176, eng) 43-3457
Basal till and tephra layers in Kunlun Mountains. Zheng, B.X., et al, (1989, p.177-186, eng) 43-3458
Distribution and ages of volcanoes in Kunlun Mountains. Liu, J.Q., et al, (1989, p.187-190, eng) 43-3459
Heat and water balances on glaciers. Takahashi, S., et al, (1989, p.147-152, eng) 43-4212

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Temperature, salinity and density of fast ice in Liaodong Bay. Li, Z.J., et al, (1989, p.218-224, eng) 43-3727

—Qilian Mountains
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—Taibai Mountain
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—Tian Shan
Avalanches in Tianshan Mountains, China, and their control. Hu, R., et al, (1987, p.13-24, chi) 43-477
Earthwork for snowdrift control on highways, Tian Shan Mts. Wang, C., et al, (1987, p.40-42, chi) 43-481
Air temperature and precipitation in Tian Shan. Liu, C.H., et al, (1988, p.151-159, chi) 43-2850
Review and prospects of Tian Shan glaciological station. Kang, E.S., (1988, p.290-295, chi) 43-2871
Dynamics of Urumqi Glacier, China. Huang, M.H., et al, (1989, p.70-73, eng) 43-3336

—Urumqi River
Precipitation measurements at the source of the Urumqi River. Yang, D.Q., et al, (1988, p.384-399, chi) 43-2853
Runoff analysis of the Urumqi River in China's Xinjiang Province. Sugawara, M., et al, (1989, p.35-72, jpn) 43-3542

—Xizang
Water quality of lakes and rivers in Tibet. Fushimi, H., et al, (1989, p.129-137, eng) 43-3452

—Yellow River
Ice problems on the Yellow River. Chen, Z., (1986, p.25-47, eng) 43-260
Field investigation of frazil ice jam in Yellow River. Sun, Z.C., et al, (1988, p.157-175, eng) 43-2170
Variation in the stage of the ice period of the Yellow River. Wang, Y.G., et al, (1988, p.142-151, eng) 43-2988
Forecasts of ice condition on the Yellow River. Chen, Z.T., et al, (1988, p.239-248, eng) 43-2997

—Yimin River
Forecast of Yimin River in Eerguna water system. Xu, J.P., et al, (1988, p.271-281, eng) 43-3000

Chlorophylls
Effects of frost hardening on *in vivo* fluorescence of Scots pine seedlings. Strand, M., et al, (1988, p.231-238, eng) 43-1058
Chukchi Sea
Outer Continental Shelf Environmental Assessment Program; comprehensive bibliography. (1988, 746p., eng) 43-1833
Environment and biological resources of Chukchi Sea. Hameedi, M.J., ed, (1988, 103p, eng) 43-2426
Marine geology. Naidu, A.S., et al, (1988, p.11-27, eng) 43-2427
Physical oceanography Johnson, W R, (1988, p.29-38, eng) 43-2428
Sea ice ridging in the Ross Sea, Antarctica, as compared with sites in the Arctic Weeks, W.F., et al, (1989, p.4984-4988, eng) 43-2725
Meteorological and oceanic forcing of the Alaskan continental shelf seas. Overland, J.E, (1988, p.39-40, eng) 43-3501
Climatic atlas of Alaskan coastal regions and shelf waters. Brower, W.A., Jr., et al, (1988, 3 vols, eng) 43-4476
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Cirque glaciers
Fossil glacial cirques at low altitudes in Sweden. Rudberg, S., (1985, p.19-25, swe) 43-1011
Suspected glacial cirque form in central Sweden. Agrell, H., (1985, p 26-27, swe) 43-1012
Glacier mass balance investigations in the balance year 1986-87. Hagen, J.O., (1988, p.205-209, eng) 43-2010
Dynamics of Urumqi Glacier, China Huang, M H, et al, (1989, p.70-73, eng) 43-3336
Accumulation rates of rock debris at the foot of supraglacial walls in northwest Spitsbergen Andre, M.F., (1988, p.351-373, fre) 43-4336
Cirques
Fossil glacial cirques at low altitudes in Sweden. Rudberg, S, (1985, p.19-25, swe) 43-1011
Ice-sheet dynamics of Baffin Island and Hudson Strait. Miller, G.H., et al, (1988, p.116-136, eng) 43-2012
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Classifications
IAHR—recommendations on testing methods of ice 5th report of Working Group on Testing Methods in Ice. (1986, p.595-599, eng) 43-280
Classification of glaciological maps. Petrova, T M, (1988, p.90-93, rus) 43-688
Characteristics of pack-ice distribution in the East Siberian Sea during the summer period Kovalev, E.G, (1988, p.23-27, rus) 43-799
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Rock glacier taxonomy. Corte, A.E., (1987, p.27-39, eng) 43-3043
Rock glaciers: an approach to their systematics. Barsch, D., (1987, p.41-44, eng) 43-3044
Problem of the ice-cored rock glacier. Barsch, D., (1987, p 45-53, eng) 43-3045
Rock glaciers and site characteristics in Colorado. Parson, C.G., (1987, p 127-143, eng) 43-3050
Geocryological systems and an approach to their classification. Shvetsov, P F, (1987, p 17-25, rus) 43-3369
Radar observation on the sort of sea ice Sun, Y, et al, (1989, p.1084-1095, eng) 43-3805
Topography as a fundamental element of glacial systems Kuhle, M., (1988, p.545-566, eng) 43-4568
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Negative octahedral snowflakes or Tyndall figures in tetrahydrofuran clathrate hydrat McLaurin, G.E., et al, (1988, p.711-712, eng) 43-1491
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Clay minerals
Breakdown of potassium feldspars during cryolithogenesis. Poklonnyi, S.A., (1988, p.108-114, rus) 43-534
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Clay soils
Clay contamination of road stone layers on glacial till subgrades. Cochrane, S.R., (1985, p.87-91, eng) 43-2
Silicification of loess soils. Volianik, N.V., ed, (1985, 94p., rus) 43-41
Alkalinization—the new chemical method of stabilizing water—saturated loess and clayey soils. Volkov, F E., et al, (1988, p.15-29, rus) 43-599
Behavior of water saturated sand-clay ground under dynamic conditions. Nikolaeva, S.K., et al, (1988, p.207-215, rus) 43-886
Frost heave prediction for clayey soils. Chen, X., et al, (1988, p.233-238, eng) 43-1344
Visco-plasticity of soils and design of structures. Zaretskiĭ, IU.K., (1988, 349p., rus) 43-2281
Effect of overconsolidation on freezing of clayey silt. Konrad, J.M., (1989, p.9-21, eng) 43-2705
Depression of soil moisture freezing point as a thermodynamic parameter. Fedorov, V.I., (1989, p.239-249, eng) 43-3102
Investigation of the supercooling in clayey soils. Kozlowski, T., (1989, p.293-299, eng) 43-3106
Physical changes in clays due to frost action. Chamberlain, E.J., (1989, p.863-893, eng) 43-3155
Effect of freeze thaw cycles on clayey silt. Konrad, J.M., (1989, p.217-226, eng) 43-3824
Physical processes during freeze-thaw cycles in clayey silts. Konrad, J.M., (1989, p.291-303, eng) 43-4449
Clays
Evaluation of the X-ray radiography efficiency for heaving and consolidation observation. Akagawa, S., (1988, p.23-28, eng) 43-56
On salt heave of saline soil. Chen, X., et al, (1988, p 35-39, eng) 43-58
Influence of freezing and thawing on the physical and chemical properties of swelling clays. Czurda, K.A., et al, (1988, p.51-58, eng) 43-60
Mechanical characteristics of artificially frozen clays under triaxial stress condition. Chen, X., (1988, p.173-179, eng) 43-74
Mechanical properties of circular slabs of frozen sand and clay in bending tests. Izuta, H., et al, (1988, p.187-192, eng) 43-76
Laboratory determination of pore pressure during thawing of three different types of soil. Rydén, C.G., et al, (1988, p.213-217, eng) 43-80
Water erosion of frozen fines. IAkovlev, A.V., (1988, p.131-135, rus) 43-537
Thixotropy of water-saturated soils, its nature and the determining factors (scientific review). Osipov, V.I., (1988, p.3-31, rus) 43-597
Engineering-geological properties of loess. Gerasimova, A.S, et al, (1988, p.216-226, rus) 43-887
Microdynamic behavior of water in clay gels below the freezing point. Fripiat, J., et al, (1984, p.279-286, eng) 43-1832
Observed strength distributions in some arctic clays. Jefferies, M.G., (1989, p.125-132, eng) 43-2618
Increase of frost heave in clays due to changes in soil microstructure. Kumor, M.K., (1989, p.535-545, eng) 43-3126
Microstructural changes in clays due to freezing. Stepkowska, E.T., et al, (1989, p 573-582, eng) 43-3130
Thaw consolidation of frozen clays of post-glacial origin in Helsinki. Vähäaho, I., et al, (1989, p.583-600, eng) 43-3131
Frost susceptibility of lime and cement-stabilized soils. Kujala, K., (1989, p.809-819, eng) 43-3149
Climate
Exceptionally high ablation in 1985 at Qamanârssûp sermia, West Greenland. Braithwaite, R.J., (1987, p.126-129, eng) 43-746
Physical oceanography and tracer chemistry of the southern ocean. (1988, 128p., eng) 43-1173
Climate of the Vestfold Hills. Streten, N.A., (1986, p.141-164, eng) 43-1190
Coupled energy balance climate-sea ice model. Ledley, T.S., (1988, p.15,919-15,932, eng) 43-2490
Arctic climate change impacts: summary and proposals for action. (1986, 29p., eng) 43-2581
Proceedings. Climate change impacts in the Canadian Arctic. (1986, 171p., eng) 43-2582
Impacts of CO2 doubling on snow and ice in the Canadian Arctic. Barry, R.G., (1986, p.54-66, eng) 43-2583
Evidence for the response of the antarctic ice sheet to climate warming. Prentice, M.L., et al, (1987, p.56-58, eng) 43-2731
Polar ecology. Stonehouse, B., (1989, 222p., eng) 43-2896
Semianalytic energy balance climate model with explicit sea ice and snow physics. Harvey, L.D.D., (1988, p.1065-1085, eng) 43-3074
To the Arctic: an in ction to the far northern world. Young, S.B., (1989, , eng) 43-3080
Climate of Yukon Wa.., H.E., et al, (1987, 323p, eng) 43-3081
Comparative studies of the winter climate at selected locations in Europe and the United States. Bates, R.E., et al, (1989, p.283-293, eng) 43-3213
Snow and avalanches in the Swiss Alps, Winter 1986/87. (1988, 139p., ger) 43-3236
Weather and climate. Beck, E., et al, (1988, p.5-27, ger) 43-3237
See also: Indoor climates
Climate control
Need for weather and climate modification. List, R., (1987, p.61-86, eng) 43-2249
Climatic changes
Holocene glaciolacustrine sedimentation in Muir Inlet and ice advance in Glacier Bay, Alaska, U.S.A. Goodwin, R.G., (1988, p.55-69, eng) 43-13
Changes in glacial and climatic conditions of Spitsbergen in the Subboreal period. Surova, T.G., et al, (1987, p.108-112, rus) 43-239
Isotopic modeling of climate oscillations. Le Treut, H., et al, (1988, p.9365-9383, eng) 43-284
Ocean level and models simulating its oscillations. Klige, R.K., et al, (1988, p.273-278, eng) 43-315
Interactions between ice sheets and climate in the Northern Hemisphere. Neeman, B.U., et al, (1988, p.11,175-11,191, eng) 43-724
Stable isotope studies on the Greenland ice-sheet margin. Reeh, N., et al, (1987, p.108-114, eng) 43-743
Ice-sampling programme in the Thule area, North Greenland. Reeh, N., et al, (1987, p 81-84, eng) 43-748
Role of sea ice in the dynamics of the Arctic climatic system. Subbotin, V.V., (1988, p.82-97, rus) 43-762
Role of the phase transformation heat of ice in the energy balance at the ocean-atmosphere interface. Lebedev, A.A., (1988, p.6-23, rus) 43-798
Mass movements, nivation processes and climatic fluctuations in northern Scandinavian mountains. Rapp, A., et al, (1988, p.245-253, eng) 43-927
Radiative effects of Arctic haze during pollution episode, spring 1983. Wendling, P., et al, (1985, p.2181-2193, eng) 43-1002
Nivation and glacio-geomorphology, minisymposium in Abisko, 1983. Åkerman, J., ed, (1985, 72p., swe) 43-1008
Antarctic ice sheet response to changes. Robin, G. de Q, (1988, p.31-50, eng) 43-1095
Numerical modelling of the southern ocean ice cover. Guretskiĭ, V.V., (1987, 39p., rus) 43-1097
North Atlantic deep water formation. Bennett, T., ed, (1985, 82p, eng) 43-1152
Sea ice, climate and Fram Strait. Hunkins, K., (1985, p.50-52, eng) 43-1157
Climatic impact of a change in North Atlantic deep water formation. Rind, D, (1985, p 62-65, eng) 43-1160
Assessment of polar climate change using satellite technology. Hall, D.K., (1988, p.26-39, eng) 43-1403
Ice, snow and vegetation in climatic response to external changes. Harvey, L.D.D., (1988, p.191-224, eng) 43-1481
Looking at the Earth from space. Geller, M.A., (1988, p.95-102, eng) 43-1502
Climatic variability and tree response within the forest-alpine tundra ecotone. Hansen-Bristow, K.J., et al, (1988, p.505-519, eng) 43-1670
Methane hydrates and global climate. Kvenvolden, K.A., (1988, p.221-229, eng) 43-1672
Permafrost; Fifth International Conference; (Proceedings), Vol.3. (1988, 87p., eng) 43-1717
Permafrost temperature and the changing climate. Lachenbruch, A.H., et al, (1988, p.9-17, eng) 43-1718
Significance of climatic change for the permafrost environment. Smith, M.W., (1988, p.18-23, eng) 43-1719
Effect of climate on permafrost, Svalbard Archipelago. Kristensen, M., (1988, p.24-26, eng) 43-1720
Permafrost on Arctic coasts of North America. Hunter, J.A., (1988, p.27-34, eng) 43-1721
Permafrost temperatures related to climate warming. Osterkamp, T.E., et al, (1987, 21p, eng) 43-1729
Is Alaska's permafrost melting. Esch, D.C., (1988, 2p, eng) 43-1824
Index of sea ice variations in the nordic seas. Sear, C.B., (1988, p.339-355, eng) 43-2038
Glacier-climate relationship in Switzerland. Müller, P., (1988, 228p., ger) 43-2217
Retrogression of the forest-alpine tundra ecotone in Sweden. Kullman, L., (1989, p.83-90, eng) 43-2311
Methane hydrate—a major reservoir of carbon in the shallow geosphere?. Kvenvolden, K.A., (1988, p.41-51, eng) 43-2320
Climatic change in the Canadian Arctic. Maxwell, B., (1987, p.2-6, eng) 43-2377
Effects of climatic change on northern permafrost. Harris, S.A., (1987, p.7-9, eng) 43-2378
Arctic ice cores: putting present climate into perspective. Koerner, R.M., (1987, p.10-12, eng) 43-2379
Recent variations of Blue Glacier, Olympic Mountains, Washington, U.S.A. Spicer, R.C., (1989, p.1-21, eng) 43-2476
Tundra snow disappearance as climate change indicator Foster, J.L., (1989, p 69-70, eng) 43-2477
Global alpine glacier trends, 1960s to 1980s. Wood, F.B., (1988, p.404-413, eng) 43-2481
Arctic climate change impacts: summary and proposals for action. (1986, 29p., eng) 43-2581
Proceedings. Climate change impacts in the Canadian Arctic. (1986, 171p., eng) 43-2582

Climatic changes *(cont.)*
Significance of climate change for the permafrost environment. Smith, M., [1986, p.67-81, eng] 43-2584
Numerical experiments on fluctuation in glacial climate. Verbitskiĭ, M.IA., [1988, p.52-54, eng] 43-2599
Global climatic change. Houghton, R.A., et al, [1989, p.36-44, eng] 43-2698
Relation of glacier oscillation to climatic changes in China. Ren, B.H., [1988, p.244-249, chi] 43-2863
Climate in the North: prospects for change. Hare, F.K., [1988, p.9-14, eng] 43-2899
Variations in the global water budget. Street-Perrott, A., ed, [1983, 518p., eng] 43-3035
Climate feedback mechanism involving oceanic upwelling, atmospheric CO2 and water vapour. Flohn, H., [1983, p 403-418, eng] 43-3037
Proceedings. [1989, 418p., eng] 43-3176
Topographic and climatic effects on glacier changes. Whalley, W.B., et al, [1989, p.153-172, eng] 43-3182
Simple method for determining the response time of glaciers. Jóhannesson, T., et al, [1989, p.343-352, eng] 43-3193
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Equilibrium line altitude and climate fluctuations. Kuhn, M., [1989, p.407-417, eng] 43-3197
Isotope studies of ice cores from Komsomolskaya Station, Antarctica. Kotliakov, V.M., et al, [1989, p.97-102, rus] 43-3309
Average soil temperature dynamics during short-term climatic changes. Parmuzin, S.IU., [1987, p.157-167, rus] 43-3381
Global sea-level changes during the past century. Gornitz, V., et al, [1987, p.3-16, eng] 43-3392
Anthropogenic warming in North Alaska?. Michaels, P.J., et al, [1988, p.942-945, eng] 43-3469
Sea level changes from future retreat of ice sheets. Clark, J.A., et al, [1987, p.356-370, eng] 43-3623
Climate in southeastern Siberia and climatic aspects of exogenetic processes. D'iakonov, A.I., [1987, p 80-103, rus] 43-3660
How can an ice core chronology be established. Budd, W.F., et al, [1989, p.177-192, eng] 43-3687
Impact of atmospheric chemistry on climate. Crutzen, P.J., et al, [1989, p.249-266, eng] 43-3691
Past environmental long-term records from the Arctic. Dansgaard, W., et al, [1989, p.287-317, eng] 43-3693
Long-term ice core records and global environmental changes. Hecht, A.D., et al, [1989, p.379-388, eng] 43-3697
Sea ice and surface albedo in models of climate change. Ingram, W.J., et al, [1989, p.8609-8622, eng] 43-3848
Fluctuations in ice shelves and outlet glaciers in Antarctica. Zakharov, V.G., [1988, p.297-311, eng] 43-4070
Relative sea level chronology in Arctic Canada. Retelle, M.J., et al, [1989, p.113-125, eng] 43-4085
Effect of snow cover on the climate. Cohen, J., [1988, p.27-41, eng] 43-4114
Climatic change during the Mikulino-Kazantsevo interglacial. Gurtovaia, E.E., [1987, p.54-62, rus] 43-4233
Ice time: climate, science, and life on earth. Levenson, T., [1989, 242p., eng] 43-4488
Topography as a fundamental element of glacial systems. Kuhle, M., [1988, p.545-568, eng] 43-4568

Climatic extremes
See also: Records (extremes)

Climatic factors
New results in oxygen isotope studies of the Vostok Station ice core. Kotliakov, V.M., et al, [1987, p.83-85, rus] 43-232
Ice jams and the winter climate near White River, SD. Bilello, M.A., [1987, p.154-.62, eng] 43-398
Possibility of using overland air cushion vehicles in the construction of electrical networks. Butylkin, I.P., et al, [1988, p.24-28, rus] 43-558
Regularities governing the formation of composition and properties of loess in southern East Siberia and northern Mongolia. Riashchenko, T.G., [1988, p.98-106, rus] 43-596
Prediction of winter battlefield weather effects Ryerson, C.C., et al, [1988, p.357-362, eng] 43-603
Development and opportunities in Greenland. Rosendahl, G.P., [1988, p.769-782, eng] 43-661
New technique developed in Tyumen' Branzburg, I.P., [1988, p.59-61, rus] 43-693
Prospects and ways of developing oil and gas deposits in the arctic waters of the U.S.A. and Canada Moskovich, E.F., [1988, 39p., rus] 43-759
Mass balance reconstruction for the Golubin Glacier. Aizin, V.B., [1988, p.119-126, rus] 43-947
Glaciers of the Iskaten Range. Sedov, R.V., [1988, p.129-133, rus] 43-949
Ice dynamics in mountain caves, Yukon, Canada Lauriol, B., et al, [1988, p.215-220, eng] 43-1031
Potential climatic effects on the Greenland ice sheet. Bindschadler, R.A., [1985, p.60-61, eng] 43-1159
Origin of the Greenland ice sheet North, G.R., [1985, p 66-67, eng] 43-1161
Avalanche formation, movement and effects. Salm, B., ed, [1987, 686p., eng] 43-1214
Analysis of the weather situations leading to severe and extraordinary avalanche situations. Hächler, P., [1987, p.295-304, eng] 43-1238
Geotechnical aspects of snow pack stability in the Himalayan region. Pathak, R.C., [1987, p.353-354, eng] 43-1244
Snow avalanche prediction using a probabilistic method. Bakkehöi, S., [1987, p.549-555, eng] 43-1260
Avalanche forecast by the nearest neighbour method. Buser, O., et al, [1987, p.557-569, eng] 43-1261
Avalanche distribution in the Caucasus. Zalikhanov, M., et al, [1987, p.627-628, eng] 43-1269
Land development in Yellowknife—a case history. King, G.D.S., [1988, p.689-699, eng] 43-1333
Surface winds over the antarctic continent: a review. Parish, T.R., [1988, p.169-180, eng] 43-1407
River-flow studies in the BAM zone in winter. Sokolov, B.L., et al, [1987, p.96-110, rus] 43-1436
Flood climates. Hayden, B.P., [1988, p.13-26, eng] 43-1547
Climatic influence on upper Mississippi Valley floods. Knox, J.C., [1988, p.279-300, eng] 43-1551
Tractive requirements for off-road ACV's. Yong, R.N., et al, [1988, p.23-51, eng] 43-1750
Quaternary sediment patterns in the Weddell Sea: relations and environmental conditions. Futterer, D.K., et al, [1988, p.551-561, eng] 43-1787
Recommendations for design of building walls in arctic climate. [1986, 94p., rus] 43-1887
Oceanic environment of George VI Ice Shelf, Antarctic Peninsula. Talbot, M.H., [1988, p.161-164, eng] 43-1960
Phases of the ice season in the Baltic Sea (North of latitude 57N). Leppäranta, M., et al, [1988, 83p, eng] 43-1975
Glacier variations caused by climatic changes. Oerlemans, J., [1988, p 333-341, eng] 43-1990
House in cold climates—current technologies. Dunets, A., et al, [1989, p.27-40, eng] 43-2086
Winter vessel performance and trafficability. Wells, D., et al, [1987, 33p., eng] 43-2139
Climatic control of sedimentation in bays and fjords of the northern Antarctic Peninsula. Griffith, T.W., et al, [1989, p.181-204, eng] 43-2274
Pangaean climates: megamonsoons of the megacontinent. Kutzbach, J.E., et al, [1989, p.3341-3357, eng] 43-2397
Analysis of long-period changes in some climate-forming factors of the northern European basin. Dement'ev, A.A., et al, [1988, p.107-117, rus] 43-2411
Arctic climate change impacts: summary and proposals for action. [1986, 29p., eng] 43-2581
Proceedings. Climate change impacts in the Canadian Arctic. [1986, 171p., eng] 43-2582
Climatic factors for road maintenance and traffic safety. Lindqvist, S., [1986, 8p., eng] 43-2762
Antarctic winter; simulations with climatological and reduced sea-ice extents. Mitchell, J.F.B., et al, [1989, p.225-246, eng] 43-2836
Climate in the North: prospects for change. Hare, F.K., [1988, p.9-14, eng] 43-2899
Rock glacier response to abrupt changes in talus production. Olyphant, G.A., [1987, p.55-64, eng] 43-3046
Topographic and climatic effects on glacier changes. Whalley, W.B., et al, [1989, p.153-172, eng] 43-3182
Field stations for glacier-climate research, West Greenland. Braithwaite, R.J., et al, [1989, p.207-218, eng] 43-3185
Energy balance and greenhouse warming ablation of glacier. Greuell, W., et al, [1989, p.305-323, eng] 43-3191
Energy and mass balance of glacier firn. Harding, R.J., et al, [1989, p.325-341, eng] 43-3192
Simple method for determining the response time of glaciers. Jóhannesson, T., et al, [1989, p.343-352, eng] 43-3193
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Comparative studies of the winter climate at selected locations in Europe and the United States. Bates, R.E., et al, [1989, p.283-293, eng] 43-3213
Average soil temperature dynamics during short-term climatic changes Parmuzin, S.IU., [1987, p.157-167, rus] 43-3381
Short-term sea-level changes and coastal erosion. Komar, P.D., et al, [1987, p.17-27, eng] 43-3393
Snow data analysis for structural safety. Harris, J.R., [1989, p.15-24, eng] 43-3547
Annual balance and climatic sensitivity of North Cascade, Washington glaciers. Pelto, M.S., [1988, p.13-26, eng] 43-4113
Long range forecasting of climatically induced phenomena (e.g., avalanches). Okolov, V.F., et al, [1987, p.104-120, rus] 43-4509
Permafrost sensitivity to global thermal regime changes in land surface. Anisimov, O.A., [1989, p.79-84, rus] 43-4557
Wisconsin/Würm glacial stage ice in the subtropical Dunde Ice Cap, China. Thompson, L.G., et al, [1988, p.517-523, eng] 43-4566
Utilization of Unmanned Aerial Vehicles in the ALBE Thrust. Greeley, H.P., et al, [1986, p.249-257, eng] 43-4639

Climatology
Fourth year of glaciological field work at Tasersiaq and Qapiarfiup sermia, West Greenland. Olesen, O.B., [1987, p.121-126, eng] 43-745
Last full summer of glacier-climate investigations at Qamanârssûp sermia, West Greenland. Braithwaite, R.J., [1987, p.95-99, eng] 43-751
Energy balance on outlet glaciers from the Inland Ice, West Greenland. Knudsen, N.T., et al, [1987, p.99-105, eng] 43-752
Role of sea ice in the dynamics of the Arctic climatic system. Subbotin, V.V., [1988, p.82-97, rus] 43-762
Clouds and ice in relation to climate, 1977-1983. Herman, G.F., et al, [1984, 117p., eng] 43-1076
Monitoring of the Arctic climate. Voskresenskiĭ, A.I., ed, [1988, 205p., rus] 43-1174
Monitoring of the Arctic climate. Voskresenskiĭ, A.I., [1988, p 6-23, rus] 43-1175
Glaciers and the climate of Siberia. Maloletko, A.M., et al, [1987, 192p., rus] 43-1408
Flood hydroclimatology. Hirschboeck, K.K., [1988, p.27-49, eng] 43-1548
Temporal statistics: an application in snowfall climatology. Harrington, J.A., Jr., et al, [1988, p.337-353, eng] 43-2826
Climatology of melt-freeze metamorphic snow in central Europe. Essenwanger, O.M., et al, [1989, p.273-282, eng] 43-3212
Contribution of the SNOwpack TELemetry system. Doesken, N.J., et al, [1987, p.20-30, eng] 43-3924
Probabilistic ice information system for Canadian waterways. Perchanok, M., et al, [1989, p.28-32, eng] 43-4255
Analysis of three rain on snow floods in the Sierra Nevada, California. Hall, R.L., et al, [1983, p.46-54, eng] 43-4352
Compilation of deuterium data at Schirmacher Hills. Kowski, P., et al, [1968, p.55-97, eng] 43-4516
See also: Microclimatology; Paleoclimatology

Clothing
Cold weather handbook for surface ships. [1988, c 236p., eng] 43-3620
Air layer effect on thermal insulation of clothing. Fujimoto, T., et al, [1989, p.251-256, eng] 43-4219

Cloud chambers
Experimental study of ice crystal growth below water saturation in the University of Utah supercooled cloud tunnel. Matsuo, T., et al, [1987, p.247-264, eng] 43-826
Dynamic aerosol flow chamber. Hewitt, A.D., [1988, 13p., eng] 43-1840
New diffusion chamber for detecting ice-forming nuclei on membrane filters or substrata. Bogdanova, S.L., [1988, p.95-105, rus] 43-2718
Increased transmission through brass obscurant clouds during snowfall. Hewitt, A.D., et al, [1988, p.489-496, eng] 43-3430

Cloud cover
Atmospheric remote sensing in arctic regions. Felde, G.W., et al, [1987, p.319-326, eng] 43-867
Space remote sensing workshop: working group report. Breslau, L.R., et al, [1987, p.333-339, eng] 43-869
Clouds and ice in relation to climate, 1977-1983. Herman, G.F., et al, [1984, 117p., eng] 43-1076
Space-time distribution of atmospheric ice nucleating agents above Ukraine. Silaev, A.V., et al, [1988, p.142-153, rus] 43-1084
Radiative properties of antarctic atmosphere and snow. Yamanouchi, T., [1988, p.248-249, eng] 43-1645
Arctic cloudiness in spring from satellite imagery: some comments. Curry, J.A., [1988, p.533-538, eng] 43-2035
Arctic cloudiness in spring from satellite imagery: a response. Barry, R.G., et al, [1988, p.539-540, eng] 43-2036
Evidence of central morphostructures in the formation of cloud cover and ice cover over bodies of water. Ezhov, B.V., [1988, p.124-128, rus] 43-2201
Comparison of 0000Z upper air temperatures with 1600 LST West Gulkana Glacier air temperature Brazel, A.J., [1988, p.115-122, eng] 43-2798
Summer field season weather observations, West Gulkana Glacier and environs: 1986, 1987. Brazel, A.J., et al, [1988, p.123-142, eng] 43-2799
Effect of snow cover on cloud analysis. McGuffie, K., et al, [1988, p.1124-1137, eng] 43-3470

Cloud dissipation
Modeling artificial crystallization and dissipation of supercooled fogs and low clouds. Khvorost'ianov, V.I., [1988, p.82-90, rus] 43-1080

Cloud droplets
Modeling studies on the formation, growth, dissipation, and acidification of cumulus clouds. Nair, S.K., [1988, 271p., eng] 43-308

On the distribution of acidity within clouds as a function of droplet size. Rancourt, K.L., et al, [1987, p.54-60, eng] 43-389
Model to predict the surface structures, local densities and Ludlam limit of rime accretions. McComber, P., et al, [1987, p.61-72, eng] 43-390
Heat- and mass transfer during cooling and hardening of water drops in air streams. Filatkin, V.N., et al, [1988, p 86-88, rus] 43-550
Dynamics of supercooled fog dispersal from lidar data. Alekseev, A.P., et al, [1987, p 190-195, rus] 43-604
Possible mechanisms of crystal nucleation in clouds and their parametrization in numerical models. Mazin, I.P., [1988, p.7-13, rus] 43-1077
Atmospheric aerosol fractionation resulting from snow crystal formation. Borys, R.D., et al, [1988, p.213-239, eng] 43-1467
Modeling of precipitation from a mixed cloud Bakhanov, V.P., et al, [1988, p.12-24, rus] 43-1768
Droplet accretion, rime growth, and secondary ice crystal formation. Dong, Y.Y., et al, [1989, p.127-142, eng] 43-2159
Ice crystal and water drop velocities. Nisbet, J.S., [1989, p.11-29, eng] 43-2902
Use of holography for airborne cloud physics measurements. Brown, P.R.A., [1989, p.293-306, eng] 43-4401
Freezing of supercooled water drops in ionized air Dubrovich, N.A., [1988, p.851-855, eng] 43-4548
Icing rate in a horizontally inhomogeneous atmospheric boundary layer. Ivanova, L.A., et al, [1988, p.48-56, rus] 43-4586

Cloud physics
Microwave radiances from horizontally finite, vertically structured precipitating clouds. Kummerow, C.D., [1988, 162p., eng] 43-306
Modeling studies on the formation, growth, dissipation, and acidification of cumulus clouds. Nair, S.K., [1988, 271p., eng] 43-308
Airborne lidar studies of Arctic polar stratospheric clouds. Poole, L.R., [1988, 237p., eng] 43-341
Mathematical simulation of orbital polarization lidars. Krekov, G.M., et al, [1988, p.44-51, rus] 43-587
Growth and movement of hailstones in convective clouds. Lomidze, N.E., et al, [1988, p.148-152, rus] 43-1412
Ice crystal formation by aerosols in a convective cloud. Klingo, V.V., et al, [1988, p.18-27, rus] 43-1429
Changes of microstructure of convective clouds by ice-forming aerosols. Klingo, V.V., [1988, p.28-33, rus] 43-1430
Ice crystal formation on AgI particles. Klingo, V.V., [1988, p 34-42, rus] 43-1431
Report on winter snowpack-augmentation. Reynolds, D.W., [1988, p.1290-1300, eng] 43-1735
Estimation of rainfall rates from passive microwave remote sensing. Sharma, A.K., [1988, 220p., eng] 43-1916
Warming up to winter. Twombly, M.R., [1988, p.62-65, eng] 43-2313
Dynamics of supercooled water in wintertime storms over the Sierra Nevada. Heggli, M.F., et al, [1988, p.989-1015, eng] 43-2398
Cloud physics and weather modification. Plaude, N.O., ed, [1988, 136p., rus] 43-2709
Concentration and size distribution of large crystals (l>200 micrometer) in upper air clouds. Kosarev, A.L., [1988, p.3-14, rus] 43-2710
Numerical modeling of artificial crystallization and gap zones in clouds with height-dependent windshear and turbulence. Khvorost'ianov, V.I., [1988, p.37-49, rus] 43-2714
Cloud and fog dissipation by solar heating of a surface with nonhomogeneous albedo. Khvorost'ianov, V.I., [1988, p 62-72, rus] 43-2716
Modeling ground-based seeding of orographic clouds over varying forms of crests. Toroian, G.R., et al, [1988, p.72-83, rus] 43-2717
Ice mass transported into thunderstorms. Heymsfield, A.J., et al, [1988, p.3501-3514, eng] 43-2772
Ice crystal and water drop velocities. Nisbet, J.S., [1989, p.11-29, eng] 43-2902
Some wintertime cloud aerosol interactions over Lake Michigan. Saxena, V.K., [1980, p.255-265, eng] 43-3946
Temperature dependence of ice nucleation. Katz, U., et al, [1980, p 267-273, eng] 43-3947
Atmospheric changes producing polar mesospheric clouds. Memmesheimer, M., et al, [1988, p.178-184, eng] 43-4376
Use of holography for airborne cloud physics measurements. Brown, P.R.A., [1989, p.293-306, eng] 43-4401
Solar radiative transfer in cirrus clouds Pt. I and Pt. II. Takano, Y., et al, [1989, p.3-36, eng] 43-4420
Numerical simulations of hailstorm feeder-cloud initiation. Cheng, L., [1989, p.279-305, eng] 43-4559

Cloud seeding
Artificial nucleation of mixed and stratiform clouds. Bulkov, M.V., et al, [1988, p.24-29, rus] 43-1083
Space-time distribution of atmospheric ice nucleating agents above Ukraine. Silaev, A.V., et al, [1988, p.142-153, rus] 43-1084
Report on winter snowpack-augmentation. Reynolds, D.W., [1988, p.1290-1300, eng] 43-1735
Modeling of precipitation from a mixed cloud. Bakhanov, V.P., et al, [1988, p.12-24, rus] 43-1768
Hail research and hail suppression. Waldvogel, A., [1987, p 87-109, eng] 43-2250
Modeling ground-based seeding of orographic clouds over varying forms of crests. Toroian, G.R., et al, [1988, 72-83, rus] 43-2717
Temperature dependence of ice nucleation. Katz, U., et al, [1980, p.267-273, eng] 43-3947
Airborne lidar observation of clouds in the antarctic troposphere. Morley, B.M., et al, [1989, p.491-494, eng] 43-4345
See also: Artificial precipitation; Cloud dissipation; Fog dispersal; Hail prevention; Weather modification

Cloud seeding generators
See also: Smoke generators

Clouds (meteorology)
Mesoscale circulations forced by melting snow. Szeto, K.K., et al, [1988, p.1629-1650, eng] 43-36
Influence of the ice crystal form transformation on the spectrum of precipitation particles. Dorman, B.A., [1988, p 62-69, rus] 43-1079
Roll vortices during Arctic cold air outbreaks over open water. Hein, P.F., et al, [1988, p.177-199, eng] 43-1378
Small, solid particles above the frost point of Arctic PSCs. Poole, L.R., et al, [1988, p.867-870, eng] 43-1553
Lidar detection of leads in Arctic sea ice. Schnell, R.C., et al, [1989, p.530-532, eng] 43-3359
JARE-28 ACR report. Yamanouchi, T., et al, [1989, p.53-72, jpn] 43-3703
NOAA data processing system. Takabe, H., et al, [1989, p.73-87, jpn] 43-3704
Cloud track winds in the polar regions from sequences of AVHRR images. Turner, J., et al, [1989, p.695-703, eng] 43-4066
Algorithm for snow and ice detection using AVHRR data. Gesell, G., [1989, p 897-905, eng] 43-4104
Airborne lidar observation of clouds in the antarctic troposphere. Morley, B.M., et al, [1989, p.491-494, eng] 43-4345
See also: Hail clouds; Supercooled clouds

Coagulation
Freeze-thaw coagulation. Kalousdian, S., [1980, 248p., eng] 43-475
Parametrization of the precipitation processes in mixed and in ice clouds in numerical models. Sergeev, B.N., [1988, p.32-35, rus] 43-1078
Modeling microphysical processes in clouds during seeding. Khvorost'ianov, V.I., et al, [1988, p.101-106, rus] 43-1082

Coal
Thermal regime of pipelines transporting coal-water suspensions in non-Newtonian rheological models. Ovsiannikov, V.M., [1988, p.51-52, rus] 43-551
Working capacity of hydraulic props under permafrost conditions. Rozenbaum, M.A., et al, [1987, 105p., rus] 43-1088
Technogenic pollution of snow cover in Spitsbergen. Il'ina, E.A., [1988, p.113-116, rus] 43-3266

Coastal topographic features
Zonality of modern coastal processes and sea level indicators. Kelletat, D., [1988, p.219-230, eng] 43-2005
Arctic lowlands. Carter, L.D., et al, [1987, p.583-628, eng] 43-2415
Tidal entrances in the Okhotsk coast, Japan. Kondo, H., et al, [1988, p.103-111, eng] 43-2984
Ice-dominated shores of Canadian Arctic islands. Taylor, R.B., et al, [1987, p.33-48, eng] 43-3200
Coastal subsea permafrost and bedrock observations using dc resistivity. Sellmann, P.V., et al, [1989, 13p., eng] 43-4386
See also: Shoreline modification

Coasts
See also: Banks (waterways); Beaches; Shores

Coatings
See also: Protective coatings

Codes
See also: Building codes; Standards

Cohesion
Field study on snow mechanical properties with special regard to liquid water content. Brun, E., et al, [1987, p.183-193, eng] 43-1229

Cold chambers
Formation of loess structure, and settlement. Komissarova, N.N., et al, [1988, p.186-194, rus] 43-885
Cryogenic vacuum window. Adams, G., [1988, p.2477-2478, eng] 43-1995
Cold room studies for sliding snow. Sack, R.L., et al, [1989, p.199-209, eng] 43-3565
Cold room studies for snow and ice control on buildings. Lepage, M.F., et al, [1989, p.232-242, eng] 43-3568

Cold exposure
Arctic marine lifesaving equipment. Part 1. Thompson, E.W., [1988, p.14-17, eng] 43-1460
Arctic marine lifesaving equipment. Part 2. Thompson, E.W., [1988, p.14-15, eng] 43-1461
See also: Frostbite

Cold storage
Reinforced concretes for the containment of cryogenic liquids offshore. Berner, D.E., [1988, p.173-178, eng] 43-709
Ice storage cooling system at Fort Stewart, GA. Sohn, C.W., et al, [1988, 53p., eng] 43-1313
Influence of freezing on liposomes in aqueous media. Özer, Y., et al, [1988, p.129-139, eng] 43-1569
Cooling air jacket walls for underground cold storage. Chen, Q.G., et al, [1989, p.354-363, eng] 43-3580
Water discharge apparatus for an ice making system. Matsuda, J., et al, [1989, p.285-289, eng] 43-4224

Cold stress
Deterioration of concrete water tanks in cold climates. Grieve, R., [1989, p.51-54, eng] 43-3958

Cold tolerance
Frost resistance in crops. Flore, J.A., et al, [1987, p.139-150, eng] 43-2252
See also: Acclimatization; Viability

Cold weather concreting
See also: Winter concreting

Cold weather construction
Problems of using tie-rods in overlapping metallic bridge spans. Vladimirskiĭ, S.R., et al, [1988, p.14-15, rus] 43-25
Physical and mechanical aspects of working capacity of equipment designed for the North. Larionov, V.P., ed, [1987, 91p., rus] 43-112
Welding of metallic structures in freezing weather. Savvinov, I.T., [1987, p.39-45, rus] 43-114
Air structure protection of cold weather concreting. Mangus, A.R., [1988, p.22-27, eng] 43-347
Concreting in Alaska. Pekar, J.W., [1988, p.28-30, eng] 43-348
Cold weather concreting for oil production plant. Moore, K., et al, [1988, p.31-33, eng] 43-349
Cold weather concrete curing planned and controlled by microcomputer. Maage, M., et al, [1988, p.34-39, eng] 43-350
Heating water and aggregates for cold weather concrete. Lane, D.S., [1988, p.40-43, eng] 43-351
Cold weather admixture. Brook, J.W., et al, [1988, p.44-49, eng] 43-352
Specifications for cold weather concreting. Carino, N.J., [1988, p.50-57, eng] 43-353
Cold weather concreting. Haavik, D.J., [1988, p.73-75, eng] 43-354
Need of winter knowledge in the construction industry. Sjökvist, K., [1985, p.54-71, swe] 43-361
National highway system in the Swedish mountains. Nilsson, A., [1985, p 88-95, swe] 43-364
Route selection for highways in avalanche areas. Hu, Z., [1987, p.43-44, chi] 43-482
Recent results in improving snow roads and runways in Antarctica. Wuori, A.F., et al, [1988, p.297-307, eng] 43-629
Exploration base in the high Arctic; discussion and case study. Ammendrup, H., et al, [1988, p.309-318, eng] 43-630
International Specialty Conference on Cold Regions Engineering, 1984. [1984, p.1021-1201, eng] 43-667
Embankment design and construction in cold regions. Johnson, E.G., ed, [1988, 173p., eng] 43-765
Embankment design and construction in cold regions: an overview. Phukan, A., et al, [1988, p.1-12, eng] 43-766
Embankment stabilization techniques. Rooney, J.W., et al, [1988, p.13-34, eng] 43-767
Geotechnical thermal analysis. Zarling, J.P., et al, [1988, p.35-92, eng] 43-768
Embankment settlement and stability analyses. Johnson, E.G., et al, [1988, p.93-113, eng] 43-769
Construction materials and field placement. Haas, W.M., [1988, p.114-126, eng] 43-770
Case histories in seasonal frost areas. Haas, W.M., et al, [1988, p.160-169, eng] 43-772
Mechanical and physical properties of soils in cold regions. Chamberlain, E.J., [1987, p.155-161, eng] 43-854
Buildings and utilities in very cold regions: overview and research needs. Tobiasson, W., [1987, p.299-303, eng] 43-864
Foundation technology in cold regions. Quinn, W.F., [1987, p 305-310, eng] 43-865
Arctic construction: working group report. Marvin, E.L., et al, [1987, p.311-314, eng] 43-866
Engineering geology today: theory, practice, problems. Sergeev, E.M., ed, [1988, 293p., rus] 43-883
Soil cement elements of earth dams erected at subzero temperatures. Lavrinovich, E.V., et al, [1987, p.96-102, rus] 43-1184
Mechanization of pile work under winter conditions. Bad'in, G.M., [1987, 184p., rus] 43-1186
Water flow over and through concrete dams during construction. Sokolov, I.B., et al, [1987, p.4-9, rus] 43-1194
Energy considerations in the design of northern housing. Larsson, N.K., [1985, 32p., eng] 43-1311
Conference of the CSCE, Calgary, Alberta, May 25-27, 1988. [1988, 833p., eng] 43-1325

Cold weather construction *(cont.)*

Construction of the Pangnirtung water reservoir. Notenboom, W.G., et al, (1988, p 613-632, eng) 43-1329

Pangnirtung water reservoir geotechnical aspects. Smith, L.B., et al, (1988, p 633-658, eng) 43-1330

Burntwood Trailer Court case study of construction in permafrost. Feilden, R.E.K., et al, (1988, p.659-672, eng) 43-1331

Economics of piped services in Northwest Territories hamlets. Feilden, R.E.K., et al, (1988, p.734-748, eng) 43-1335

Thermosyphons and foundation design in cold regions. Haynes, F.D., et al, (1988, p.251-259, eng) 43-1346

Thermosyphon for horizontal applications. DenHartog, S.L., (1988, p.319-321, eng) 43-1351

Stresses and strains in underground structures, Kolyma hydro-power plant. Kuznetsov, V.S., et al, (1987, p.51-57, rus) 43-1393

Design for construction on permafrost. Gavril'ev, P.P., (1988, 128p, rus) 43-1438

Effects of soil freezing by applying thermopiles. Gorelik, IA.B., et al, (1988, p.14-29, rus) 43-1598

Performance of riprap in northern climates. (1988, 124p. + 4 appends, eng) 43-1667

Arctic engineering principles applied to antarctic construction. Myers, G.D., (1988, p.18-19, eng) 43-1712

Airfields in Arctic Alaska. Crory, F.E., (1988, p.49-55, eng) 43-1724

HVS-aided validation of pavement behavior at low temperatures. Hugo, F., et al, (1987, p.168-197, eng) 43-1862

Recommendations for design of building walls in arctic climate. (1986, 94p., rus) 43-1887

Feasibility model for use of weather protection in cold region construction. Shahbodaghlou, F., (1988, 308p., eng) 43-1919

Cold weather concreting. (1988, p 280-302, eng) 43-2040

Cold regions engineering conference, Feb. 6-8, 1989. (1989, 399p, eng) 43-2083

Design of a replacement science laboratory for McMurdo Station, Antarctica. Haehnle, R.J., (1989, p.1-10, eng) 43-2084

DYE-2 and DYE-3—a 30 year engineering history. Osgood, S., et al, (1989, p.11-26, eng) 43-2085

House in cold climates—current technologies. Dunets, A., et al, (1989, p.27-40, eng) 43-2086

Cold weather concreting in the St Paul-Minneapolis area. Downs, M.B., et al, (1989, p.41-49, eng) 43-2087

Cold weather roofing failures. Dregger, P.D., et al, (1989, p.50-58, eng) 43-2088

Asphalt pavement crack control at Fairbanks International Airport. Esch, D.C., et al, (1989, p.59-69, eng) 43-2089

Use of low viscosity asphalts in cold regions. Janoo, V.C., (1989, p.70-80, eng) 43-2090

Performance of rubber-modified asphalt pavements in cold regions. Takallou, H.B., et al, (1989, p.81-91, eng) 43-2091

Performance of pavement at Central Wisconsin Airport. Stark, J., et al, (1989, p.92-103, eng) 43-2092

Rebuilding infrastructure for pleasure boating. Wortley, C.A., et al, (1989, p.188-201, eng) 43-2102

Design and installation of a pile foundation in a remote area of Alaska. Hammer, T.A., et al, (1989, p.215-225, eng) 43-2104

Strength of compacted frozen fill after thawing. Graham, J., et al, (1989, p.274-281, eng) 43-2109

Frozen gravel, a study of compaction and thaw-settlement behavior. Haas, W.M., et al, (1989, p.308-319, eng) 43-2112

Disintegration of frozen granular materials using high pressure water jets Skudrzyk, F.J., et al, (1989, p 320-334, eng) 43-2113

Unique new cold weather testing facility Eaton, R.A., (1989, p.335-342, eng) 43-2114

Unfrozen water contents of six antarctic soil materials. Anderson, D.M., et al, (1989, p.353-366, eng) 43-2116

Problems in developing territories with permafrost. Nekrasov, I.A., (1988, p.36-43, rus) 43-2198

New data and technology for construction in the North (1986, 133p, rus) 43-2214

Energy-efficient regimes for thermal treatment of concrete in extended constructions under winter conditions Zasedatelev, I.B., et al, (1988, p.75-79, rus) 43-2434

Adelie land airport. Regrettier, J.F., et al, (1989, p 91-96, eng) 43-2614

Design of the Great Belt western bridge for ice forces. Christensen, F.T., et al, (1989, p.365-376, eng) 43-2647

Offshore development in Cook Inlet, Alaska. Visser, R.C., (1989, p.435-442, eng) 43-2655

Study on frozen ground for construction in cold regions. Yuan, Z.H., (1988, p.338-341, chi) 43-2878

Ice wharf at McMurdo Station. Barthelemy, J.L., et al, (1988, p 601-609, eng) 43-2958

Frost in geotechnical engineering; VTT Symposium 94, Vols. 1 and 2. (1989, 946p. (2 vols.), eng) 43-3093

Frost protection in design and construction. Nordal, R.S., et al, (1989, p.127-163, eng) 43-3096

Artificial permafrost test plot. Matala, H.J., et al, (1989, p.353-364, eng) 43-3111

Evaluation of frost heave properties of soils. Saarelainen, S.M.I., (1989, p.471-480, eng) 43-3120

Frost protection in design and construction in Japan. Kubo, H., (1989, p.613-631, eng) 43-3133

Site investigation on frost damages of roads at highland. Fukuda, M., et al, (1989, p.655-663, eng) 43-3136

Arctic road construction. Lehtonen, J., et al, (1989, p.679-689, eng) 43-3138

Preventing measures against frost actions in soils. Phukan, A.P.E., (1989, p.749-769, eng) 43-3144

Insulation effect of polypropylene beads concrete in pavement. Yanagisawa, E., et al, (1989, p.845-853, eng) 43-3153

Cryogenic protection of gas systems in West Siberia. Zakharov, IU.F., et al, (1989, p.855-861, eng) 43-3154

Army Arctic and Arctic-related construction needs. Duscha, L.A., (1987, p.49-52, eng) 43-3294

Permafrost compressibility during thawing and construction problems. Khrustalev, L.N., et al, (1987, p.221-227, rus) 43-3386

Bibliography on building in cold climates. (1985, 7p, eng) 43-3506

Laying masonry in cold weather. Suprenant, B.A., (1988, p.388-391, eng) 43-3987

Problems of phase change in polar engineering. Aguirre-Puente, J., (1989, 23p., fre) 43-4028

Architecture of arctic regions: a selected bibliography. White, A.G., (1987, 7p., eng) 43-4387

Notes on Norwegian arctic road construction techniques. Johansen, N.I., et al, (1988, p.26-29, eng) 43-4496

Ice runways near the South Pole. Swithinbank, C., (1989, 42p., eng) 43-4598

Cold weather operation

Methods of determining service life of equipment in the Far North. Malinovskiĭ, N.S., et al, (1987, p.29-32, rus) 43-105

Proceedings. (1987, var.p., eng) 43-218

Winter knowledge and winter data. (1985, 329p., swe) 43-355

Need for winter data in Sweden; and inquiry. Mellander, N., (1985, p.23-29, swe) 43-356

Winter knowledge in the Swedish forestry. Scholander, J., (1985, p.50-53, swe) 43-360

Trafficability in snow and ice in Sweden. Wangel, G., (1985, p.72-74, swe) 43-362

Measurement and evaluation of tire performance under winter conditions. Blaisdell, G.L., (1985, p.198-228, eng) 43-374

Mobility of different forest machines in snow. Sirén, M., et al, (1985, p 229-239, swe) 43-375

U.S. Marine Corps cold weather combat operations study, (1980, var.p., eng) 43-439

Cold weather tips for construction equipment. (1988, p.53, eng) 43-503

Arctic and Arctic-related environmental sciences; Proceedings, Vol.I. (1987, 371p., eng) 43-847

Corps of Engineers research in the Arctic. Smallidge, P.D., et al, (1987, p.81-87, eng) 43-848

Aircraft operations in the Arctic. DenHartog, S.L., (1987, p.271-272, eng) 43-861

Mobility working group report. Blaisdell, G.L., et al, (1987, p.273-274, eng) 43-862

Methods of risk analysis. Bercha, F.G., (1987, p.305-333, eng) 43-910

Improving transportation in the Yakut ASSR Belinskiĭ, B.V., (1987, p.31-54, rus) 43-1384

Engine heaters: benefits and maintenance. (1988, p.66, eng) 43-1450

International Conference on Air Cushion Technology, Montreal, 1987. (1988, 381p., eng) 43-1747

Survey of hovercrafts in the USSR. Zelitskaya, P.V., (1988, p.5-16, eng) 43-1748

Design and operation of ACV lightering barges IAkonovskiĭ, S.V., (1988, p.147-162, eng) 43-1756

Deck variant of AP1.88 for the Canadian Coast Guard. Leonard, J., (1988, p.185-211, eng) 43-1758

History of designing, building and operating Gepard amphibious hovercraft. Martynov, I.A., (1988, p.221-240, eng) 43-1759

Portable digital data-acquisition system for surface-based ice-radar studies. Jacobel, R.W., et al, (1988, p.349-354, eng) 43-1992

Fire hydrant winter maintenance program for Anchorage. Wolf, T.S., et al, (1989, p.179-187, eng) 43-2101

Ice buildup in tailing basins. Barr, D.W., (1989, p.202-214, eng) 43-2103

SNOW III WEST field experiment report. Volume I. Lacombe, J., et al, (1988, 170p, eng) 43-2121

Problems of mobile buildings in the North. (1986, 112p., rus) 43-2195

Forecasting and control of the thermal regime in mine shafts. Galkin, A.F., ed, (1987, 67p., rus) 43-2284

Regulating the thermal regime in highly mechanized placer mines in the North. Kiselev, V.V., et al, (1987, p.40-43, rus) 43-2287

Problems in safety technology in the management of underground mining explorations under permafrost conditions, with regard to the temperature factor. Voronov, E.T., (1987, p.44-48, rus) 43-2288

Problem of protecting ventilator facilities of mines in the North against freezing. Afanas'ev, V.P., et al, (1987, p.50-54, rus) 43-2290

Applying physical and chemical methods to operating a coal mine in disturbed zones under permafrost conditions. Vasiuchkov, IU.F., et al, (1987, p.54-57, rus) 43-2291

Proceedings. (1982, var. p., eng) 43-2802

Technique of drilling blastholes in frozen rocks. Strabykin, N.N., (1989, 171p., rus) 43-3064

Operation and safe driving of amphibious vehicles. Stepanov, A.P., et al, (1988, 318p., rus) 43-3065

Precise radar integrated navigation system (NAVFIX) for coastal and inshore navigation. Lyall, R.G., et al, (1988, var.p., eng) 43-3210

Proceedings. (1983, 740p., eng) 43-3412

Inspection of the Tanana River pipeline bridge. Christopherson, A., et al, (1983, p.362-374, eng) 43-3419

Transport and unloading of ballast materials during subzero temperatures. Terekhin, L.N., et al, (1989, p.28-29, rus) 43-3535

Machinery maintenance in subzero temperatures. IAkuntsev, M.M., et al, (1988, p.11-13, rus) 43-3540

Cold weather handbook for surface ships. (1988, c 236p, eng) 43-3620

Preliminary design guide for arctic equipment. Walsh, M.R., et al, (1989, 35p., eng) 43-3894

Resistively heated metal monolith as a cold start assist. Piotrowski, G.K., (1988, 21p., eng) 43-3971

Heat-removal characteristics of concentric-tube thermosyphon and heat pump. Fukusako, S., et al, (1989, p.233-238 eng) 43-4218

Making sensitive data collection instruments work in the Arctic. Seiler, J.H., (1988, p.33-36, eng) 43-4497

Air instead of water used in sub-arctic line testing. Smith, J.D., et al, (1988, p.11-12, eng) 43-4531

Transmission levels required to defeat thermal imaging systems in winter. Farmer, W.M., et al, (1986, p.3-10, eng) 43-4622

Use and application of PRESTO in Snow-III West. Stallings, E.S., et al, (1986, p.11-24, eng) 43-4623

Cold weather performance

Performance of quarry excavators, with variable drive loading regimes in the North. Makhno, D.E., (1988, p.70-72, rus) 43-690

Structural fiber composite materials for cold regions. Dutta, P.K., (1988, p.124-134, eng) 43-873

Effects of cold weather on a natural gas pipeline. Ney, S.C., et al, (1988, p.749-763, eng) 43-1336

Specification and acquisition of AP1.88 by the Canadian Coast Guard. Melhuish, T.F., (1988, p.163-184, eng) 43-1757

Materials for pavements at low temperature. Roque, R., et al, (1987, p.130-167, eng) 43-1861

Anaerobic filter treatment of septic tank effluent at low temperatures. Viraraghavan, T., et al, (1989, p.131-140, eng) 43-2096

Effect of low temperature on the functioning of metal structures in the North. Trumbachev, V.F., et al, (1987, p.17-19, rus) 43-2262

U.S. naval landing craft, air cushion LCAC-008, cold weather tests. Ehrhardt, J., (1989, p.141-178, eng) 43-2438

Strength of metals used at low temperatures. Solntsev, IU.P., ed, (1987, 168p, rus) 43-2447

Development of composite cold-resistant and durable steels. Volchok, I.P., et al, (1987, p.5-10, rus) 43-2448

Technical demands of cold-resistant cast steel for payloader's wheels. Gol'dbukht, E.E., et al, (1987, p.10-12, rus) 43-2449

Improved cold-resistant steel. Bernshteĭn, M.L., et al, (1987, p.12-20, rus) 43-2450

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IAHR Symposium on Ice, 9th, 1988. (1988, 3 vols., eng) 43-2906
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Repair and protection of piles in hydraulic structures. Nikitin, P.P., (1988, p.55-56, rus) 43-896
Expert system countermeasures for snow accretion on transmission lines. Nara, K., et al, (1988, p.1052-1058, eng) 43-1317
All-Union Conference on Avalanches, 2nd, Yangiabad, USSR, May 1985. Proceedings. (1987, 439p., rus) 43-2493
Computer-controlled avalanche protection. Rzhevskiĭ, B.N., et al, (1987, p.154-163, rus) 43-2514
Current status of research on engineering protection from avalanches. Diunin, A.K., et al, (1987, p 283-294, rus) 43-2531
Classification of anti-avalanche measures. Zhigul'skiĭ, A.A., et al, (1987, p.317-327, rus) 43-2535
Protecting the Novokuznetsk-Abakan railroad from snow avalanches. Kvon, IA.D., et al, (1987, p.328-333, rus) 43-2536
Preventive avalanche triggering along railroads of the USSR. Gerber, A.R., (1987, p.337-339, rus) 43-2538
Preventive triggering of snow avalanches. Isaev, A.A., (1987, p.340-342, rus) 43-2539
Frost destruction and its prevention of reservoir revetment in plain area. Sui, X.Z., (1988, p.493-501, eng) 43-2948
Ice jams and breakup: problems, progress and prospects. Gerard, R., (1988, p.26-46, eng) 43-3022
Ice jams at a lake: the situation at Hay River, Northwest Territories, Canada. Gerard, R., et al, (1988, p.157-167, eng) 43-3029
Counter-avalanche rack in France. Giry, E., et al, (1988, p.13-24, fre) 43-3206
New icing prevention methods in folded mountain regions. Afanasenko, V.E., et al, (1987, p.253-260, rus) 43-3390
Minimizing snow accumulation around the entrance of a building. Dickey, R., et al, (1989, p.243-255, eng) 43-3569
Wind deflection fins for the control of snow on roofs. Williams, C.J., (1989, p.307-314, eng) 43-3575
Portable animal protection shelter and wind screen. Jairell, R.L., et al, (1988, p.170-173, eng) 43-4011
Safeguarding cooling towers against moisture and freezing. Duzhikh, F.P., et al, (1988, p.52-55, rus) 43-4100
Urban planning and design in Norilsk. Bond, A.R., (1988, p 295-318, eng) 43-4250
Ice formation in frequently transited navigation channels. Huang, H.P., (1989, 227p., eng) 43-4574
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Crack propagation
Development of cryogenic inner fractures in massive permafrost. Gevorkian, S.G., (1988, p.55-62, rus) 43-592
Mechanics of destruction and some problems of ice destruction. Gol'dshteĭn, R.V., et al, (1987, 41p. + appends., eng) 43-719
International Congress on Experimental Mechanics, 6th, 1988, (1988, 1278p. (2 vols.), eng) 43-977
Growth and closure of cracks in steels at low and high temperatures. Ogura, K., et al, (1988, p.1267-1272, eng) 43-980
Tensile strength of ice containing cracks; final report. Schulson, E.M., (1988, 7p., eng) 43-1701
Effective-medium theory for fracture of fractal porous media. Cook, R.F., (1988, p.47-49, eng) 43-1744
Tensile strength of cracked ice. Schulson, E.M., et al, (1989, p.303-311, eng) 43-2242
Growth of radial cracks in ice sheets. Cocks, A.C.F., (1989, p.7-12, eng) 43-2603
Crack nucleation in polycrystalline ice under compressive stress states. Kalifa, P., et al, (1989, p.13-21, eng) 43-2604
Mechanics of the multidirectional microcracking of ice. Santaoja, K., (1989, p.55-65, eng) 43-2610
Estimate of the size of the damage zone beneath an indenter on ice. Parsons, B.L., (1989, p.411-417, eng) 43-2652
Thermal contraction and crack formation in frozen soil. Al-Moussawi, H.M., (1989, 243p., eng) 43-2892
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Cracking (fracturing)
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Recent frost fissuring in a coastal area of southwestern Sweden. Svensson, H., (1988, p.271-277, eng) 43-930
Stress intensity factors of cracked plates under thermal load. Matsumoto, E., et al, (1988, p.65-70, eng) 43-978
Strength of thawed and frozen dam soils under stress. Vasil'ev, I.M., et al, (1988, p.27-33, eng) 43-1087
Higher frequency ambient noise in the Arctic Ocean. Lewis, J.K., et al, (1988, p.1444-1455, eng) 43-1209

Road reinforcement with geosynthetics Kinney, T., et al, (1988, p.17-18, eng) 43-1463
Cryogenic cracks on pavements. Kazantsev, V V, (1985, p.53-60, rus) 43-1657
Crack-enhanced creep in polycrystalline material. Sinha, N.K., (1988, p 4415-4428, eng) 43-1792
Low-temperature cracking of asphalt pavements. Haas, R.C.G., et al, (1988, p.290-319, eng) 43-1857
HVS-aided validation of pavement behavior at low temperatures. Hugo, F., et al, (1987, p.168-197, eng) 43-1862
Comprehensive study of cold climate airport pavement cracking. Haas, R., et al, (1987, p.198-245, eng) 43-1863
Mechanical properties of bitumen. Rosengren, A., (1986, 60p. + append., swe) 43-1878
Asphalt pavement crack control at Fairbanks International Airport. Esch, D.C., et al, (1989, p.59-69, eng) 43-2089
Performance of pavement at Central Wisconsin Airport. Stark, J., et al, (1989, p.92-103, eng) 43-2092
Temperature effect on steel crack resistance. Kashtalian, IU.A., et al, (1987, p.111-115, rus) 43-2460
Holographic study of frost damage. Rastogi, P.K., et al, (1988, p.142-143, eng) 43-2588
Thermal contraction and crack formation in frozen soil. Al-Moussawi, H.M., (1989, 243p., eng) 43-2892
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Cracks
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Use of low viscosity asphalts in cold regions. Janoo, V.C., (1989, p.70-80, eng) 43-2090
Dimensioning frost protection in roads—demi-risk analysis by VTI method. Stenberg, L., (1989, p.831-837, eng) 43-3151
Water escape fissures resembling ice-wedge casts in outwash. Burbridge, G.H., et al, (1988, p.33-40, eng) 43-3702
Cracking of roof felt caused by an ice-cover. Cederwall, K., et al, (1989, p.796-807, eng) 43-3778
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Creep
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Crevasses
Internal geometry and evolution of moulins, Storglaciären, Sweden. Holmlund, P., (1988, p.242-248, eng) 43-171
Can relict crevasse plumes on antarctic ice shelves reveal a history of ice-stream fluctuation MacAyeal, D R, et al, (1988, p.77-82, eng) 43-1948
Transient behavior of ice stream B and Crary Ice Rise, West Antarctica. Bindschadler, R.A., et al, (1987, p.66-67, eng) 43-2735
Flow of ice streams B and C. Whillans, I.M., (1987, p 67-68, eng) 43-2736
Glacier variations in the French Alps and their effect on the glacial area. Reynaud, L., (1988, p.3-12, fre) 43-3205
Tensor algebra modeling of glacier crevassing. Ivanov, A.I., (1988, p.33-37, rus) 43-3252

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Crude oil
Thermal cross section for the permafrost and hydrate stability zones in the Kuparuk and Prudhoe Bay oil fields. Lachenbruch, A.H., et al, (1988, p.48-51, eng) 43-511
Absorption of crude oil and petroleum products by peat soils. Brattsev, A.P., (1988, p.29-35, rus) 43-1537
Oil production in the Arctic National Wildlife Refuge. (1989, 123p., eng) 43-2590

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Cryobiology
Nutrient regimes in the marginal ice zone of the Greenland Sea in summer. Spies, A., et al, (1988, p.195-204, eng) 43-455
Effects of river plume on sea-ice meiofauna in Hudson Bay. Grainger, E.H., (1988, p.131-141, eng) 43-1487
Ice nucleation and crystallization in water-glycerol mixtures. Vigier, G., et al, (1987, p.345-354, eng) 43-1566
Microalgae at the ice edge in the northern Weddell Sea. Fryxell, G.A., (1988, p.166-168, eng) 43-1636
Microheterotrophs in the ice edge zone: an AMERIEZ study. Garrison, D.L., et al, (1988, p.169-171, eng) 43-1637
Physical control of arctic ice algal production. Cota, G.F., et al, (1989, p.111-121, eng) 43-2403
Actinomycetes from inside the central antarctic ice sheet. Abyzov, S.S., et al, (1987, p.15-20, eng) 43-2409
Bacteria in pack-ice north of Elephant Island (BIOMASS III, October 1986). Zdanowski, M.K., (1988, p.203-216, eng) 43-2770
Photoadaptation of sea-ice microalgae in springtime. Michel, C., et al, (1988, p.177-185, eng) 43-2839
Effects of low temperatures on biological systems. Grout, B.W.W., ed, (1987, 500p., eng) 43-3979
Physico-chemical principles in low temperature biology. Taylor, M.J., (1987, p 3-71, eng) 43-3980
Freezing and cellular organization. Grout, B.W.W., et al, (1987, p.147-173, eng) 43-3981
Low temperature and biological electron microscopy. Skaer, H.B., (1987, p.177-233, eng) 43-3982
Higher plants at freezing temperatures. Grout, B.W.W., (1987, p 293-314, eng) 43-3983
Photosynthetic responses of sea-ice microalgae to temperature change. Michel, C., et al, (1989, p.437-442, eng) 43-4289
Sediment fluxes beneath fast ice: October 1986 through February 1987. Dunbar, R.B., et al, (1989, p.112-115, eng) 43-4437
Microbiological studies of ice cores from deep holes of Central Antarctica. Abyzov, S.S., et al, (1989, p.86-91, rus) 43-4546

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Cryogenic soils
Microelement content in soils of south taiga. Vorotiukhina, I.I., (1987, p.342-350, rus) 43-29
Origin, chemistry and biology of soils in Primorye and the Amur region. Ivanov, G.I., ed, (1987, 196p., rus) 43-37
Cryogenic taiga soils of the Selemdzha River basin. Rybachuk, N.A., et al, (1987, p.40-50, rus) 43-38
Color differentiation of profiles of brown taiga soils in the BAM zone. Mikhallova, N.A., et al, (1987, p 82-88, rus) 43-39
Scientific and technological progress and economic development in the Murmansk region. Sakharina, L.A., ed, (1987, 113p., rus) 43-104
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Vegetation of Mabel and Hooker islands (Franz-Josef Land archipelago) Safronova, I.N., (1987, p.261-272, eng) 43-130
Man-induced activation of exogenic processes in taiga. Evseeva, N.S., (1987, p.292-299, eng) 43-133
Solifluction effluents at the Yamal Peninsula. Grigor'ev, N.F., et al, (1988, p.43-46, rus) 43-524
Role of frost-related processes in topographic changes. Liubtsova, E.M., (1988, p 55-61, rus) 43-526
Radiation properties of some natural and disturbed ground covers in the Yamal Peninsula. Sergeev, B.P., (1988, p.61-70, rus) 43-527
Frost heave investigations in the Chabydinskiy research station. Katkov, A.V., et al, (1988, p.77-83, rus) 43-529
Ecology and practice. Ivantsov, O.M., (1988, p 28-32, rus) 43-566
Heat balance structure of forest landscapes in West Siberia. Abdullaev, A.A., (1988, p.321-326, rus) 43-568
Physical, chemical and mechanical bases of cryolithogenesis. Ershov, E.D., (1987, p 54-66, rus) 43-687
Discussions on environmental protection in the North. Solomonov, N.G., (1987, 176p., rus) 43-716
Renewal of forest resources in eastern Transbaikal. Bobrinev, V.P., et al, (1988, 113p., rus) 43-717
Soils of Predbaykal'e and northern Transbaikal. Kuz'min, V.A., (1988, 174p., rus) 43-1089
Morphology of forest soils on the Kola Peninsula. Nikonov, V.V., et al, (1988, p.68-76, eng) 43-1119
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Soil toposequences in Carbon County, Wyoming: pedogenic processes in a semi-arid region. Evans, C.V., (1988, 178p., eng) 43-1914
Ice content and thermal properties of cryoturbated soils. Van Vliet-Lanoë, B., (1988, p.119-135, fre) 43-2299
Geocryology of the USSR: Central Siberia. Ershov, E.D., ed, (1989, 413p., rus) 43-3615
All-Union conference "Soil cryogenesis theory," 5th, Pushchino, Feb. 6-10, 1989. Abstracts. (1989, 114p., rus) 43-3976
Cryogenic heaving in seasonal and perennial freezing of soils. Nevecheria, V.L., (1989, p.58-65, rus) 43-4613

Cryogenic structures
Microstructure of frozen rocks. Ershov, E.D., et al, (1988, 182p., rus) 43-285
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Cryogenics
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Crystal defects
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Corps of Engineers Structural Engineering Conference, 1988. [1989, 2 vols, eng] 43-4406
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Studying changes in geological media due to building large hydraulic structures. Varga, A.A., et al, [1988, p.139-152, rus] 43-739
Field studies of the solidity of tall concrete structures. Durcheva, V.N., [1988, 120p., rus] 43-740
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Chemical undermining in foundations of dams. Tetel'min, V.V., et al, [1987, p.38-42, rus] 43-1391
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Ice cover formation downstream of a reservoir. Ashton, G.D., [1988, p.189-198, eng] 43-2992
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Windy Gap Project streamflow forecasting. Eckhardt, J.R., et al, [1985, p.54-62, eng] 43-4268
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Danube River
Characteristics of ice conditions based on aerial photography. Starosolszky, O., et al, [1988, p 611-622, eng] 43-2959

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Checking the floe of ice: real-time processing of digital image data. Ramsay, B R, et al, [1988, p.17-20, eng] 43-1573
Indicators of physical processes in permafrost. Kitaev, V.V., [1988, p.53-58, rus] 43-1600
Comparison of results from transit satellite tracking. McDonald, J., et al, [1988, p.83-88, eng] 43-1949
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Algorithms for automated forecasting of avalanche hazard. Belima, A.S., et al, [1987, p.163-166, rus] 43-2515
Installation of automatic well temperature measuring system. Judge, A., et al, [1989, p.89-94, eng] 43-2591
Setting up the second phase of the automated information system of the National Water Inventory "Hydrology-glaciers". Antonova, E.B., et al, [1988, p.120-125, rus] 43-2689
Automation of radar measurements of the thickness of sea ice. Bogorodskiĭ, V V, et al, [1987, p.982-985, eng] 43-2844
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Mathematical processing of radio echo surveys of glaciers. Kuz'michenok, V.A., et al, [1988, p.151-155, rus] 43-3322
Automated avalanche forecasting in Kazakhstan. Kolesnikov, E.I., et al, [1988, p.165-171, rus] 43-3325
Report of the Arctic Environmental Data Workshop. Laughlin, T.L., comp, [1988, var. p., eng] 43-3363
Estimating snowpack distribution by pattern recognition. Leu, C.H., [1989, 220p., eng] 43-3611
Choosing between some incompatible regional surface-mass-balance data sets in Antarctica. Giovinetto, M.B., et al, [1989, p.7-13, eng] 43-3614
QuickDraw data structures for image processing LaPotin, P.J., et al, [1989, 17p, eng] 43-3676
NOAA data processing system. Takabe, H., et al, [1989, p.73-87, jpn] 43-3704
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Role of microcomputers in data acquisition and analysis. Anderson, R.K., et al, [1987, p 88-96, eng] 43-3931
Microcomputer-based watershed-modeling and data-management system. Leavesley, G.H., et al, [1987, p.108-117, eng] 43-3933
Graphics system for SNOTEL data. Grimsted, L.A., [1987, p.154-157, eng] 43-3940
Construction of a United States historical snow data base. Robinson, D.A., [1988, p.50-59, eng] 43-4116
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Polar Floats Program. Manley, T.O., et al, [1989, p.186-194, eng] 43-3514
Autonomous ocean profiler: a current-driven oceanographic sensor platform. Echert, D.C., et al, [1989, p.195-202, eng] 43-3515
Instrument frame for measuring turbulence and internal waves in the Arctic. McPhee, M.G., [1989, p.203-207, eng] 43-3516
Position measurements with radiosondes. Tüg, H., [1989, p.208-210, eng] 43-3517
Modification and deployment of hand-deployed long-life sonobuoys. Horsley, L.E., [1989, p.211-220, eng] 43-3518
SMART transmission support at SNOW IV. Bean, B.L., et al, [1989, p.33-80, eng] 43-4303

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See also: Age determination

Deception Island
Calving ice walls. Hughes, T., [1989, p.74-80, eng] 43-3337

Decomposition
Decomposition of Alaska tundra soils. Linkins, A.E., [1986, 10p., eng] 43-881
Effect of snow on litter decomposition and nutrient leaching. Knight, D.H., et al, [1975, p.215-224, eng] 43-1365
Decomposition of plant residues and humus formation in the Khibiny Mountains. Pereverzev, V.N., [1988, p.48-57, eng] 43-2193

Decontamination
Decontamination of chemical agents on the winter battlefield. Parker, L.V., [1988, 48p., eng] 43-427

Defects
Lattice defects in ice crystals—X-ray topographic observations. Higashi, A., ed, [1988, 156p., eng] 43-1413
Stacking faults in ice crystals. Oguro, M., et al, [1988, p.49-67, eng] 43-1416
Interactions between dislocations and point defects in ice crystals. Oguro, M., et al, [1988, p.97-128, eng] 43-1418
See also: Crystal defects

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Deformation
Tunnel displacements under freezing and thawing conditions. Meissner, H., [1988, p.285-293, eng] 43-89
Volume change behavior of frozen sands. Youssef, H., [1988, p.49-64, eng] 43-147
Influence of water-saturation techniques on temperature deformations of freezing concrete. Almazov, V.O., et al, [1986, p.162-169, rus] 43-733
New achievements in foundation construction on peat and weak ground (according to materials of the Baltic International Conference). Svetinskiĭ, B.V., [1988, p.28-30, rus] 43-815
Design of hydraulic earth structures and methods of determining soil properties. Kartelev, B.G., ed, [1987, 120p., rus] 43-1178
Effect of a decrease in deformation characteristics of materials on the stress-strain state of earth dams. Burman, G.V., [1987, p.9-12, rus] 43-1180
Differential flow model for polycrystalline ice. Sunder, S.S., et al, [1989, p 45-62, eng] 43-1578
Stability of structures on permafrost. Babello, V.A., et al, [1985, p.25-31, rus] 43-1652
Calculation of stresses and deformations in flat foundations. Mirenkov, V.E., et al, [1985, p.104-110, rus] 43-1665
Preliminary results from simulation of retaining wall displacement by frost action. Li, Y., et al, [1989, p.389-396, eng] 43-2119
Visco-plasticity of soils and design of structures. Zaretskiĭ, IU.K., [1988, 349p., rus] 43-2281
Influence of the temperature range on the stress-deformed condition of the permafrost massif of the "Kuvet" formation. Kovlekov, I.I., [1987, p.48-50, rus] 43-2289
Establishment of a permafrost service. Dement'ev, A.I., [1988, p.119-121, rus] 43-2413
Driving forces of moisture migration with cryogenic deformation. Lebedenko, IU.P., [1988, p.3-13, rus] 43-2414
Deformations and strains in grounds subjected to freezing out and thawing. Ershov, E.D., et al, [1989, p.425-433, eng] 43-3118
Study on deformation features of frozen coarse sand. Shusherina, E.P., et al, [1987, p.227-237, rus] 43-3387
Deformation features of saline soils. Maslov, A.D., [1987, p.237-243, rus] 43-3388
Engineering geophysics. Liakhovitskiĭ, F.M., et al, [1989, 251p., rus] 43-3706
Deformation properties of frost resistant concrete with PAV admixtures. IAnbykh, N.N., [1988, p.9, rus] 43-3851
Evaluating thermo-stressed conditions of road asphalt at low temperatures. Gubach, L.S., [1989, p.101-105, rus] 43-3859
Analysis of heave processes in freezing ash slag materials. Ogarkov, A.A., et al, [1988, p.12-17, rus] 43-4099
See also: Ice deformation; Plastic deformation; Rheology; Snow deformation

Defrosting
Freezing and defrosting of cargo Lepnev, M.I., et al, [1988, 141p., rus] 43-3063

Degradation
On the design of polymeric composite structures for cold regions applications. Lord, H.W., et al, [1988, p.435-458, eng] 43-303
Disintegration of frozen granular materials using high pressure water jets. Skudrzyk, F.J., et al, [1989, p.320-334, eng] 43-2113
Iceberg/seabed interaction events observed during the DIGS experiment. Lever, J.H., et al, [1989, p 205-220, eng] 43-2629
Predictions of airfoil aerodynamic performance degradation due to icing. Shaw, R.J., et al, [1988, 16p., eng] 43-3967

Degree days
Derivation of positive-degree-days factor in West Greenland. Ambach, W., [1988, p.217-224, eng] 43-2015
Heat balance characteristics and ice ablation, western EGIG-profile, Greenland. Ambach, W., [1988, p.59-69, eng] 43-2128
Snowmelt rate methods used in forecasting runoff from mountains. Ferner, S., et al, [1985, p.107-116, eng] 43-4274

Deicing
See also: Ice removal

Deltas
Fan-delta sedimentation in a Spitsbergen fjord. (Volumes I and II). Evans, R., [1988, 738p., eng] 43-344
Cryomorphogenesis in topographic evolution of river estuaries in Holocene. Grigor'ev, M.N., [1988, p.22-28, rus] 43-521
Water temperature and ice in Danube River delta. Min'kovskaia, R.IA., [1988, p.86-94, rus] 43-2392
Sea level history and evolution of Brazilian coast. Dominguez, J.M.L., et al, [1987, p.115-127, eng] 43-3400
Sea level and delta sedimentation in Louisiana. Wells, J.T., [1987, p.157-166, eng] 43-3403
Ice jamming characteristics of the Mackenzie Delta, N.W.T. Bigras, S.C., [1988, p.129-139, eng] 43-4123

Dendritic ice
Dendrites, viscous fingers, and the theory of pattern formation. Langer, J.S., [1989, p.1150-1156, eng] 43-1819
Dendritic crystal growth with convection in the melt. Ananth, R., [1989, 162p., eng] 43-3609

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Denmark
Design of the Great Belt western bridge for ice forces Christensen, F.T., et al, (1989, p.365-376, eng) 43-2647
Dynamic ice loads on the Great Belt Western Bridge. Christensen, F.T., et al, (1989, p 453-466, eng) 43-3748
—Jutland
Glacial and sea-level generation of spit in Jutland. Bruun, P., (1989, p.18-30, eng) 43-3709
Density (mass/volume)
Frozen gravel: a study of compaction and thaw-settlement behavior Haas, W M., et al, (1989, p.308-319, eng) 43-2112
Firn core data from eastern Wilkes Land. Goodwin, I.D., (1988, 74p., eng) 43-2145
Density functional theory of freezing with a self-consistent effective liquid. Baus, M., (1989, p.3131-3134, eng) 43-4620
See also: Atmospheric density; Ice density; Snow density
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Deposits
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See also: Permafrost depth, Snow depth
Depth hoar
Transformation in polar firn. Alley, R.B., (1987, 413p, eng) 43-474
Thin sections, serial cuts and 3-D analysis of snow. Good, W., (1987, p.35-48, eng) 43-1216
Seasonal depth hoar and avalanches in Western China Wang, Y.L., (1988, p.173-180, chi) 43-2851
Isotopic composition in Queen Maud Land deposits. Satake, H., et al, (1986, p.57-69, jpn) 43-3641
Desalting
Desalting of brines by the spray-cone ice freezing technique. Sosnovskii, A.V., (1987, p.143-149, rus) 43-247
Determining the intensity of ice accretion from brines when using spray-cones. Sosnovskii, A.V., (1987, p.149-154, rus) 43-248
Peculiarities of sea ice desalination in winter. Grishchenko, V.D., (1988, p.55-64, rus) 43-804
Distribution of brine drainage channels in sea ice. Kawamura, T., (1988, p.219-228, eng) 43-2995
Deserts
Vegetation of Mabel and Hooker islands (Franz-Josef Land archipelago). Safronova, I.N., (1987, p.261-272, eng) 43-130
Palynology in a polar desert, eastern North Greenland. Funder, S., et al, (1988, p.195-207, eng) 43-1034
Vegetation of the Soviet polar deserts. Aleksandrova, V.D., (1988, 228p., eng) 43-3627
Design
New types of ships and their seagoing qualities. Peresypkin, V.I., ed, (1987, 136p., rus) 43-30
Influence of ship hull forms on propulsion performance in calm and agitated seas. Tsoi, L.G., et al, (1987, p.14-19, rus) 43-31
Possibility of increasing the Arctic draught of "Noril'sk"-type ships according to ice-strake strength Karavanov, S.B., (1987, p.54-63, rus) 43-33
Nonsteady computed temperatures of the permafrost beds of structures with a cold basement. Gokhman, M.R., (1988, p.199-203, eng) 43-146
Nonsteady computed temperatures of the permafrost beds of structures with a cold basement. Gokhman, M.R., (1988, p.199-203, eng) 43-146
Interaction of shallow strip foundations and heaving soils. Sazhin, V.S., et al, (1988, p.129-133, eng) 43-214
Present state of the Ponneurgen dam. Biianov, G.F., et al, (1988, p.36-40, rus) 43-561
Ways of improving structural-technological methods of preventing brittle failure of steel structure junctions and elements. Kudrin, V G., et al, (1988, p.5-9, rus) 43-564
Analyzing the trends in the improvement of mounted rippers. Khmara, L.A., et al, (1988, p.108-112, rus) 43-591
Measuring thermophysical properties of conducting materials at low temperatures. Buravoi, S.E., et al, (1988, p.92-96, rus) 43-694
Design of grounding devices for 110-220 kV substations. Goncharov, V.N., et al, (1988, p.13-15, rus) 43-695
Ice loads and the requirements for hulls of icebreakers. Segal, Z., (1987, p.31-32, rus) 43-697
Extreme ice feature-structure interaction. Croasdale, K.R., (1987, p.233-277, eng) 43-908
Designing industrial pipelines for thawing ground. Klement'ev, A.F., (1988, p.73-77, rus) 43-1020
Cosmic neutron measurements linked to automatic weather stations. Vorob'ev, A.A., et al, (1987, p.49-51, rus) 43-1043
Developing the structure of the ice-breaking fleet for objectives of the national economy. Arikainen, A.I., (1988, p.99-103, rus) 43-1090
Design of arctic snow vehicles. Poole, P., (1988, 32p, eng) 43-2150
Dual rigidity of an anti-ice structure. Wang, Q.J., (1988, p.561-569, eng) 43-2954
Revolution in polar shipping—Thyssen/Waas in the Arctic. Varges, G., (1988, p.719-734, eng) 43-2968
Proceedings. (1983, 740p., eng) 43-3412
Influence of northern pipelines on river crossing design. Yaremko, E.K., et al, (1983, p.49-63, eng) 43-3413
Facility designs in the Arctic for the Kuparuk Pipeline System Manikian, V., et al, (1983, p.84-107, eng) 43-3415
Unified geotechnical engineering systems approach applied to Arctic pipeline planning and design. Vita, C L., et al, (1983, p.291-299, eng) 43-3416
Water supply lines in the Arctic and Subarctic. Haviland, R.A., (1983, p 694-703, eng) 43-3425
Compacted-snow runways: design and construction guidelines for Antarctica Russell-Head, D.S., et al, (1989, 68p., eng) 43-3474
Autonomous ocean profiler: a current-driven oceanographic sensor platform Echert, D C., et al, (1989, p.195-202, eng) 43-3515
Building design for heavy snow areas. Paine, J.C., (1989, p.483-492, eng) 43-3592
Extra high strength structural steels for ice breakers. Nordén, R., (1989, p.839-851, eng) 43-3782
Building the Swedish antarctic research station Wasa, Jan. 1989. Haugum, D., et al, (1989, p.983-990, eng) 43-3795
Offshore development in Cook Inlet, Alaska. Visser, R.C., (1989, p.1012-1022, eng) 43-3798
Data collection for design, the Alaskan experience. Hemsley, J.M., et al, (1989, p.1023-1031, eng) 43-3799
Icebreakers. (1986, var. p., eng) 43-3854
Heavy snow failures in the Sierra Nevada Mountains of California. Coen, C.C., et al, (1987, p.146-149, eng) 43-3938
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Designing mine supports in permafrost. Izakson, V.IU., et al, (1988, 122p., rus) 43-4037
Effective designs for foundations on permafrost. Goncharov, IU M., (1988, 191p., rus) 43-4038
Frost-protected shallow foundations. Morris, R.A., (1988, 136p. + appends., eng) 43-4165
Cities designed for winter. Mänty, J., ed, (1988, 384p, eng) 43-4235
Winter policies, plans and designs: the Canadian experience. Pressman, N., (1988, p.35-64, eng) 43-4237
Design of climate-adapted arctic settlements Zrudlo, L., (1988, p 85-109, eng) 43-4239
Review of Harbin's challenge to winter. Liu, D., (1988, p.113-129, eng) 43-4240
Winter factor in Finnish urbanism. Mänty, J., (1988, p.133-144, eng) 43-4241
Mongolia, land of the herders under change. Erat, B., (1988, p.223-241, eng) 43-4245
Urban planning and design in Norilsk. Bond, A.R., (1988, p.295-318, eng) 43-4250
Architecture and urban design in Sweden. Eek, H., (1988, p.321-346, eng) 43-4251
Roof design in cold regions. Tobiasson, W., (1989, p.1029-1037, eng) 43-4412
Controlling wear on hydraulic installations Bezinge, A., (1988, p.303-328, fre) 43-4443
Air instead of water used in sub-arctic line testing. Smith, J.D., et al, (1988, p.11-12, eng) 43-4531
Design criteria
Air cushion vehicles for Arctic operation. Koleser, J., et al, (1988, p.59-71, eng) 43-1425
Practical code formats for reliability based design of transmission structures. Peyrot, A.H., et al, (1987, p.89-100, eng) 43-1588
Computer program for the reliability analysis of transmission lines. Peyrot, A.H., et al, (1987, p.223-230, eng) 43-1591
Use of probability techniques in the design and uprating of transmission lines in Hydro-Quebec Ghannoum, E., et al, (1987, p.535-547, eng) 43-1593
Ice pack conditions drive production, transport design. LeBlanc, L., (1989, p.26-28, eng) 43-2185
Design formulas in building codes for avalanche-resistant structures. Andreev, IU.B., et al, (1987, p.357-362, rus) 43-2542
Local ice loads and design of offshore structures. Iyer, S.H., (1989, p.1-57, eng) 43-2813
Global design load selection for arctic mobile drilling platform. Kamesaki, K., et al, (1988, p.371-384, eng) 43-2937
Design procedures for detachable platforms located in iceberg infested areas. Waegter, J., et al, (1988, p.451-462, eng) 43-2944
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Influence of northern pipelines on river crossing design Yaremko, E.K., et al, (1983, p.49-63, eng) 43-3413
Arctic pipeline river crossings—design trends and lessons learned. Veldman, W.M., (1983, p.70-83, eng) 43-3414
Modified reel method for subsea arctic pipelines. Bryce, P.W., et al, (1983, p.486-499, eng) 43-3421
Design of single pile supports for arctic pipelines. Bird, H.W.K., et al, (1983, p.525-540, eng) 43-3423
Analysis of overhead transmission structures by probabilistic methods. Krishnasamy, S.G., (1987, p.417-425, eng) 43-3482
Global and local ice loads for structure design. Allyn, N., (1988, p.13-22, eng) 43-3497
Bibliography on building in cold climates. (1985, 7p., eng) 43-3506
Standards for snow loads. Apeland, K., (1989, p.385-402, eng) 43-3583
Developing the Eurocode. Judge, C.J., (1989, p.403-412, eng) 43-3584
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Snow loads on roofs in East European standards. Zuranski, J.A., (1989, p.419-428, eng) 43-3586
Mission-based approach in modern icebreaker design. Soininen, H., (1989, p.764-773, eng) 43-3775
Environmental conditions and platform design criteria for the Barents Sea. Eriksen, K., et al, (1989, p 896-907, eng) 43-3787
Technical and economic feasibility of platform systems in iceberg infested areas. Olsen, K.B., et al, (1989, p.918-929, eng) 43-3789
Icebreakers. (1986, var. p., eng) 43-3854
Preliminary design guide for arctic equipment. Walsh, M.R., et al, (1989, 35p., eng) 43-3894
Designing structures for snow loads. Sack, R.L., (1987, p.97-107, eng) 43-3932
Slide rule for snow fence design. Tabler, R.D., (1987, p.162-165, eng) 43-3942
Designing mine supports in permafrost. Izakson, V.IU., et al, (1988, 122p., rus) 43-4037
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Design issues for iceberg/structure interaction Lever, J.H., (1988, p.57-59, eng) 43-4169
Selection of mechanical properties for design. Gold, L.W., (1988, p.93-101, eng) 43-4172
Thermal engineering and structural foundations. Farouki, O.T., (1989, p.257-262, eng) 43-4220
Cities designed for winter. Mänty, J., ed, (1988, 384p., eng) 43-4235
Planning and building in Hammerfest. Börve, A.B., (1988, p.251-266, eng) 43-4247
Computer-aided structural modeling (CASM). Pace, M.E., et al, (1989, p.526-540, eng) 43-4409
Changes coming in snow load design criteria. Tobiasson, W., (1989, p.918-920, eng) 43-4410
Notes on Norwegian arctic road construction techniques. Johansen, N.I., et al, (1988, p.26-29, eng) 43-4496
Making sensitive data collection instruments work in the Arctic. Seiler, J.H., (1988, p.33-36, eng) 43-4497
See also: Building codes
Detection
Offshore ship-based search and rescue experiment using radar. Dawe, B., et al, (1987, 20p. + appends., eng) 43-680
Experimental and theoretical studies of acoustic-to-seismic coupling. Albert, D.G., (1988, p.19-31, eng) 43-1036
Analytical method for determining tetrazene in soil. Walsh, M.E., et al, (1988, 22p., eng) 43-1397
Over-the-horizon target detection from a floating platform. Khan, R.H., et al, (1989, p.221-228, eng) 43-2630
Single fiber measurements for remote optical detection of TNT. Zhang, Y., et al, (1989, 7p., eng) 43-3870
Locating buried utilities. Bigl, S.R., (1985, 48p., eng) 43-4589
Transmission levels required to defeat thermal imaging systems in winter. Farmer, W.M., et al, (1986, p.3-10, eng) 43-4622
Standard targets taken with military electro-optical systems Rice, J.E., et al, (1986, p.25-27, eng) 43-4624
Novel transmissometry at SNOW III West. Hanley, S.T., et al, (1986, p.129-139, eng) 43-4632
Effects of water and ice on the scattering of diffuse reflectors. Jezek, K.C., et al, (1986, p.259-269, eng) 43-4640
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Water quality during winter river navigation seasons Sletten, R.S., (1988, 56p., eng) 43-1201
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FT-IR spectroscopic study of proton transport and trapping in cubic ice. Wooldridge, P.J., (1988, 166p., eng) 43-1915
Polarized Raman spectra for ices Devlin, J P., (1989, p.1322-1329, eng) 43-2904

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Dielectric properties of KOH-doped D2O ice. Kawada, S., (1989, p.295-300, eng) 43-3829

Development
See also: Economic development, Land development; Landscape development; Natural resources

Dew point
Summer field season weather observations, West Gulkana Glacier and environs: 1986, 1987. Brazel, A.J., et al, (1988, p.123-142, eng) 43-2799

Diagenesis
Concerning the deposition and diagenesis of strata in polar firn. Alley, R.B., (1988, p.283-290, eng) 43-1982
Carbon cycle in anoxic marine sediments. Alperin, M.J., (1989, 241p, eng) 43-2133

Dictionaries
Glossary of permafrost and related ground-ice terms. Harris, S.A., et al, (1988, 156p, eng) 43-123

Dielectric properties
Bridge measurements of conductive dielectrics by layered capacitor. Gross, G.W., et al, (1988, p.387-396, eng) 43-1314
Dielectric properties of supercooled glycerol-water solutions. Huck, J.R., et al, (1988, p 627-638, eng) 43-1315
Eddy currents in heterogeneous mixtures. Mätzler, C., (1988, p.473-479, eng) 43-1321
Thickness-dependent electrical conduction of polycrystalline ice films Chrzanowski, J., (1988, p.1058-1060, eng) 43-1475
Microwave propagation through the melting layer at grazing angles of incidence Kharadly, M.M.Z., et al, (1988, p.1106-1113, eng) 43-1555
Low temperature properties of SF6 circuit breakers Landry, M., et al, (1988, p.1029-1035, eng) 43-1559
Protonic conductivity of heavily KOH-doped ice. Zaretskiĭ, A.V., et al, (1988, p.373-381, eng) 43-1711
Unfrozen water content of soils. Smith, M.W., et al, (1988, 11p., eng) 43-1844
Dielectric properties and microwave remote sensing. Singh, R.P., (1984, p.97-101, eng) 43-1929
Antenna pattern degradation by snow accretion on the reflector surface. Shimba, M., et al, (1988, p.871-874, eng) 43-2278
Measurement of statistical dielectric transmittance of snow. Vakalov, I.A., et al, (1988, p.3-8, rus) 43-2558
Investigations of dielectric properties of some frozen materials. Arcone, S.A., et al, (1989, 18p., eng) 43-3476
New relaxation process in KOH-doped ice single crystal. Kawada, S, et al, (1989, p.54-57, eng) 43-3828
Dielectric properties of KOH-doped D2O ice. Kawada, S., (1989, p.295-300, eng) 43-3829
Step frequency radar for determining the thickness of saline ice. Iizuka, K., (1984, var. p, eng) 43-4160
Electromagnetic properties of freshwater ice, sea ice, and snow. Lüdecke, C., (1986, 97p, ger) 43-4163
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Quickening of dielectric relaxation of ice Ih by doping. Kawada, S., (1988, p.3694-3697, eng) 43-4534
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Diesel engines
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Diffusion
Ice/water interface: a molecular dynamics simulation study. Karim, O.A., et al, (1988, p.6889-6896, eng) 43-1366
Numerical prediction of frost formation on cooled heat exchangers. Sami, S.M, et al, (1988, p.81-94, eng) 43-1457
See also: Ion diffusion; Self diffusion, Thermal diffusion, Turbulent diffusion; Vapor diffusion

Discontinuous permafrost
Mapping permafrost by electromagnetic induction. Kawasaki, K., et al, (1988, p.279-288, eng) 43-1348
Cryohydrogeological massifs with shallow, discontinuous freezing. Romanovskiĭ, V.E., et al, (1987, p.109-117, rus) 43-3375
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Dislocations (materials)
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Dislocations in artificially grown single crystals of ice. Oguro, M., (1988, p 27-47, eng) 43-1415
Generation, multiplication and motion of dislocations in ice crystals. Fukuda, A., et al, (1988, p 69-96, eng) 43-1417
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Observations of large-angle grain boundaries in ice crystals. Hondoh, T., (1988, p.129-146, eng) 43-1419
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Dispersions
Freeze-thaw coagulation. Kalousdian, S., (1980, 248p., eng) 43-475
Thermal regime of pipelines transporting coal-water suspensions in non-Newtonian rheological models. Ovsiannikov, V.M., (1988, p.51-52, rus) 43-551
Thixotropy of water-saturated soils, its nature and the determining factors (scientific review). Osipov, V.I., (1988, p.3-31, rus) 43-597

Disposal
See also: Snow disposal; Waste disposal

Distribution
See also: Permafrost distribution, Sea ice distribution; Snow cover distribution

Disturbances
See also: Atmospheric disturbances

Diurnal variations
Soil temperature and electric potential during diurnal and seasonal freeze-thaw. Outcalt, S.I., et al, (1989, p.37-43, eng) 43-1577
Air temperature variations over different surfaces in the West Gulkana Glacier valley. Brazel, A.J., et al, (1988, p.81-91, eng) 43-2795
Two electric potential signatures of serial diurnal frost. Outcalt, S.I., et al, (1988, p.354-360, eng) 43-2827
Formation mechanisms of a daily thermal regime of a cryogenic landscape surface. Bryksin, V.N., (1987, p.168-183, rus) 43-3382
Climate in southeastern Siberia and climatic aspects of exogenetic processes. D'iakonov, A.I., (1987, p 80-103, rus) 43-3660
Surveys of diurnal variations in small river flow during snowmelt. Kravchenko, V.V., (1987, p.104-142, rus) 43-3661
Snow compaction effects on nighttime freezing. Kattelmann, R., (1986, p.168-171, eng) 43-3919
Diurnal fluctuations in remote precipitation gage readings. Cooley, K.R., et al, (1987, p.10-19, eng) 43-3923
Climate and energy balance model for the arctic tundra. Szilder, K., et al, (1989, p.263-271, eng) 43-4221

Docks
Rebuilding infrastructure for pleasure boating. Wortley, C.A., et al, (1989, p.188-201, eng) 43-2102
Underwater observations of ice/structure interactions in small-craft harbors. Wortley, C.A., et al, (1989, p.930-942, eng) 43-3790
See also: Piers; Wharves

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See also: Pingos

Doped ice
Properties of EG/AD-model ice in VTT ice basin. Lehmus, E., (1988, p 661-668, eng) 43-652
Protonic conductivity of heavily KOH-doped ice. Zaretskiĭ, A.V., et al, (1988, p.373-381, eng) 43-1711
Alternate interpretation of the conductivity of HCl-doped ice. Devlin, J.P., (1988, p.5967-5968, eng) 43-2188
Reference strengths of sea ice based on total porosity. Häusler, F.U., (1988, p.77-91, eng) 43-2911
On confined compressive strength of urea-doped ice. Taguchi, Y., et al, (1988, p.92-98, eng) 43-2912
Model ice of the NKK Ice Model Basin. Narita, S., et al, (1988, p.782-792, eng) 43-2973
Fracture of freshwater and urea model ice. Bentley, D.L., (1989, 142p., eng) 43-3610
New relaxation process in KOH-doped ice single crystal. Kawada, S., et al, (1989, p.54-57, eng) 43-3828
Dielectric properties of KOH-doped D2O ice. Kawada, S., (1989, p.295-300, eng) 43-3829
Quickening of dielectric relaxation of ice Ih by doping. Kawada, S., (1988, p.3694-3697, eng) 43-4534

Drainage
All terrain swamp vehicles for peat industry. Korovitsyn, L.F., et al, (1988, p.14-16, rus) 43-1023
Slushflow activity in the Rana district, North Norway. Hestnes, E., et al, (1987, p.317-330, eng) 43-1241
Deep frost effects on a longitudinal edge drain. Allen, W.L., (1989, p.343-352, eng) 43-2115
Minimal river discharge of the Chulyma basin. Proskurina, G.V., (1988, p.67-74, rus) 43-2351
Problems of swamp hydrology. Novikov, S.M., ed, (1988, 152p., rus) 43-2461
Runoff from spring floods in swamps. Pakutin, A.V., (1988, p.82-86, rus) 43-2468
Runoff from drained swamps. Baliasova, E.L., et al, (1988, p.87-98, rus) 43-2469
Aeration of peat deposits in reclaimed swamps. Vorob'ev, P.K., (1988, p.99-113, rus) 43-2470
Perennial grasses in drained swamps. Novikov, S.M., et al, (1988, p.114-133, rus) 43-2471
Glacial history of inner Ross Embayment. Denton, G.H., et al, (1989, p.151-182, eng) 43-3164
Late Quaternary ice-surface fluctuations of Beardmore Glacier. Denton, G.H., et al, (1989, p.183-209, eng) 43-3165
Sedimentation and Quaternary glacial history of Marguerite Bay. Kennedy, D.S., et al, (1989, p.255-276, eng) 43-3168
Roof design in cold regions. Tobiasson, W., (1989, p.462-472, eng) 43-3590
Roof design in cold regions. Tobiasson, W., (1989, p.1029-1037, eng) 43-4412
See also: Runoff; Subglacial drainage; Subsurface drainage; Surface drainage

Drains
Unexpected soils problem fails to slow building project. Munn, W.D., (1988, p.52-53, eng) 43-2399

Dredging
Beaufort Sea cased gloryhole drilling. Gilbert, D., et al, (1989, p.451-458, eng) 43-2657

Drift
MIZEX: Ice floe trajectories through the Greenland Sea. Symonds, G., et al, (1985, 68p., eng) 43-286
Hindcast study of iceberg drift on the Labrador Coast. Banke, E.G., et al, (1984, 161p., eng) 43-448
Experience in and problems of marine pipeline construction. Grudnitskiĭ, G.V., et al, (1988, p.33-36, rus) 43-567
Probabilistic design for drifting Arctic ice features. Mizikos, J.P., et al, (1988, p.179-190, eng) 43-620
Acoustic remote sensing instruments for monitoring of polar drift ice. Kvinge, T., et al, (1988, p.485-493, eng) 43-642
Some ocean drift ice scaling ideas. Korsnes, R., (1988, p.647-659, eng) 43-651
Experimental determination of total pressure-ridge load on cylindrical structures. Belov, A.B., (1986, p.158-161, rus) 43-732
Role of sea ice in the dynamics of the Arctic climatic system. Subbotin, V.V., (1988, p.82-97, rus) 43-762
Program for the analysis of iceberg rolling. Peters, G.R., (1988, p.33-50, eng) 43-788
Role of the phase transformation heat of ice in the energy balance at the ocean-atmosphere interface. Lebedev, A.A., (1988, p.6-23, rus) 43-798
Studying and forecasting the development of anomalous ice phenomena. Kovalev, E.G., (1988, p.28-32, rus) 43-800
Experience in real-time forecasting of the relief, level and drift of ice in Arctic seas with a 6-8 day lead. Vanda, IU.A., et al, (1988, p.41-45, rus) 43-802
Beaufort Gyre ice trajectories Cornett, S., (1987, p.11-37, eng) 43-900
Loss, decay, and recent drift of ice islands. Sackinger, W.M., et al, (1987, p.53-66, eng) 43-902
Ultimate extreme ice feature: antactic icebergs. Thomson, R.B., (1987, p.369-371, eng) 43-914
Origin of the permanent transarctic current in the Arctic Ocean. Beliakov, L.N., (1988, p.441-443, rus) 43-1092
Numerical simulation of North Atlantic sea ice variability, 1951-1980. Walsh, J.E., (1985, p.43-46, eng) 43-1155
Sea ice, climate and Fram Strait. Hunkins, K., (1985, p.50-52, eng) 43-1157
Beaufort Sea Mesoscale Circulation Study—preliminary results. Aagaard, K., et al, (1988, 171p., eng) 43-1284
On mesoscale modelling of the dynamics and thermodynamics of sea ice. Lu, Q., (1987, 154p., eng) 43-1411
Some thoughts on the large-scale circulation of the Arctic Ocean. Aagaard, K., (1988, p.1-3, eng) 43-1492
Meridional heat transport by the ice and ocean in the western Arctic. Pease, C.H., (1988, p.16-19, eng) 43-1493
Comparison of iceberg scour marks with trajectories on the Labrador Shelf. Todd, B.J., et al, (1988, p.1374-1383, eng) 43-1499
Analysis of Seasat SAR sea-ice data from the Beaufort Sea. Partington, K.C., (1988, p.413-416, eng) 43-1516
Remote sensing of sea ice motion using floe edge and pressure ridge features in SAR images. Vesecky, J.F., et al, (1988, p.417-418, eng) 43-1517
Regional Ice Model (RIM) for operational applications. Neralla, V.R., et al, (1988, p.135-153, eng) 43-1565
Late Quaternary surface fluctuations of Beardmore Glacier, Antarctica. Denton, G.H., et al, (1988, p.90-92, eng) 43-1619
Soil development in the Beardmore Glacier region, Antarctica Bockheim, J.G., et al, (1988, p.93-95, eng) 43-1620
Quantitative use of satellite SAR imagery of sea ice. Fily, M., et al, (1987, p.323-326, eng) 43-1794
Report of the International Ice Patrol in the North Atlantic. Season of 1986. (1988, 71p., eng) 43-1817
Sea currents and ice drift in the southeastern Barents Sea. Denisov, V.V., et al, (1987, p.105-112, rus) 43-1881
Ice transfer in the Barents Sea Zubakin, G.K., (1987, p.113-117, rus) 43-1882
Method to forecast open pack ice speed of motion using remotely-sensed data. Feldman, U., (1988, p.1695-1702, eng) 43-1899
Sea-ice analysis software—ICEMAN. Lee, M., (1988, p.1717-1720, eng) 43-1903
Particulate material in sea ice in the Fram Strait. Larssen, B.B., et al, (1987, p.313-315, eng) 43-2011
Remarks on the Arctic Ocean and ice-drifting in Beaufort Sea. Jarlan, G., (1987, p.25-35, fre) 43-2066
Transformation of petroleum films in the ocean-ice-atmosphere system. Izmailov, V.V., (1988, 144p., rus) 43-2282

Forecasting of maximal water level on Lena River due to ice jams. Kil'mianinov, V.V., (1988, p.55-67, rus) 43-2350

Generation of internal waves by sea ice. McPhee, M.G., et al, (1989, p.3287-3302, eng) 43-2396

Parameterization of the dynamics of sea ice cover in climatological studies. Makshtas, A.P., et al, (1988, p.128-136, rus) 43-2444

Measuring ice motion—from below. Belliveau, D.J., et al, (1989, p.10-14, eng) 43-2571

Probability of winter environmental forces on arctic offshore structures. Tuhk, A.L., et al, (1989, p.105-112, eng) 43-2616

Icebergs in the Barents Sea. Vinje, T.E., (1989, p.139-145, eng) 43-2620

Gamma Tower for Northern Norway. Des Déserts, L., et al, (1989, p.147-154, eng) 43-2621

Theory of equilibrium configurations of buoyantly unstable icebergs. Jessup, R.G., (1989, p.187-195, eng) 43-2627

Model simulation of the dynamic behavior of icebergs. Venkatesh, S., (1989, p.197-204, eng) 43-2628

Iceberg/seabed interaction events observed during the DIGS experiment. Lever, J.H., et al, (1989, p.205-220, eng) 43-2629

Eulerian-Lagrangian model for the prediction of ice hazards in shallow waters. Bruno, M.S., (1989, p.229-233, eng) 43-2631

Dynamic ride up and crushing of short ice ridges on conical structures. Nordgren, R.P., et al, (1989, p.287-291, eng) 43-2638

Iceberg collision reliability model. Isaacson, M., et al, (1989, p.293-299, eng) 43-2639

Simple model for collision of floating bodies. Nawwar, A.M., et al, (1989, p.309-314, eng) 43-2640

Feasibility study of full scale iceberg impact experiments. Duthinh, D., et al, (1989, p.383-392, eng) 43-2649

Dynamic model of sea ice forecast in the Bohai Sea. Liu, X.S., et al, (1988, p.282-292, eng) 43-3001

Ice rafting along the shores of the upper Saint Lawrence Estuary. Dionne, J.C., (1987, p.67-96, fre) 43-3201

Results of investigation of the dynamics of the Barents sea ice cover. Zubakin, G.K., et al, (1989, p.26-38, eng) 43-3228

Proceedings of the Symposium on Ice Dynamics, 1988. (1989, 226p, eng) 43-3326

Pack ice drift off East Antarctica. Allison, I., (1989, p.1-8, eng) 43-3327

Weather effect on Weddell Sea pack ice and the sea-ice budget. Limbert, D.W.S., et al, (1989, p.104-112, eng) 43-3343

Periodic motions in Weddell Sea pack ice. Rowe, M.A., et al, (1989, p.145-151, eng) 43-3350

Dynamics of ice island motion near Axel Heiberg Island. Sackinger, W.M., et al, (1989, p.152-156, eng) 43-3351

Ice motion and deformation in the Weddell Sea. Wadhams, P., et al, (1989, p.178-186, eng) 43-3355

Meteorological and oceanic forcing of the Alaskan continental shelf seas. Overland, J.E., (1988, p.39-40, eng) 43-3501

Total ice force measurements on an instrumented structure, an overview of ice islands, and spray ice bonding to offshore structure coatings. Sackinger, W.M., (1988, p.61-64, eng) 43-3505

Structure of medium-scale ice drift over the arctic shelf. Bannov-Balkov, IU.L., et al, (1989, p.105-110, rus) 43-3601

Hydrodynamic modeling of ice drift in Far Eastern seas. Pokrashenko, S.A., (1988, p.49-53, rus) 43-3635

Free drift model for river ice cover formation. Ho, C.F., et al, (1988, p.140-151, eng) 43-4124

Using ice beacons to study ice drift tracks off Labrador. Prinsenberg, S.J., et al, (1988, p 61-70, eng) 43-4170

Investigation of large-scale flows of sea ice from satellite television photographs. Karelin, I.D., (1989, p.115-124, eng) 43-4372

Particle-laden Eurasian Arctic sea ice: observations from July and August 1987. Pfirman, S., et al, (1989, p.59-66, eng) 43-4389

Wind effect on ice compressions in the arctic seas. Voevodin, V.A., et al, (1988, 10p, eng) 43-4439

Drift of a giant iceberg in the Weddell Sea. Komyshenets, V.I., et al, (1989, p.71-73, rus) 43-4543

Modeling seasonal variations of sea level in the Arctic Ocean. Proshutinskiĭ, A.IU., (1988, p.57-65, rus) 43-4581

See also: Continental drift, Snowdrifts

Drift stations

Meteorological and oceanographic data from the Weddell Sea, 1986. Kottmeier, C., et al, (1988, 115p., eng) 43-438

Results of radar sounding of drifting sea ice from its surface. Bogatyrev, E.F., et al, (1988, p.148-151, rus) 43-813

Monitoring of the Arctic climate. Voskresenskiĭ, A.I., ed, (1988, 205p., rus) 43-1174

Monitoring of the Arctic climate. Voskresenskiĭ, A.I., (1988, p 6-23, rus) 43-1175

Trace metal distributions at Fram 3 and Cesar ice camps. Yeats, P.A., (1988, p.383-389, eng) 43-1673

Morphological and structural peculiarities of the SP-22 drifting ice island. Grishchenko, V.D., et al, (1989, p.77-86, eng) 43-2050

Polar Floats Program. Manley, T.O., et al, (1989, p.186-194, eng) 43-3514

Autonomous ocean profiler: a current-driven oceanographic sensor platform. Echert, D.C., et al, (1989, p.195-202, eng) 43-3515

Position measurements with radiosondes. Tug, H., (1989, p.208-210, eng) 43-3517

Modification and deployment of hand-deployed long-life sonobuoys. Horsley, L.E., (1989, p.211-220, eng) 43-3518

Drift islands in the Arctic. IAkovlev, A., (1989, p.75-77, rus) 43-4097

Course—under the Arctic ice. Kniazev, A., (1988, p.75-78, rus) 43-4098

Drill core analysis

Monitoring of environmental background pollution. Vol.4. Izrael', IU.A., ed, (1987, 384p., rus) 43-26

Distribution of macro- and microelements in ice of the Vavilov Glacier. Korzun, A.V., et al, (1987, p.239-245, rus) 43-27

Stable isotope studies on the Greenland ice-sheet margin. Reeh, N., et al, (1987, p.108-114, eng) 43-743

North Atlantic deep water formation: information from ice cores. Oeschger, H., (1985, p.27-31, eng) 43-1153

Ice island: an ideal platform. Jackson, L., (1989, p.38-49, eng) 43-1564

Ice-core analysis of the Siple Coast of West Antarctica. Alley, R.B., et al, (1988, p.1-7, eng) 43-1935

Piezocone penetrometer profiles of bottom sediment. Moran, K., et al, (1989, p.88-97, eng) 43-2203

Ice core drilling during the JAGE, 1987. Kawamura, T., (1988, p.151-154, jpn) 43-2402

Ice core drilling during the JAGE, 1987. Kawamura, T., (1988, p.151-154, jpn) 43-2402

Radiocarbon date list 3. Labrador and northern Quebec, Canada. Andrews, J.T., comp, (1989, p.1-12, eng) 43-3426

Radiocarbon date list 5: Baffin Island, N.W.T., Canada. Andrews, J.T., comp, (1989, p.13-85, eng) 43-3427

N2O measurements of air extracted from antarctic ice cores: implication on atmospheric N2O back to the last glacial-interglacial transition. Zardini, D., et al, (1989, p.189-201, eng) 43-3974

Relation of deep sea oxygen isotopic record to global ice volume history. Prentice, M.L., (1989, 567p., eng) 43-4575

See also: Coring; Ice cores

Drilling

Characteristic features of the embedment of steel-tube piles in permafrost of the Tyumen oblast. Targulian, IU.O., et al, (1987, p.92-95, rus) 43-212

Scientific and technical progress in mines of polar regions. Gorbunov, G.I., ed, (1988, 239p., rus) 43-311

Construction of 35 kv overhead power lines on permafrost. Chernetskiĭ, V.I., et al, (1988, p.28-31, rus) 43-559

New technique developed in Tyumen'. Branzburg, I.P., (1988, p.59-61, rus) 43-693

Drilling in frozen ground, bitumens and concretes. Sellmann, P.V., et al, (1988, 10p., eng) 43-1024

Technological damage to tundra vegetation during exploratory drilling. Chalysheva, L.V., (1988, p.49-56, rus) 43-1539

Ice buildup in underground explorations with the aid of pneumatic drills Kuz'min, G.P., et al, (1987, p.60-66, rus) 43-2292

Proceedings. (1988, Var. p, eng) 43-2556

Oil production in the Arctic National Wildlife Refuge. (1989, 123p., eng) 43-2590

Polar Ice Coring Office activities in East and West Antarctica. Kuivinen, K.C., et al, (1987, p.84-85, eng) 43-2747

Improving the technology and machinery for drilling in permafrost. Smirnov, V.N., et al, (1988, p.15-16, rus) 43-3671

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Drilling fluids

Toxicity of drilling fluids to aquatic wildlife in Alaskan tundra. Woodward, D.F., et al, (1988, p.683-697, eng) 43-19

New technique developed in Tyumen'. Branzburg, I.P., (1988, p.59-61, rus) 43-693

Disposition of waste drilling fluids in the Northwest Territories and Yukon. (1988, 58p., eng) 43-1703

Allowable shut-in is estimated for wells in permafrost. Kutasov, I.M., et al, (1988, p.55-60, eng) 43-1969

Assessment of waste containment sites in the Mackenzie Valley region. (1988, 30p. + appends., eng) 43-1971

Drills

New technique developed in Tyumen'. Branzburg, I.P., (1988, p.59-61, rus) 43-693

Exploratory drilling on the shelf. Aseev, A.G., et al, (1988, 198p., rus) 43-755

Thin coatings in boundary lubrication. Valli, J., et al, (1988, 28p. + appends, fin) 43-1868

Technique of drilling blastholes in frozen rocks. Strabykin, N.N., (1989, 171p, rus) 43-3064

Drilling and blasting in permafrost at the Wilbur Creek mine. Ziegler, D.R., (1987, p.235-258, eng) 43-3083

Improving the technology and machinery for drilling in permafrost. Smirnov, V.N., et al, (1988, p.15-16, rus) 43-3671

See also: Ice coring drills, Ice drills, Thermal drills

Drops (liquids)

Simulation of experimental freshwater icicle growth with a simple 740 $Numerical model of freshwater icicle growth. Johnson, K., et al, (1988, p.425-435, eng) 43-3014

Numerical model of water droplet trajectories. Andersson, A., et al, (1989, p.671-680, eng) 43-3767

Predictions of airfoil aerodynamic performance degradation due to icing. Shaw, R.J., et al, (1988, 16p., eng) 43-3967

Thermal and size evolution of sea spray droplets. Andreas, E.L., (1989, 37p., eng) 43-4042

See also: Cloud droplets; Raindrops

Drying

Drying of frozen soils. De Jong, E., et al, (1988, p.807-811, eng) 43-1996

Transition of stresses in frozen alcohol specimens dried in vacuum. Reszka, J., et al, (1989, p.113-116, eng) 43-4207

See also: Freeze drying

Dust

Variations of tardigrade assemblages in dust-impacted arctic mosses. Meininger, C.A., et al, (1988, p.24-30, eng) 43-11

Breakup mechanics and dust kinetics in percussive frozen rock breakup. Larionov, V.R., et al, (1988, p.54-58, rus) 43-3852

See also: Cosmic dust

Dust control

Road dust and its environmental impact on Alaskan taiga and tundra. Walker, D.A., et al, (1987, p.479-489, eng) 43-196

Breakup mechanics and dust kinetics in percussive frozen rock breakup. Larionov, V.R., et al, (1988, p.54-58, rus) 43-3852

Dusting

Snowmelt increase through albedo reduction. Colbeck, S.C., (1988, 11p., eng) 43-1927

Construction of ice roads and crossings by means of dusting. Krasnookiĭ, S.I., et al, (1988, p.38-39, rus) 43-2233

Dynamic loads

Calculation of dynamical load of single drifting ice on pier and other hydraulic structures. Shu, J., (1987, p.65-72, chi) 43-487

Behavior of water saturated sand-clay ground under dynamic conditions. Nikolaeva, S.K., et al, (1988, p.207-215, rus) 43-886

Ice loads on structures. Määttänen, M., (1987, 15p., eng) 43-1103

Energy loss of snow blocks passing through a supporting structure. Bachmann, O., (1987, p 613-622, eng) 43-1267

Critical speed data for model floating ice roads and runways. Whitten, J., et al, (1988, p.151-161, eng) 43-1382

Class A prediction of Arctic caisson performance. Hicks, M.A., et al, (1988, p.589-612, eng) 43-1469

Dynamic properties of thawed soils. Moĭseĭchik, E.K., (1985, p.79-85, rus) 43-1661

Deformation and low temperature features of recycled bituminous concretes. Hadipour, K., et al, (1988, p 615-645, eng) 43-1859

Materials for pavements at low temperature Roque, R., et al, (1987, p.130-167, eng) 43-1861

Cold-resistance of spring steel 60S2KhA. Bruk, B.I., et al, (1987, p.34-37, rus) 43-2452

Coefficients of resistance to avalanche motion. Blagoveshchenskiĭ, V.P., (1987, p.353-357, rus) 43-2541

Design formulas in building codes for avalanche-resistant structures Andreev, IU.B., et al, (1987, p.357-362, rus) 43-2542

Calculation of ice sheet stress-strain state by numerical method. Kozin, V.M., et al, (1989, p.315-318, eng) 43-2641

Dynamic ice loads on compliant structures. Frederking, R., (1989, p.167-187, eng) 43-2817

Ships in ice. Kitagawa, H., et al, (1989, p.311-337, eng) 43-2823

Ice impact on ship hulls Müller, L., et al, (1989, p.339-375, eng) 43-2824

Ice-induced dynamic loads on offshore structures Daoud, N., et al, (1986, p.35-41, eng) 43-3217

Measurement of impact forces on sea ice. Chin, S.N., et al, (1989, p 638-647, eng) 43-3764

Dynamic properties

Molecular dynamics simulation of ice at constant volume. Kerr, J.A., et al, (1988, p.4313-4314, eng) 43-1028

Dynamic aerosol flow chamber. Hewitt, A.D., (1988, 13p., eng) 43-1840

Model simulation of the dynamic behavior of icebergs. Venkatesh, S., (1989, p.197-204, eng) 43-2628

Full-scale measurements of the dynamic properties of a channel marker. Turunen, R., et al, (1988, p.549-560, eng) 43-2953

Earth crust
Marine glacio-isostatic hypothesis of glaciations Lapshin, A.V., (1987, p.30-36, rus) 43-224
Effects of sea level changes and crustal movement on Arctic river mouth. Ivanov, V.V., et al, (1988, p.390-395, eng) 43-1372

Earth dams
Self-cooling filling dams. Guletskiĭ, V.V., et al, (1988, p.7-8, rus) 43-23
Slope protection of an earth dam, Hailongjiang. Qiao, D., (1987, p.92-96, chi) 43-491
Studies of frozen strata and cryogenic phenomena. Klimovskiĭ, I.V., ed, (1988, 153p., rus) 43-518
Formation of thermal and moisture regime of macroporous media in regions with severe climatic conditions. Mukhetdinov, N.A., (1988, p 87, rus) 43-554
Present state of the Ponnerurgen dam. Bianov, G.F., et al, (1988, p.36-40, rus) 43-561
Studying changes in geological media due to building large hydraulic structures. Varga, A.A., et al, (1988, p.139-152, rus) 43-739
Strength of thawed and frozen dam soils under stress Vasil'ev, I.M., et al, (1988, p.27-33, eng) 43-1087
Design of hydraulic earth structures and methods of determining soil properties Kartelev, B.G., ed, (1987, 120p., rus) 43-1178
Stress deformation of ground. Gorelik, L.V., et al, (1987, p.4-9, rus) 43-1179
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Soil cement elements of earth dams erected at subzero temperatures. Lavrinovich, E.V., et al, (1987, p.96-102, rus) 43-1184
Performance of riprap in northern climates. (1988, 124p. + 4 appends., eng) 43-1667
Visco-plasticity of soils and design of structures. Zaretskiĭ, IU.K., (1988, 349p., rus) 43-2281
Design and monitoring of earth embankments over permafrost. Dufour, S., et al, (1988, p.1001-1010, eng) 43-2319
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Field studies of earth dams in the northern construction-climatic zone. Belan, V.I., (1989, p.82-87, rus) 43-3174

Earth fills
See also: Hydraulic fill; Rock fills

Earthquakes
Conditions for a load combination ice-earthquake. Klingmüller, O., et al, (1988, p.209-219, eng) 43-622
Environmental consequences of 1964 Alaska earthquake in Portage, Alaska. Ovenshine, A.T., et al, (1974, p.3-9, eng) 43-829
Placer River Silt—an intertidal deposit caused by the 1964 Alaska earthquake. Ovenshine, A.T., et al, (1976, p.151-162, eng) 43-830
Glaciological research in southern Chile, 1986. Reed, D.J., et al, (1988, p.392-405, eng) 43-2003
Earthquake response characteristics of offshore structures in the presence of ice floes Adachi, H., et al, (1988, p.314-323, eng) 43-2932
Dual rigidity of an anti-ice structure. Wang, Q.J., (1988, p.561-569, eng) 43-2954
Effects of ground conditions on earthquake risk Pavlov, O.V., ed, (1988, 223p. (pertinent p.168-183), rus) 43-4014
See also: Seismology

Earthwork
Self-cooling filling dams Guletskiĭ, V.V., et al, (1988, p.7-8, rus) 43-23
Handbook of soil mechanics and foundation engineering. (1982, 1505p, jpn) 43-299
Earthwork for snowdrift control on highways, Tian Shan Mts. Wang, C., et al, (1987, p 40-42, chi) 43-481
Analyzing the trends in the improvement of mound rippers. Khmara, L.A., et al, (1988, p.108-112, rus) 43-591
Embankment design and construction in cold regions. Johnson, E.G., ed, (1988, 173p., eng) 43-765
Construction materials and field placement. Haas, W.M., (1988, p.114-126, eng) 43-770
Case histories in seasonal frost areas. Haas, W.M., et al, (1988, p.160-169, eng) 43-772
New achievements in foundation construction on peat and weak ground (according to materials of the Baltic International Conference). Svetinskiĭ, B.V., (1988, p.28-30, rus) 43-815
Changes in soils of northern West Siberia, induced by pipeline construction. Korobanova, I.G., et al, (1988, p 60-68, rus) 43-819
Productivity of bulldozer-ripper assemblies under winter conditions. Kaliuzhnyĭ, M.I., et al, (1988, p.11-13, rus) 43-1018
Pangnirtung water reservoir geotechnical aspects. Smith, L.B., et al, (1988, p 633-658, eng) 43-1330
Tool wear and tear intensity in cutting frozen coarse detrital soil Leshchiner, V.B., et al, (1989, p.101-104, rus) 43-3173
Excavating a pit in frozen ground by detonating slit charges. Gorlov, K.V., et al, (1989, p.32-33, rus) 43-3527
Turbine scraper for excavating frozen and solid ground. Marakhovskiĭ, P.F., (1988, p.16-18, rus) 43-3538
Scraper for excavating frozen and solid ground. Efanov, O.I., (1988, p.21-22, rus) 43-3539
Machinery for working in permafrost. Rastegaev, I.K., (1986, 215p., rus) 43-4480
Forecasting thermo-mechanical conditions of perennially frozen massif. Izakson, V.IU., et al, (1989, 103p., rus) 43-4490
See also: Excavation, Trenching, Tunneling (excavation)

Echo sounding
Echo sounding data on ice thickness and motion at Mirnyy Station. Sheremet'ev, A.N., et al, (1989, p.47-54, eng) 43-2046
Use of radar sounding method in the study of dynamics of the antarctic ice cover Sheremet'ev, A.N., (1989, p.143-149, eng) 43-2060

Ecology
On thin ice. the failure of the National Science Foundation to protect Antarctica. Manheim, B.S., Jr., (1988, 112p., eng) 43-216
Ecology and practice. Ivantsov, O.M., (1988, p.28-32, rus) 43-566
Glacial mudflows in Central Caucasus: activities for the last millennium. Golodkovskaia, N.A., (1988, p.71-78, rus) 43-938
Tundra ecology and mining engineering, Ural Mts. Estaf'ev, G.A., (1988, p.77-86, rus) 43-1542
Recent diatom distributions in the Amundsen Sea. Kellogg, D.E., et al, (1988, p.161-162, eng) 43-1634
Synthesis of archaeological and palynological data from Alaska and Canada. Anderson, P.M., (1983, 578p., eng) 43-1815
Polar ecology. Stonehouse, B., (1989, 222p., eng) 43-2896
See also: Ecosystems; Paleoecology; Plant ecology

Economic analysis
Economic calculations and icebreaker services. Arikainen, A., (1988, p.19-20, rus) 43-136
Basic characteristics and the elements of adaptive simulation of transportation processes on the Northern Sea Route. Arikainen, A.I., et al, (1987, p.20-33, rus) 43-314
Oil-gas construction in the Soviet North Moldavanov, O.I., et al, (1988, p.15-24, rus) 43-897
Economics of piped services in Northwest Territories hamlets. Feilden, R.E.K., et al, (1988, p.734-748, eng) 43-1335
Air cushion vehicles in Arctic offshore oil development. Dickins, D.F., (1989, p.261-277, eng) 43-2440
Mission-based approach in modern icebreaker design. Soininen, H., (1989, p.764-773, eng) 43-3775
See also: Cost analysis

Economic development
Conquered permafrost. Denisov, G.V., et al, (1988, 143p., rus) 43-40
Influence of northern reservoirs on natural environments. Shirokov, V.M., (1987, p.3-8, rus) 43-43
Scientific and technological progress and economic development in the Murmansk region. Sakharina, L.A., ed, (1987, 113p., rus) 43-104
Methods of determining service life of equipment in the Far North. Malinovskiĭ, N.S., et al, (1987, p.29-32, rus) 43-105
Scientific and technological progress and the quality of the environment in the Kola Peninsula. Kriuchkov, V.V., et al, (1987, p.71-79, rus) 43-107
Structure and origin of perennially frozen deposits in marginal parts of the aggradation plains of northern Yakutia. Gravis, G.F., (1986, p.79-85, rus) 43-111
Arctic: mankind's unique heritage and common responsibility. Rey, L., (1987, p.345-350, eng) 43-184
Scientific and technical progress in mines of polar regions. Gorbunov, G.I., ed, (1988, 239p., rus) 43-311
Economic development impact on permafrost conditions in river basins. Pozdniakov, I.V., (1988, p.29-36, rus) 43-522
Problems in rational utilization of geological media. Sergeev, E.M., ed, (1988, 246p., rus) 43-734
Changes in geocryological conditions caused by technical operations. Trofimov, V.T., et al, (1988, p.37-61, rus) 43-735
Problems of rational use, management and preservation of geological media. Golodkovskaia, G.A., et al, (1988, p.103-116, rus) 43-737
Geological changes induced by urbanization and industrialization. Kotlov, F.V., et al, (1988, p.117-138, rus) 43-738
Prospects and ways of developing oil and gas deposits in the arctic waters of the U.S.A. and Canada. Moskovich, E.F., (1988, 39p., rus) 43-759
Engineering-geological studies of subsea permafrost. Zhigarev, L.A., (1988, p.51-59, rus) 43-818
Energy considerations in the design of northern housing. Larsson, N.K., (1985, 32p., eng) 43-1311
Effect of snow on urban activities and road facilities, Tohoku District. Horii, M., (1988, p.135-142, jpn) 43-1322
Proceedings. (1988, Var. p., eng) 43-2556
CRS workshop on antarctic environmental protection. Fletcher, S.R., (1989, 57p. + 20p. appends., eng) 43-2568
Oil production in the Arctic National Wildlife Refuge. (1989, 123p., eng) 43-2590
Problem of year-round navigation along the Northern Sea Route. Arikainen, A., (1988, p.18-42, eng) 43-2908
Industrial pollution of snow cover. Ivanov, A.V., et al, (1988, p.116-120, rus) 43-3267
Conference proceedings. (1989, 257p., eng) 43-3487
Cold ocean hydrocarbon resources. Clark, J.I., (1989, p.119-139, eng) 43-3489
Natural-economic potential of the Baikal-Amur zone (geographic aspects). Krivoborskaia, A.I., (1987, 77p. (pertinent p.23-44), rus) 43-3853
International Colloquium: Arctic Technology and Economy; Present Situation, Problems, and Future Issues, Paris, Feb. 15-17, 1989. (Proceedings). (1989, Var. p., fre) 43-4017
Sea ice in the Arctic Ocean and industrial development. Wadhams, P., (1989, 23p., eng) 43-4018
Development problems in the Soviet far north. Sveshnikov, V.K., (1988, p.275-293, eng) 43-4249
See also: Land development; Landscape development; Natural resources

Ecosystems
Arctic: mankind's unique heritage and common responsibility. Rey, L., (1987, p.345-350, eng) 43-184
Carbon balance of Alaskan tundra and taiga ecosystems. past, present and future. Billings, W.D., (1987, p.165-177, eng) 43-435
Impact of snow on herbaceous and shrubby vegetation. Knight, D.H., et al, (1975, p.175-214, eng) 43-1364
Tundra ecology and mining engineering, Ural Mts. Estaf'ev, G.A., (1988, p.77-86, rus) 43-1542
Biosphere reserves and global monitoring in the Subarctic. Puzachenko, IU.G., et al, (1987, p 33-40, eng) 43-2416
Environment and biological resources of Chukchi Sea. Hameedi, M.J., ed, (1988, 103p., eng) 43-2426
Disruption of tundra from recovery of stray logs on river banks. Alekseenko, L.N., et al, (1988, p.181-190, eng) 43-2579
See also: Ecology; Forest ecosystems; Paleoecology; Plant ecology

Edoma complex
Structure and origin of perennially frozen deposits in marginal parts of the aggradation plains of northern Yakutia. Gravis, G.F., (1986, p.79-85, rus) 43-111
Cryogenic structure of the Edoma ice-bearing deposits in Kolyma. Torgovkin, IA.I., (1988, p.97-100, rus) 43-532

Education
Education and research opportunities in cold regions engineering. Hodek, R.J., ed, (1986, 63p., eng) 43-2213
Use of snow avalanches in demonstrating geographic principles. Butler, D.R., (1988, p.212-225, eng) 43-4256
Use of snow avalanches in demonstrating geographic principles. Barber, D.L., (1988, p.226-227, eng) 43-4257

Elastic properties
Pressure dependence of the elastic constants of ice Ih. Gagnon, R.E., et al, (1988, p.4522-5428, eng) 43-1030
Effect of ice formation on the elastic moduli of cement paste and mortar. Wang, J.A., et al, (1988, p.874-885, eng) 43-1444
Materials for pavements at low temperature. Roque, R., et al, (1987, p.130-167, eng) 43-1861
Determination of the effect of elastic energy factor on steel destruction. Bernshtein, S.V., et al, (1987, p.66-72, rus) 43-2455
Effect of vibration on the air-void system and freeze-thaw durability of concrete. Stark, D.C., (1986, 10p., eng) 43-3486
See also: Ice elasticity, Snow elasticity; Viscoelasticity

Elastic waves
Velocity of plastic waves in snow. Sato, A., (1987, p.119-128, eng) 43-1224

Electric cables
See also: Transmission lines

Electric charge
Electric potential of precipitation particles during snowfall at ground level. Asuma, Y., et al, (1988, p.473-488, eng) 43-1171
See also: Charge transfer; Static electricity

Electric equipment
Low temperature properties of SF6 circuit breakers. Landry, M., et al, (1988, p.1029-1035, eng) 43-1559
RER keeps out snow. (1988, p.23, eng) 43-1848
Modern coherent radar for ice-sheet sounding. Moore, R.K., (1987, p.83-84, eng) 43-2746
Standard targets taken with military electro-optical systems. Rice, J.E., et al, (1986, p.25-27, eng) 43-4624

Electric heating
Anti-icing/deicing capability for U.S. Army helicopters part 2. Werner, J.B., (1975, 220p., eng) 43-1790
BR goes electric in switch heating. (1988, p.18-20, eng) 43-1847
Efficient numerical simulation of a one-dimensional electrothermal deicer pad Roelke, R.J., et al, (1988, p.1097-1105, eng) 43-2027
Integrated method for concreting structures Kostiaev, P.S., et al, (1989, p.25-26, rus) 43-3536
Control and prevention of leaking from ice dams. Marne, H., de, (1989, p.473-482, eng) 43-3591
Electric potential
Soil temperature and electric potential during diurnal and seasonal freeze-thaw. Outcalt, S.I., et al, (1989, p.37-43, eng) 43-1577
Two electric potential signatures of serial diurnal frost. Outcalt, S.I., et al, (1988, p.354-360, eng) 43-2827
Electric power
Influence of the Vilyuy hydroelectric power plant on winter regime of the Vilyuy and Lena rivers Kusatov, K.I., (1987, p 60-64, rus) 43-47
Influence of small water-storage lakes on water resources of the North. Konstantinov, A.F., (1987, p.74-76, rus) 43-48
Damming of the Vilyuy River channel at the construction site of the Vilyuy III Hydroelectric Station. Panteleev, V.S., (1987, p 692-697, eng) 43-139
Modular construction in northern West Siberia. Golotsvan, A.G., et al, (1988, p.32-35, rus) 43-560
Ways of decreasing construction terms and man-hours for electrical substations. Gaft, S.IA., et al, (1988, p.43-44, rus) 43-562
Design of grounding devices for 110-220 kV substations. Goncharov, V.N., et al, (1988, p.13-15, rus) 43-695
Russian joint venture in western Siberia Pokonov, N.Z., et al, (1988, p.19-21, rus) 43-696
Glaciological investigations at the margin of the inland ice north-east of Jakobshavn, West Greenland. Thomsen, H.H., et al, (1987, p.102-108, eng) 43-742
Geophysical investigations at the inland ice margin of the Påkitsoq basin, central West Greenland. Thorning, L., et al, (1987, p.114-121, eng) 43-744
Fourth year of glaciological field work at Tasersiaq and Qapiarfiup sermia, West Greenland. Olesen, O.B., (1987, p.121-126, eng) 43-745
Application of satellite data to monitoring snow cover and runoff in Greenland. Sögaard, H., et al, (1988, p.225-236, eng) 43-2016
Hydrological background of a glacier-influenced hydropower station in Greenland. Kern-Hansen, C., (1988, p.269-280, eng) 43-2020
Selecting rural 0.38-10 kv overhead power lines in northern conditions. Marfin, N.I., (1989, p.61-64, rus) 43-3669
Groundings for rural electric nets in the North and Siberia. Marfin, N.I., (1989, p.54-57, rus) 43-3670
Power generation system for Coast Guard icebreakers. Wilkerson, L.A., et al, (1989, p.82-92, eng) 43-3973
Influence of snowmelt in evaluating small hydropower generation potential. Tangborn, W.V., et al, (1983, p.100-108, eng) 43-4357
Hydrologic response of central Sierra Nevada snowpacks to rainfall. Bergman, J.A., (1983, p.141-144, eng) 43-4362
Glaciers and hydropower for Nuuk/Godthåb, West Greenland. Braithwaite, R.J., (1989, 49p., eng) 43-4487
See also: Nuclear power; Wind power generation
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Design of grounding devices for 110-220 kV substations. Goncharov, V.N., et al, (1988, p.13-15, rus) 43-695
Design considerations for arctic grounding systems. Beck, R.T., et al, (1988, p.1096-1100, eng) 43-2124
Recommendations for the design and construction of 0.4-35 kv grounding devices for the regions of IAkutsk ASSR. Dordin, IU.R., ed, (1988, 120p., rus) 43-2200
Using reinforced concrete foundations in industrial structures as grounding. Katiakin, R.N., et al, (1988, 127p., rus) 43-2807
Electrical grounding in cold regions. Henry, K., (1987, 17p., eng) 43-3639
Groundings for rural electric nets in the North and Siberia. Marfin, N.I., (1989, p.54-57, rus) 43-3670
Electrical insulation
AC withstand voltage characteristics of insulator string covered with snow Yasui, M., et al, (1988, p.828-838, eng) 43-293
Wind effect on minimum flashover voltage of iced insulators. Sugawara, N., et al, (1987, p.615-623, eng) 43-1594
Electrical measurement
Bridge measurements of conductive dielectrics by layered capacitor Gross, G.W., et al, (1988, p.387-396, eng) 43-1314
Electrical properties of model ice. Inkpen, S., et al, (1989, p.201-209, eng) 43-2369
Electrical properties
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See also: Dielectric properties; Geoelectricity; Ice electrical properties; Snow electrical properties
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See also: Electromagnetic prospecting
Electrical resistivity
Sea salt in deposited snow on sea ice and snow drift. Osada, K., et al, (1988, p.17-24, jpn) 43-219
AC withstand voltage characteristics of insulator string covered with snow. Yasui, M., et al, (1988, p 828-838, eng) 43-293
Electrical resistivity logging of permafrost in dry wells Snegirev, A.M., et al, (1987, 102p., rus) 43-312
Measuring thermophysical properties of conducting materials at low temperatures. Buravoi, S.E., et al, (1988, p.92-96, rus) 43-694
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Coastal subsea permafrost and bedrock observations using dc resistivity. Sellmann, P.V., et al, (1989, 13p., eng) 43-4386
Electricity
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Electromagnetic properties
Possibility of effectively controlling avalanches by means of remote recording of the electromagnetic emission. Kardanov, IU.B., et al, (1988, p.42-46, rus) 43-2564
Protecting working surfaces from adfreezing rock mass. Berezhnoi, IU.I., et al, (1988, p.136-140, rus) 43-2810
Electromagnetic properties of freshwater ice, sea ice, and snow. Lüdecke, C., (1986, 97p., ger) 43-4163
Falling snow versus liquid hydrometeor attenuation. Ebersole, J.F., et al, (1986, p.39-54, eng) 43-4626
Electromagnetic prospecting
Electrical properties of rocks from remote sensing data. Batuev, B.Sh.Ch., et al, (1988, p.123-130, rus) 43-536
Electromagnetic reflection survey 1986 at the Inland Ice margin of the Påkitsoq basin, central West Greenland. Thorning, L., et al, (1987, p 87-95, eng) 43-750
Snow cover characteristics from data of electromagnetic and contact measurements. Miagkov, S.M., et al, (1988, p.165-170, rus) 43-957
Mapping permafrost by electromagnetic induction. Kawasaki, K., et al, (1988, p.279-288, eng) 43-1348
Electrical mapping of permafrost beneath the Beaufort Sea Edwards, R.N., et al, (1988, p.265-290, eng) 43-1458
Airborne sea ice thickness sounding. Kovacs, A., et al, (1989, p.1042-1052, eng) 43-3801
Electromagnetic pulse sounding for geological surveying Moffatt, D.L., et al, (1973, 169p., eng) 43-4164
Capacitance instrument for the *in-situ* measurement of snow wetness. Bergman, J.A., (1984, p.172-175, eng) 43-4329
Electron microscopy
Characterization of aircraft-collected particles in Alaskan Arctic aerosol. Sheridan, P.J., et al, (1985, p.2159-2166, eng) 43-999
Some replica possibilities for electron-microscope investigations of ice crystal morphology Stoianova, V., et al, (1988, p.1431-1436, eng) 43-2309
See also: Scanning electron microscopy
Electron paramagnetic resonance
Radioluminescence of ice containing MgCl2 and CaCl2. Wypych, M., et al, (1989, p.139-143, eng) 43-2778
Electronic equipment
Field tests of electronic densimeters. Zhidkov, V.A., et al, (1988, p.186-190, rus) 43-3277
Microwave instrument to measure snow properties. Toikka, M., (1989, p.75-80, eng) 43-3494
Comment on "Monitoring the unfrozen water content of soil and snow using time domain reflectometry" by Jean Stein and Douglas L. Kane Topp, G.C., et al, (1985, p.1059-1061, eng) 43-4495
Elevation
See also: Altitude
Embankments
Self-cooling filling dams. Guletskii, V.V., et al, (1988, p.7-8, rus) 43-23
Embankment design and construction in cold regions. Johnson, E.G., ed, (1988, 173p., eng) 43-765
Embankment design and construction in cold regions: an overview. Phukan, A., et al, (1988, p.1-12, eng) 43-766
Embankment stabilization techniques. Rooney, J.W., et al, (1988, p.13-34, eng) 43-767
Geotechnical thermal analysis. Zarling, J.P., et al, (1988, p.35-92, eng) 43-768
Embankment settlement and stability analyses. Johnson, E.G., et al, (1988, p.93-113, eng) 43-769
Embankment case histories on permafrost. Esch, D.C., (1988, p.127-159, eng) 43-771
Equation for calculating snow avalanche run-up against barriers. Hungr, O., et al, (1987, p 605-612, eng) 43-1266
Maintenance of a railway grade over permafrost in Canada. Hayley, D.W., (1988, p.43-48, eng) 43-1723
Thaw stabilization of roadway embankments constructed over permafrost. Zarling, J.P., et al, (1986, 34p., eng) 43-1816
Adelie land airport. Regrettier, J.F., et al, (1989, p.91-96, eng) 43-2614
Frost destruction and its prevention of reservoir revetment in plain area. Sui, X.Z., (1988, p.493-501, eng) 43-2948
Numerical solutions for freezing and thawing of soils. Shen, M., et al, (1989, p.391-400, eng) 43-3115
Experimental study on prevention of differential frost heave by using GEOGRID. Aoyama, K., et al, (1989, p.633-643, eng) 43-3134
Site investigation on frost damages of roads at highland. Fukuda, M., et al, (1989, p 655-663, eng) 43-3136
Consideration of frost heave in the design of road embankment. Saarelainen, S., et al, (1989, p 699-708, eng) 43-3140
Model studies of snowdrifts formed by livestock shelters and pond embankments Jairell, R.L., et al, (1985, p.167-170, eng) 43-4283
Engine starters
Engine heaters: benefits and maintenance. (1988, p 66, eng) 43-1450
Resistively heated metal monolith as a cold start assist. Piotrowski, G.K., (1988, 21p., eng) 43-3971
Engineering
IAHR—recommendations on testing methods of ice 5th report of Working Group on Testing Methods in Ice (1986, p.595-599, eng) 43-280
Handbook of soil mechanics and foundation engineering, (1982, 1505p., jpn) 43-299
Performance monitoring of onshore structures at Svalbard Gregersen, O., et al, (1988, p.329-342, eng) 43-632
International Specialty Conference on Cold Regions Engineering, 1984. (1984, p.1021-1201, eng) 43-667
Research in ice engineering. Christensen, F.T., et al, (1988, p.3-10, eng) 43-787
Ice engineering for civil work baseline study Carey, K.L., et al, (1983, 91p., eng) 43-1312
Ice storage cooling system at Fort Stewart, GA Sohn, C.W., et al, (1988, 53p., eng) 43-1313
Burntwood Trailer Court case study of construction in permafrost. Feilden, R.E.K., et al, (1988, p.659-672, eng) 43-1331
Effects of geological exploration on the environment of Bol'shezemel'skaya Tundra. Brattsev, A.P., ed, (1988, 128p., rus) 43-1534
Cold regions engineering conference, Feb. 6-8, 1989. (1989, 399p., eng) 43-2083
DYE-2 and DYE-3—a 30 year engineering history. Osgood, S., et al, (1989, p.11-26, eng) 43-2085
Cold weather concreting in the St Paul-Minneapolis area Downs, M.B., et al, (1989, p.41-49, eng) 43-2087
Education and research opportunities in cold regions engineering. Hodek, R.J., ed, (1986, 63p., eng) 43-2213
Rheological regularities in frozen soil mechanics. Vialov, S.S., et al, (1988, p.219-232, eng) 43-2665
Review of the study on frozen ground for water conservancy engineering. Xu, S.X., (1988, p.342-343, chi) 43-2879
Frost in geotechnical engineering; VTT Symposium 94, Vols. 1 and 2. (1989, 946p. (2 vols.), eng) 43-3093
International Conference on Snow Engineering, 1st, July 1988. (1989, 573p., eng) 43-3544
Roof design in cold regions. Tobiasson, W., (1989, p.462-472, eng) 43-3590
Perspective on mechanical properties of snow. Brown, R.L., (1989, p.502-503, eng) 43-3595
Advances in nonlinear analysis methods for ocean structures using parallel computers. Fulton, R.E., et al, (1989, p.908-917, eng) 43-3788
Microcomputer data for snow and wind engineering. Soligo, M.J., et al, (1988, p.162-175, eng) 43-4126
See also: Avalanche engineering; Human factors engineering; Military engineering, Municipal engineering; Sanitary engineering
Engineering geology
Methods of engineering-geocryological investigations for level regions Mel'nikov, E.S., ed, (1986, 206p., rus) 43-338
System of standards in engineering geology. Baulin, V.V., et al, (1988, p.104-108, rus) 43-598
Changes in geocryological conditions caused by technical operations. Trofimov, V.T., et al, (1988, p.37-61, rus) 43-735
Forecasting changes in geological media caused by technical operations. Mironenko, V.A., et al, (1988, p 84-102, rus) 43-736
Engineering-geological studies of subsea permafrost. Zhigarev, L.A., (1988, p.51-59, rus) 43-818
Bibliography of engineering-geologic literature of northern Alaska. Galloway, J.P., (1988, 34p., eng) 43-1866
Application of the landscape indication method in Siberia. Bondarik, G.K., et al, (1987, p.11-22, eng) 43-2331
Engineering geology of glacial deposits. Engel's, A.A., et al, (1988, p.77-85, rus) 43-2421

Engineering geology *(cont.)*
Study on frozen ground for construction in cold regions. Yuan, Z.H., (1988, p.338-341, chi) 43-2878
Review of the study on frozen ground for water conservancy engineering. Xu, S.X., (1988, p.342-343, chi) 43-2879
Permafrost problems in road engineering. Huang, X.M., (1988, p.344-351, chi) 43-2880
Geologic engineering aspects of rock glaciers. Giardino, J.R., et al, (1987, p.265-287, eng) 43-3057
Cryogenic protection of gas systems in West Siberia. Zakharov, IU.F., et al, (1989, p.855-861, eng) 43-3154
Proceedings. Vol 1. (1989, 742p., eng) 43-3219
Control of frost heave in geotechnical engineering. Chen, X.B., et al, (1989, p.739-742, eng) 43-3225
Geocryological studies. Ershov, E.D., ed, (1987, 292p., rus) 43-3368
Land-based industrial and civil engineering in Charskaya Basin. Nistratova, T.A., (1987, p.117-124, rus) 43-3376
Characteristics of soil freezing under open system conditions. Zhestkova, T.N., (1987, p.124-133, rus) 43-3377
Technology for offshore development. strengths and weaknesses. Hayley, D.W., (1989, p.140-148, eng) 43-3490

Engines
Induction icing. Wolk, A.A., (1988, p.61-64, eng) 43-1584
See also: Diesel engines; Jet engines

Enthalpy
Energies of the phases of ice at low temperature and pressure relative to ice Ih. Handa, Y.P., et al, (1988, p.919-924, eng) 43-437
Properties of gels obtained by freezing/thawing of PVA/water/DMSO solutions. Yamaura, K., et al, (1989, p.2709-2718, eng) 43-3483

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See also: Air entrainment

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See also: Transition heating

Environmental impact
Toxicity of drilling fluids to aquatic wildlife in Alaskan tundra. Woodward, D.F., et al, (1988, p.683-697, eng) 43-19
Environmental impact of hydroelectric power plants in the Far North. Vozin, V.F., ed, (1987, 103p., rus) 43-42
Influence of northern reservoirs on natural environments. Shirokov, V.M., (1987, p.3-8, rus) 43-43
Changes in natural conditions in the hydraulic power system environment in the Far North. Olovin, B.A., et al, (1987, p.42-57, rus) 43-46
Influence of small water-storage lakes on water resources of the North. Konstantinov, A.F., (1987, p.74-76, rus) 43-48
Influence of the Vilyuy electric power plant on its environment. Ignat'ev, N.L., et al, (1987, p.76-78, rus) 43-49
Changes in the regime of the Yenisey and Angara rivers due to flow regulation. Odrova, T.V., (1987, p.84-95, rus) 43-51
Man-induced activation of exogenic processes in taiga. Evseeva, N.S., (1987, p.292-299, eng) 43-133
Arctic: mankind's unique heritage and common responsibility. Rey, L., (1987, p.345-350, eng) 43-184
Peatland disturbances along hydroelectric transmission corridors in Canada. Magnusson, B., et al, (1987, p.470-478, eng) 43-195
Road dust and its environmental impact on Alaskan taiga and tundra. Walker, D.A., et al, (1987, p.479-489, eng) 43-196
Effects of oil spills on plant communities in northeast Greenland. Holt, S., (1987, p.490-497, eng) 43-197
Assisted revegetation in Denali National Park, Alaska, U.S.A. Densmore, R.V., et al, (1987, p.544-548, eng) 43-205
Plant succession on disturbed sites, North Slope, Alaska, U.S.A. McKendrick, J.D., (1987, p.554-565, eng) 43-207
Problems in rational utilization of geological media. Sergeev, E.M., ed, (1988, 246p., rus) 43-734
Changes in geocryological conditions caused by technical operations. Trofimov, V.T., et al, (1988, p.37-61, rus) 43-735
Forecasting changes in geological media caused by technical operations. Mironenko, V.A., et al, (1988, p.84-102, rus) 43-736
Problems of rational use, management and preservation of geological media. Golodkovskaia, G.A., et al, (1988, p.103-116, rus) 43-737
Geological changes induced by urbanization and industrialization. Kotlov, F.V., et al, (1988, p.117-138, rus) 43-738
Studying changes in geological media due to building large hydraulic structures. Varga, A.A., et al, (1988, p.139-152, rus) 43-739
Environmental effects of Polish Polar Station at Svalbard. Krzyszowska, A., (1986, p.227-246, eng) 43-1207
Effects of all terrain vehicles on tundra. Racine, C., et al, (1988, 12p., eng) 43-1340
Fragility of the plant cover in the Arctic. Eckardt, F.E., (1988, p.7-17, eng) 43-1445
Monitoring snow-cover pollution. Vasilenko, V.N., et al, (1988, p.61-71, eng) 43-1454
Trail erosion variables in Alaska. Jubenville, A., et al, (1987, p.450-452, eng) 43-1478
Effects of geological exploration on the environment of Bol'shezemel'skaya Tundra. Brattsev, A.P., ed, (1988, 128p., rus) 43-1534
Changes of landscape and geochemical structure due to geological surveys. Tentiukov, M.P., (1988, p.12-28, rus) 43-1536
Effects of caterpillar-tracked transportation on permafrost thawing. Gladkov, V.P., (1988, p.36-48, rus) 43-1538
Technological damage to tundra vegetation during exploratory drilling. Chalysheva, L.V., (1988, p.49-56, rus) 43-1539
Cost analysis for exploration of natural resources in tundra. Popova, N.A., et al, (1988, p.113-121, rus) 43-1545
Using turbidity to predict total suspended solids in mined streams in interior Alaska. Mack, S.F., (1988, 48p., eng) 43-1687
Water quality in placer mining areas in Alaska, Summer 1986. Mack, S.F., et al, (1988, 73p., eng) 43-1689
Analysis of sediment data from the Beaufort Sea Shorebase Monitoring Program, 1982-1984. Wainwright, P.F., et al, (1988, 78p. + appends., eng) 43-1702
Development of analytical methods for military-unique compounds. Walsh, M.E., et al, (1988, p.370-380, eng) 43-1811
Study to model the effects of uranium mine tailings on a permafrost environment. Woo, M.K., et al, (1988, 41p., eng) 43-1970
Waste management practices in Antarctica. Sletten, R.S., et al, (1989, p.122-130, eng) 43-2095
Contamination of sea by radioactive wastes. Vakulovskii, S.M., et al, (1989, p.620-622, eng) 43-2235
Transformation of petroleum films in the ocean-ice-atmosphere system. Izmallov, V.V., (1988, 144p., rus) 43-2282
Rock glaciers. Gorbunov, A.P., (1988, 106p., rus) 43-2283
Northern environmental disturbances. Kershaw, P., ed, (1988, 70p., eng) 43-2303
Environmental impact assessment and review in the North. Duffy, P.J.B., (1988, p.5-8, eng) 43-2304
Reclamation of the Norman Wells pipeline. Wishart, D.M., (1988, p.11-27, eng) 43-2305
Sewage waste discharge to the Arctic marine environment. (1987, 5 sections, eng) 43-2380
Natural regeneration of *Eriophorum* tussock tundra after a fire. Ignatenko, I.V., et al, (1988, p.169-180, eng) 43-2578
Disruption of tundra from recovery of stray logs on river banks. Alekseenko, L.N., et al, (1988, p.181-190, eng) 43-2579
Arctic climate change impacts. summary and proposals for action. (1986, 29p., eng) 43-2581
Proceedings. Climate change impacts in the Canadian Arctic. (1986, 171p., eng) 43-2582
Impacts of CO2 doubling on snow and ice in the Canadian Arctic. Barry, R.G., (1986, p.54-66, eng) 43-2583
Significance of climate change for the permafrost environment. Smith, M., (1986, p.67-81, eng) 43-2584
Direct plowing of small-inch pipelines. Maki, D.R., (1989, p.124-129, eng) 43-2593
Sewage waste discharge to the arctic marine environment, February 1987. (1988, var. p., eng) 43-3060
Beaufort environmental monitoring project, 1987-1988 final report. (1989, 136p., eng) 43-3062
Forecasting technique for anthropogenic changes in cryogenic conditions. Garagulia, L.S., (1985, 224p., rus) 43-3073
Effect of placer gold mines on streams in Alaska. Van Maanen, J.L., et al, (1988, 105p., eng) 43-3216
Technogenic pollution of snow cover in Spitsbergen. Il'ina, E.A., (1988, p.113-116, rus) 43-3266
Industrial pollution of snow cover. Ivanov, A.V., et al, (1988, p.116-120, rus) 43-3267
Influence of well casing composition on trace metals in ground water. Hewitt, A.D., (1989, 18p., eng) 43-3619
Environmental impact of snow disposal in Anchorage. Cross, J.E., et al, (1989, p.43-54 + 1 append., eng) 43-3666
Effect of vehicle tracks on tundra vegetation. Felix, N.A., et al, (1988, p.188-202, eng) 43-4023
Terrain disturbance due to summer off-road vehicle use in Canada. Dyke, L.D., (1985, 47p., eng) 43-4161
Soil changes caused by pipe laying in Siberia. Korobanova, I.G., et al, (1988, p.50-57, eng) 43-4261

Environmental protection
On thin ice: the failure of the National Science Foundation to protect Antarctica. Manheim, B.S., Jr., (1988, 112p., eng) 43-216
Arctic Island abandonment: planning and implementation for Mukluk Island. Anderson, L.M., et al, (1988, p.49-60, eng) 43-711
Discussions on environmental protection in the North. Solomonov, N.G., (1987, 176p., rus) 43-716
Problems in rational utilization of geological media. Sergeev, E.M., ed, (1988, 246p., rus) 43-734
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Oil-gas construction in the Soviet North. Moldavanov, O.I., et al, (1988, p.15-24, rus) 43-897
Chemical soil stabilization and the environment. Sokolovich, V.E., (1988, p.233-236, eng) 43-1085
Environmental protection of the BAM zone. Vorob'ev, V.V., ed, (1987, 167p., rus) 43-1435
Tundra ecology and mining engineering, Ural Mts. Estaf'ev, G.A., (1988, p.77-86, rus) 43-1542
Environmental Quality R&D Symposium, 13th, Nov. 1988. (1988, 575p., eng) 43-1809
Comparison of EPA and USATHAMA detection capability estimators. Grant, C.L., et al, (1988, p.405-418, eng) 43-1812
Environmental protection problems in Western Siberia (methods of investigation and optimization). Malik, L.K., (1988, p.62-67, rus) 43-2199
Hydrology: an introduction for wetland managers. Kusler, J., (1988, p.5-24, eng) 43-2236
Northern environmental disturbances. Kershaw, P., ed, (1988, 70p., eng) 43-2303
Biosphere reserves and global monitoring in the Subarctic. Puzachenko, IU.G., et al, (1987, p.33-40, eng) 43-2416
CRS workshop on antarctic environmental protection. Fletcher, S.R., (1989, 57p. + 20p. appends., eng) 43-2568
Disruption of tundra from recovery of stray logs on river banks. Alekseenko, L.N., et al, (1988, p.181-190, eng) 43-2579
Laser ignition of Arctic oil spills. Frish, M.B., et al, (1987, p.355-365, eng) 43-3242
Laser ignition of oil spills. Phase 1: concept development. Final report. Frish, M.B., et al, (1985, 89p. + appends, eng) 43-3243
Laser ignition of oil spills. Phase 2: outdoor demonstration experiments. Nawwar, A.M., et al, (1985, 36p. + appends, eng) 43-3244
Laser ignition of oil spills engineering design. Kung, W.L., et al, (1986, 51p., eng) 43-3245
Laser ignition of oil spills: telescope assembly and testing. Frish, M., et al, (1988, 23p., eng) 43-3246
Sudden thaw in the Arctic. MacKenzie, D., et al, (1989, p.25-26, eng) 43-3286
Pollution-free petroleum production and transportation systems in the Arctic region. Mian, F.A., (1989, p.1150-1162, eng) 43-3811
Environmental pollution and the ice regime of rivers and lakes. Prokacheva, V.G., et al, (1988, p.74-80, rus) 43-4582

Environments
Seasonal and long-term changes in land cover. Yokota, T., et al, (1988, p.215-216, eng) 43-1509
Report of the Arctic Environmental Data Workshop. Laughlin, T.L., comp, (1988, var. p., eng) 43-3363
Current Army environmental operational support. Chesley, C.H., et al, (1986, p.241-247, eng) 43-4638
See also: Arctic landscapes; Alpine landscapes; Deserts; Forest land; Landscape types; Littoral zone; Ocean environments; Planetary environments; Steppes; Subarctic landscapes; Taiga; Tundra

Eolian soils
Aeolian processes and landforms in south Pangnirtung Pass, southeast Baffin Island, N.W.T. McKenna Neuman, C.L., (1988, 7p., eng) 43-122
Loess sources and eolian deposits in Antarctica. Claridge, G.G.C., et al, (1988, p.33-45, eng) 43-2337
Niveo-aeolian deposits and denivation forms in northwestern Alaska. Koster, E.A., et al, (1988, p.153-170, eng) 43-3531

Equipment
Probability of smooth operation of excavation systems at low temperatures. Zudov, G.IU., et al, (1987, p.50-55, rus) 43-115
Operation of snow removal vehicles. Matsosaka, H., et al, (1986, p.1799-1808, jpn) 43-298
Scientific and technical progress in mines of polar regions. Gorbunov, G.I., ed, (1988, 239p., rus) 43-311
Electrical resistivity logging of permafrost in dry wells. Snegirev, A.M., et al, (1987, 102p., rus) 43-312
Geological and economic problems in the development of apatite deposits in southern Yakutia. Entin, A.R., et al, (1987, 126p., rus) 43-313
U.S. Marine Corps cold weather combat operations study. (1980, var.p., eng) 43-439
Manufacture and efficacy of JLJ-II type clean-snow-machine. Chang, J., (1987, p.133-140, chi) 43-499
Equipment and salt. one, two punch for winter opponents. (1988, p.54-55, 106, eng) 43-504
Giant V-plow makes windrowing easier. Gove, A., (1988, p.74-75, eng) 43-505

Evolution of onshore facilities of the U.S. Antarctic Research Program. Splettstoesser, J.F., et al, (1988, p.287-295, eng) 43-628
Argos and the 1990's system efficiency in polar regions Vassal, C., (1988, p.455-470, eng) 43-640
Performance of quarry excavators, with variable drive loading regimes in the North Makhno, D.E., (1988, p.70-72, rus) 43-690
Studies and data processing on spray-cone accretion of ice. Sosnovskii, A.V., (1988, p.36-41, rus) 43-936
Blades and cusps in snow clearing. Gola, G.L., (1988, p.59-61, ita) 43-1063
First official snow-compaction vehicle contest at Vars (1988, p 64-67, ita) 43-1065
Dobbiaco '78: new developments in operations and technology. Baiano, G., (1988, p.88-93, ita) 43-1067
Equipment damage prevented by urethane edges for snow plows. Carlson, J., (1988, p.29, eng) 43-1850
Winter operations call for advance preparation. Stellfox, E., et al, (1988, p.36-37, eng) 43-1852
Design of a replacement science laboratory for McMurdo Station, Antarctica Haehnle, R.J., (1989, p.1-10, eng) 43-2084
Technology of snow and ice removal Minsk, L.D., (1989, p.104-112, eng) 43-2093
Snow control on floating ice sheets. Nelson, W.G., et al, (1989, p.161-169, eng) 43-2099
Unique new cold weather testing facility. Eaton, R.A., (1989, p.335-342, eng) 43-2114
Snow plowing basics. (1988, p.42-43, eng) 43-2137
Behavior of bolted flanged connectors in low temperatures. Biriulev, V.V., et al, (1988, p.9-14, rus) 43-2432
State of the art in snowmaking and its application to arctic construction. Collins, J., et al, (1989, p.247-251, eng) 43-2633
Drill-anchor for iceberg towing. Kolle, J.J., (1989, p.469-476, eng) 43-2659
Laboratory device for studying the effectiveness of coolant nucleants. Aksenov, M.IA., et al, (1988, p.105-113, rus) 43-2719
Radio communication system for mines. Korennov, B.I., (1988, p 85-86, rus) 43-2785
Concrete and reinforced concrete studies. Sovalov, I.G., et al, (1988, 335p (Pertinent p.261-281), rus) 43-2806
Influence of test conditions and equipment on the frost heave test. Kujala, K., et al, (1989, p.931-944, eng) 43-3158
Counter-avalanche rack in France. Giry, E., et al, (1988, p.13-24, fre) 43-3206
Gazex: a revolution in triggering avalanches?. Brugnot, G., (1989, p.17, fre) 43-3604
Ice model basin of the Gorky Polytechnic Institute. Beliakov, V.B., et al, (1982, 5p., eng) 43-3856
Preliminary design guide for arctic equipment. Walsh, M.R., et al, (1989, 35p, eng) 43-3894
More effective means of cutting frozen solid fuel Madoian, A.A., et al, (1989, p.33-36, rus) 43-4101
Road and airport snowplows. Catalog-handbook. Shalman, D.A., et al, (1971. 121p., rus) 43-4102
Sediment fluxes beneath fast ice: October 1986 through February 1987. Dunbar, R.B., et al, (1989, p.112-115, eng) 43-4437
Machinery for working in permafrost. Rastegaev, I.K., (1986, 215p., rus) 43-4480
See also: Airborne equipment; Construction equipment; Electric equipment; Electronic equipment; Infrared equipment; Machinery; Military equipment; Photographic equipment; Portable equipment, Railroad equipment, Rescue equipment; Telemetering equipment; Test equipment

Erosion

Microtextures of quartz grains from North Slope of Alaska. Hodel, K.L., et al, (1988, p 24-32, eng) 43-436
Ice-rock interfaces and subglacial erosion. Vivian, R., (1988, p.207-218, fre) 43-1165
Slope stability and erosion in Nepal Kienholz, H., (1986, p.127-141, eng) 43-2830
Ice formation during the development of ravine thermal erosion. Poznanin, V.L., (1988, p.53-58, rus) 43-3256
Monitoring a rain-on-snow event. Cooley, K.R., et al, (1983, p.19-26, eng) 43-4349
Erosion of the Pelton-runners of the Stalden penstock Thomann, P., (1988, p.151-160, ger) 43-4442
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Estuaries

Geographic interpretation of satellite survey data. Vasil'ev, L.N., ed, (1988, 132p, rus) 43-108
Geographic interpretation of remote sensing data on river estuaries and shelf zones. Krasnozhon, G.F., (1988, p 41-58, rus) 43-109
Cryomorphogenesis in topographic evolution of river estuaries in Holocene. Grigor'ev, M.N., (1988, p.22-28, rus) 43-521
Effects of sea level changes and crustal movement on Arctic river mouth. Ivanov, V.V., et al, (1988, p.390-395, eng) 43-1372
Effects of river plume on sea-ice meiofauna in Hudson Bay. Grainger, E.H., (1988, p.131-141, eng) 43-1487
Water temperature and ice in Danube River delta. Min'kovskaia, R.IA., (1988, p.86-94, rus) 43-2392
Shore ice action in a tidal marsh Dionne, J.C., (1989, p.281-293, eng) 43-2405
Columbia Bay, Alaska: an 'upside down' estuary. Walters, R.A., et al, (1988, p 607-617, eng) 43-2696
Modeling the thermal regime of estuaries. Omstedt, A., (1988, p.346-355, eng) 43-3007
Ice rafting along the shores of the upper Saint Lawrence Estuary. Dionne, J.C., (1987, p.67-96, fre) 43-3201
Sea level history and evolution of Brazilian coast. Dominguez, J.M.L., et al, (1987, p.115-127, eng) 43-3400
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Evaporation

Evaporation of chemical agents from ice and snow. Leggett, D.C., (1988, 10p., eng) 43-425
Influence of climate on evaporation in a subarctic wetland Lafleur, P.M., et al, (1988, p.327-347, eng) 43-449
Removal of trace organics by overland flow. Leggett, D.C., et al, (1982, p.176-184, eng) 43-1285
Thermosyphons and foundation design in cold regions. Haynes, F.D., et al, (1988, p.251-259, eng) 43-1346
Thermosyphon for horizontal applications. DenHartog, S.L., (1988, p 319-321, eng) 43-1351
Ice surface hydrolysis of diisopropylfluorophosphate (DFP). Leggett, D.C., (1987, p.809-815, eng) 43-1876
Drying of frozen soils. De Jong, E., et al, (1988, p.807-811, eng) 43-1996
Glacial mass balance and water yield, Western and Eastern Suek in 1983-1984. Bakov, E.A., (1988, p.13-18, rus) 43-2384
Heat balance of swamps in Western Siberia. Moskvin, IU.P., (1988, p.30-37, rus) 43-2464
Evaporation from swamp lakes in permafrost zones. Novikov, S.M., et al, (1988, p.38-54, rus) 43-2465
Variations in the global water budget. Street-Perrott, A., ed, (1983, 518p., eng) 43-3035
Hydrological cycle as simulated by an atmospheric general circulation model. Mitchell, J.F.B., (1983, p.429-446, eng) 43-3039
Formation mechanisms of a daily thermal regime of a cryogenic landscape surface. Bryksin, V.N., (1987, p.168-183, rus) 43-3382
Modeling Laurentian Great Lakes evaporation, heat storage, and energy fluxes. Croley, T.E., II, (1989, 48p, eng) 43-3473
Heat and moisture exchange of antarctic fast ice with the atmosphere in Alasheev Bight. Nazintsev, IU.L., (1989, p.54-62, eng) 43-4370
Cooling of cryoagents by the pumping-out of vapor. Kirichenko, IU.A., et al, (1989, p 63-68, eng) 43-4399
See also: Evapotranspiration; Ice sublimation; Snow evaporation; Sublimation; Transpiration

Evapotranspiration

Coon Creek water yield augmentation pilot project. Bevenger, G.S., et al, (1987, p 145-149, eng) 43-579
Snow retention in a large cutblock. Nip, A.M.K., et al, (1987, p 491-496, eng) 43-1309
Evapotranspiration from the alpine tundra of Colorado, U.S.A. Isard, S.A., et al, (1989, p.71-82, eng) 43-2478

Excavation

Soil freezing for the construction of a drain pump chamber. Murayama, S., et al, (1988, p.377-382, eng) 43-99
Two practical applications of soil freezing by liquid nitrogen. Orth, W., (1988, p.389-394, eng) 43-101
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Strength and creep testing for artificial ground freezing. Hampton, C.N., (1988, 242p, eng) 43-304
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Working capacity of hydraulic props under permafrost conditions. Rozenbaum, M.A., et al, (1987, 105p., rus) 43-1088
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Shattering permafrost with the percussion power device of a stripping machine. Labutin, V.N., et al, (1988, p 87-92, rus) 43-3632
Optimizing the technology of excavating disturbed coal beds. Kirzhner, F.M., (1989, 114p. (pertinent p.48-59), rus) 43-4039
Forecasting thermo-mechanical conditions of perennially frozen massif. Izakson, V.IU., et al, (1989, 103p., rus) 43-4490
See also: Earthwork; Pits (excavations); Rock excavation; Trenching; Tunneling (excavation)

Expansion

See also: Thermal expansion

Expeditions

Sino-Japanese Joint Glaciological Expedition to West Kunlun Mt. Zheng, B., et al, (1988, p.84-89, chi) 43-471
Glaciers of Paramushir Island, Kuril Islands. Kovalev, P.V., et al, (1988, p.126-129, rus) 43-948
Operation Deep Freeze 89 end of season report. (1989, Var. p., eng) 43-2442
Expedition Arctic V/1a, 1b, and 2 with RV *Polarstern* 1988. Spindler, M., ed, (1989, 197p., ger) 43-3077
Glaciological expedition of Nepal. Yamada, T., (1989, p.191-193, eng) 43-3460
Report on the 22nd Soviet Antarctic Expedition. Tiabin, N.I., ed, (1988, 147p., rus) 43-3839
Drift islands in the Arctic. IAkovlev, A., (1989, p.75-77, rus) 43-4097
Course—under the Arctic ice. Kniazev, A., (1988, p.75-78, rus) 43-4098
Arctic research in the United States, Vol.3. (1989, 72p., eng) 43-4482
Center of attraction—the North Pole. Arikaĭnen, A.I., (1988, 220p., rus) 43-4605
See also: Traverses

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Experimentation

Development of solids circulating heat collector from air Takeuchi, H., et al, (1989, p.135-140, eng) 43-4211

Exploration

Exploration base in the high Arctic; discussion and case study. Ammendrup, H., et al, (1988, p.309-318, eng) 43-630
Exploratory drilling on the shelf. Aseev, A.G., et al, (1988, 198p., rus) 43-755
Prospects and ways of developing oil and gas deposits in the arctic waters of the U.S.A and Canada. Moskovich, E.F., (1988, 39p., rus) 43-759
Exploration status and future perspectives in the Barents Sea. Johansen, B., (1987, 7p. + maps + charts, eng) 43-1100
Searching for gas hydrate deposits in permafrost. Degtiarev, B.V., et al, (1988, p.110-115, rus) 43-1609
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Blasting and blast effects in cold regions. Part 3: explosions in ground materials. Mellor, M., (1989, 62p., eng) 43-3651
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Field studies on stress waves in natural snow cover. Brown, R.L., et al, (1987, p.89-110, eng) 43-1292
Analytical method for determining tetrazene in soil. Walsh, M.E., et al, (1988, 22p., eng) 43-1397
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Exposure
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Water ice phases II, III, and IV. plastic deformation and phase relationships. Durham, W.B., et al, (1988, p.10,191-10,206, eng) 43-506
NASA Mars Project: evolution of climate and atmosphere Clifford, S.M., et al, (1988, p.1585, 1595-1596, eng) 43-1052
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Trapping of gas mixtures by amorphous water ice. Bar-Nun, A., et al, (1988, p 7749-7754, eng) 43-1422
Resurfacing history of Mars. Tanaka, K.L., et al, (1988, p 665-678, eng) 43-1762
Model of porous structure of icy satellites. Eluszkiewicz, J., et al, (1988, p.741-747, eng) 43-1763
Ice and permafrost on Mars. Masson, P., (1987, p.379-385, fre) 43-2073
Ice-formed landscapes on Mars. Lucchitta, B.K., (1987, p.387-398, fre) 43-2074
Morphological evidence of ancient ice caps on Mars Battistini, R., (1987, p.399-411, fre) 43-2075
Analysis of Voyager images of Europa: plasma bombardment. Johnson, R.E., et al, (1988, p 423-436, eng) 43-2323
Geologic implications of spectrophotometric measurements of Europa. Buratti, B., et al, (1988, p.437-449, eng) 43-2324
Solid-state greenhouses and their implications for icy satellites. Matson, D.L., et al, (1989, p.67-81, eng) 43-2325
Near-infrared photometry of the Galilean satellites Tittemore, W.C., et al, (1989, p.82-97, eng) 43-2326
Science of ice. Maeno, N., (1988, 229p, rus) 43-2327
Interstellar and cometary H2O CO ices. Sandford, S.A., et al54 700 SAllamandola, L.J., (1988, p 201-224, eng) 43-3985
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Urey Prize lecture: water on Mars. Squyres, S.W., (1989, p.229-288, eng) 43-4390
Residues from irradiation of carbon ices. Khare, B.N., et al, (1989, p.350-361, eng) 43-4391
Geohydrology of Mars. Risner, J.K., (1989, p.184-192, eng) 43-4599

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Measurements of the concentration of falling snow. Stallabrass, J.R., (1987, p.389-410, eng) 43-1304
Examination of the terminal velocity of falling snowflakes. Suzuki, M., et al, (1988, p.63-71, jpn) 43-1907
Terminal velocity adjustments for plate-like crystals and graupel. Beard, K.V., et al, (1988, p.3515-3518, eng) 43-2773

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Chernobyl reactor accident; contamination of snow cover on Alpine glaciers. Ambach, W., et al, (1987, p.276-281, ger) 43-1280
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Finnish Ice Service. Grönvall, H., (1988, p.95-110, eng) 43-1972
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Finnish river ice research project. Huokuna, M., (1988, p.15-41, eng) 43-2163
Hydrological yearbook 1981-1983. Leppäjärvi, R., ed, (1987, 238p, eng) 43-3492
Winter factor in Finnish urbanism. Mänty, J., (1988, p.133-144, eng) 43-4241

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Mudflows; collected articles, No.10. Stepanov, B.S., ed, (1988, 172p., rus) 43-2417
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Flood geomorphology in the glaciated terrain, New England. Patton, P.C., (1988, p.261-277, eng) 43-1550
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Mudflow passages in high mountains. Haeberli, W., et al, (1988, p.331-343, ger) 43-2062
Breakout of fiord dammed by glacier near Yakutat, Alaska. Mayo, L.R., (1988, p.42-49, eng) 43-2138
Ice jam flood frequency and annual damages at Dawson City on the Yukon River. McCreath, P.S., et al, (1988, p.63-83, eng) 43-2165
Using historical data to determine flood risk from ice jams Kriwoken, L.A., et al, (1988, p.97-113, eng) 43-2167
Historical ice jam flood data. Stanley, S., et al, (1988, p.115-137, eng) 43-2168
Forecasting of maximal water level on Lena River due to ice jams. Kil'mianinov, V.V., (1988, p.55-67, rus) 43-2350
Mudflows; collected articles, No.10. Stepanov, B.S., ed, (1988, 172p, rus) 43-2417
Outbreaks of moraine lakes. Keremkulov, V.A., et al, (1988, p.62-77, rus) 43-2420
Flash flood of July 2, 1984, in the Kol'say River basin. Mochalov, V.P., et al, (1988, p.150-155, rus) 43-2423
Runoff from spring floods in swamps. Pakutin, A.V., (1988, p 82-86, rus) 43-2468
Implications of warm weather during Canadian Arctic winter. Gilbert, R., et al, (1988, p 395-403, eng) 43-2480
Ice jams and floods on the Lower Vistula River. Grześ, M., (1986, p 51-67, eng) 43-2800
Glacial mud flows and outburst floods from icebound lakes in China. Xu, D.M., et al, (1988, p.284-289, chi) 43-2870
Computer modeling of avalanches, mudflows and floods. Mironova, E.M., et al, (1988, p.161-165, rus) 43-3324
Stream types and floods in the Kunlun Mountains. Ai, S.T., (1989, p.123-127, eng) 43-3451
Analysis of three rain on snow floods in the Sierra Nevada, California. Hall, R.L., et al, (1983, p.46-54, eng) 43-4352
Rain on snow: shallow, transient snowpacks with frozen soils. Zuzel, J.F, et al, (1983, p.67-75, eng) 43-4354
Rain-on-snow flood event in central Arizona. Ffolliott, P.F., et al, (1983, p.130-138, eng) 43-4360

Floors

Construction materials for low-storied housing in the North and Siberia. Khrulev, V M, et al, (1989, 152p, rus) 43-3633
Thermal effect on high-rise buildings in cold regions Lee, Y., et al, (1989, p.117-122, eng) 43-4208
Thermal engineering and structural foundations. Farouki, O.T., (1989, p.257-262, eng) 43-4220

Flora

See also: Plants (botany); Vegetation

Flow

See also: Air flow; Fluid flow; Glacier flow; Laminar flow; Pipe flow; Plastic flow; Rheology; River flow; Shear flow; Stream flow; Turbulent flow; Unsteady flow; Viscous flow; Water flow

Flow control

Ice jams and damming of flow-controlled rivers. Karnovich, V.N., et al, (1988, p.598-604, eng) 43-138
Damming structures at headworks of rivers. Xu, S.B., (1988, p.92-102, eng) 43-2983
Numerical solutions for laminar heat transfer with freezing and thawing. Nakamura, H., et al, (1989, p.39-44, eng) 43-4197

Flow measurement

Ice movement characteristics of the Bezengi glacier during its advancement stage. Barykov, A.A., et al, (1987, p.95-99, rus) 43-236
Ice-shelf flow at the boundary of Crary Ice Rise, Antarctica. Bindschadler, R.A., et al, (1988, p.8-13, eng) 43-1936
Ice-motion determination by means of satellite positioning systems. Hinze, H., et al, (1988, p.36-41, eng) 43-1941
Review of ice rheology for ice sheet modelling. Budd, W.F., et al, (1989, p.107-144, eng) 43-2362
Stream discharge during ice-affected periods. Melcher, N.B., (1988, p.293-303, eng) 43-3002

Flow rate

New methods of determining spacial shifts of glacier surfaces. Vinnikov, L.P., et al, (1987, p.179-183, rus) 43-255
Predicting flowrates in an ice covered stream. Santeford, H.S, et al, (1984, p.1031-1043, eng) 43-668
Two-power law for analysis of velocity profiles in ice covered rivers. Papadakis, J.E., (1988, 13p. + append., eng) 43-932
Stable-isotope pattern predicted in surge-type glaciers. Waddington, E.D., et al, (1988, p.657-668, eng) 43-1127
Slushflow activity in the Rana district, North Norway. Hestnes, E., et al, (1987, p.317-330, eng) 43-1241
Slushflow release mechanism: a first approximation. Onesti, L.J., (1987, p.331-336, eng) 43-1242
Granular shear flows as models for flow avalanches. Hutter, K., et al, (1987, p.381-394, eng) 43-1247
Experiments on snow-avalanche dynamics. Nishimura, K., et al, (1987, p.395-404, eng) 43-1248
Measurements and modelling of snow avalanche speeds. Gubler, H., (1987, p.405-420, eng) 43-1249

Flow rate *(cont.)*
Physical characteristics of snow-avalanche debris. Maeno, N., et al, (1987, p.421-427, eng) 43-1250
Laboratory experiments on the dynamics of powder snow avalanches. Hermann, F., et al, (1987, p.431-440, eng) 43-1252
Glacial geodetic contributions to the mass balance and dynamics of ice shelves. Möller, D., et al, (1988, p.89-94, eng) 43-1950
BAS review of ice streams and ice shelves. Morris, E.M., (1989, p.17-36, eng) 43-2660
Ice flow over viscous basal sediment, ice stream B. MacAyeal, D.R., (1989, p.4071-4087, eng) 43-2721
C-axis orientation and flow rate of ice. Azuma, N., et al, (1988, p.67-76, eng) 43-2910
Stream discharge during ice-affected periods. Melcher, N.B., (1988, p.293-303, eng) 43-3002
Dating by ice flow modeling. Reeh, N., (1989, p.141-159, eng) 43-3685
Heat transfer from water flowing through a chilled-bed open channel. Richmond, P.W., et al, (1989, p.51-58, eng) 43-4199
Urban snow removal and storage for air conditioning. Shirakashi, M., et al, (1989, p.375-382, eng) 43-4396
See also: Water transport

Fluid dynamics
Startup from the frozen state and performance of heat pipes. Jang, J.H., (1988, 217p., eng) 43-2891
Natural convective heat transfer of cold water. Ho, C.J., et al, (1988, p.894-900, eng) 43-3087
Icing technology bibliography. (1987, 149p., eng) 43-3411

Fluid flow
On two special Rivlin-Ericksen fluid models generalizing Glen's flow law for polycrystalline ice. Sun, Q.X., (1988, 7p, eng) 43-119
Application of two non-linear fluid models to glacier flows. Sun, Q.X., (1988, p.231-240, eng) 43-1328
On the pressure drop through a uniform snow layer. Yen, Y.C., (1988, 10p., eng) 43-1401
Exploration of the iceformation method applied to a diffuser. LaFleur, R.S., (1988, p.244-250, eng) 43-1464
Dendrites, viscous fingers, and the theory of pattern formation. Langer, J.S., (1989, p.1150-1156, eng) 43-1819
Solidification dynamics of a flowing molten fluid. Chun, M.H., (1989, p.1-10, eng) 43-3282
Icing technology bibliography. (1987, 149p., eng) 43-3411
Hot wire anemometer in low temperature gas flow. Adachi, T., et al, (1988, p.387-392, jpn) 43-4484
Yield stress of frozen hydrocarbon fuels. Neihof, R.A., (1989, p.843-848, eng) 43-4558
See also: Air flow; Glacier flow; Laminar flow; Pipe flow; River flow; Stream flow; Turbulent flow; Unsteady flow; Water flow

Fluid infiltration
See also: Seepage

Fluids
See also: Liquids

Flumes
See also: Channels (waterways)

Foam
Foam-initiated ice covers on small rivers and streams. Ettema, R., et al, (1989, p.95-99, eng) 43-1583

Foam plastics
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Fog
Statistical analysis of fog and snowstorms. Karpenko, V.N., (1988, p.127-136, rus) 43-1777
Disturbance of the homogeneity of horizontal visibility series. Kashevar, V.V., (1988, p.176-180, rus) 43-1781
See also: Advection fog; Ice fog; Supercooled fog

Fog dispersal
Dynamics of supercooled fog dispersal from lidar data. Alekseev, A.P., et al, (1987, p.190-195, rus) 43-604
Modeling artificial crystallization and dissipation of supercooled fogs and low clouds. Khvorost'ianov, V.I., (1988, p.82-90, rus) 43-1080
Cloud physics and weather modification. Plaude, N.O., ed, (1988, 136p., rus) 43-2709
Three-dimensional time-dependent microphysical numerical model of artificial crystallization and dispersal of fog and low clouds. Khvorost'ianov, V.I., (1988, p.50-62, rus) 43-2715
Cloud and fog dissipation by solar heating of a surface with nonhomogeneous albedo. Khvorost'ianov, V.I., (1988, p.62-72, rus) 43-2716

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See also: Forest canopy

Footings
See also: Foundations; Pavement bases; Permafrost bases

Forecasting
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Scheme for forecasting flood runoff for unstudied rivers of eastern Siberia. Petenkov, A.V., (1986, p.451-458, eng) 43-1091
Simple solution for thawing of multi-layered soil systems. Kuhlemeyer, R.L., (1988, p.673-688, eng) 43-1332
Preliminary results from simulation of retaining wall displacement by frost action. Li, Y., et al, (1989, p.389-396, eng) 43-2119
Forecasting of ocean waves and wind. Hodgins, S.L.M., et al, (1988, 356p., eng) 43-2258
Forecasting and control of the thermal regime in mine shafts. Galkin, A.F., ed, (1987, 67p., rus) 43-2284
Forecasting the temperature regime of warehouses, under construction in permafrost on a multilayer foundation Bondarev, E.A., et al, (1987, p.30-34, rus) 43-2286
Predicting the mud shear process. Gavrishina, L.N., (1988, p.35-39, rus) 43-2419
Indirect indicators of mud hazards of a territory. Mochalov, V.P., et al, (1988, p.133-149, rus) 43-2422
Engineering method for predicting settlement of foundations. Tsytovich, N.A., (1988, 118p., rus) 43-2576
Probabilistic study of ice island trajectories. Li, F.C., et al, (1988, p.405-414, eng) 43-2940
Forecasting river water temperatures. Daly, S.F., (1988, p.180-188, eng) 43-3031
Forecasting technique for anthropogenic changes in cryogenic conditions. Garagulia, L.S., (1985, 224p., rus) 43-3073
Forecasting snow capacity of existing roadside snow-protection forest strips. Kolomiets, V.A., (1989, p.125-127, rus) 43-3172
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Acoustic propagation across the East Greenland marginal ice zone. Gallagher, C.J., (1989, 82p., eng) 43-3366
Approximation methods for calculating the thermal effect of snow cover. Romanovskiĭ, V.E., (1987, p.183-188, rus) 43-3383
Meteorological and oceanic forcing of the Alaskan continental shelf seas. Overland, J.E., (1988, p.39-40, eng) 43-3501
Estimating the thawing rate of ice-saturated porous deposits. Bulskikh, A.A., et al, (1988, p.73-78, rus) 43-3863
Settlement pressures on roof structures. Albrecht, R.G., (1987, p.118-123, eng) 43-3934
Roof load predictions using artificial snow. Sack, R.L., et al, (1987, p.150-153, eng) 43-3939
Calculating the highest ice-jam stage. Buzin, V.A., (1989, p.95-101, rus) 43-4553
Probability estimation of snow cover mass on the ground. Ledovskoĭ, I.V., et al, (1988, p.96-104, rus) 43-4555
See also: Avalanche forecasting; Flood forecasting; Frost forecasting; Ice forecasting; Long range forecasting; Permafrost forecasting; Runoff forecasting; Weather forecasting

Forest canopy
Effects of land clearing on soil variability. Goldin, A., et al, (1988, p.473-477, eng) 43-127
Snow interception in coastal forests of British Columbia. McNay, R.S., et al, (1988, p.566-573, eng) 43-295
Management of subalpine forests: building on 50 years of research. (1987, 253p., eng) 43-573
Influence of forests on snowpack accumulation. Meiman, J.R., (1987, p.61-67, eng) 43-574
Coon Creek water yield augmentation pilot project. Bevenger, G.S., et al, (1987, p.145-149, eng) 43-579
System that monitors blowing snow in forest canopies. Schmidt, R.A., et al, (1987, p.227-230, eng) 43-583
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Snow hydrology—forest harvesting interface. Toews, D.A.A., et al, (1988, p.13-22, eng) 43-3992
Snow deposition processes in a forest stand with a clearing. Troendle, C.A., et al, (1988, p.78-86, eng) 43-3999
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Precipitation gages protected by shields and trees. Sturges, D.L., (1984, p.57-67, eng) 43-4316
Options for harvesting timber to control snowpack accumulation. Troendle, C.A., et al, (1984, p.86-97, eng) 43-4319
Snow accumulation, melt, and soil moisture in pine forest. Potts, D.F., (1984, p.98-108, eng) 43-4320
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Snow accumulation and melt during rainfall in forests Harr, R.D., et al, (1983, p.38-45, eng) 43-4351

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Scientific and technological progress and economic development in the Murmansk region. Sakharina, L.A., ed, (1987, 113p., rus) 43-104
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Forest litter in the middle Angara region. Popova, E.P., et al, (1988, p.13-20, eng) 43-2192

Forest lines
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Forest soils
Man-induced activation of exogenic processes in taiga. Evseeva, N.S., (1987, p.292-299, eng) 43-133
Heat balance structure of forest landscapes in West Siberia. Abdullaev, A.A., (1988, p.321-326, rus) 43-568
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Morphology of forest soils on the Kola Peninsula. Nikonov, V.V., et al, (1988, p.68-76, eng) 43-1119
Proceedings of the Alaska Forest Soil Productivity Workshop, 1987. (1988, 120p., eng) 43-1142
Soils of pine forests in the Angara depression area. Bugakov, I.P., (1986, p.56-63, rus) 43-1409
Microbiology of taiga soils. Sorokin, N.D., (1986, p.79-87, rus) 43-1410
Forest soil frost development in western Montana. Saul, L.A., et al, (1986, p.165-167, eng) 43-3918
Soil freezing and thawing in the middle taiga of the European USSR. Deriugin, A.A., (1989, p.76-82, rus) 43-4067
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Forest strips
See also: Protective vegetation

Forest trees
See also: Trees (plants)

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Suspended sediments as a function of stream flow. Salway, A.A., (1985, p.175-178, eng) 43-4285
Influences of snow persistence on subalpine forest. Daly, C., (1984, p.109-119, eng) 43-4321
Large, adjustable tipping bucket gauge for measuring snowmelt. Wilford, D.J., (1984, p.176-179, eng) 43-4330

Formwork (construction)
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Concrete and reinforced concrete studies. Sovalov, I.G., et al, (1988, 335p. (Pertinent p.261-281), rus) 43-2806

Fossils
Fossil-pingo lake peatlands in the Sanjang Plain. Song, H., et al, (1988, p.76-83, chi) 43-470
Fossil glacial cirques at low altitudes in Sweden. Rudberg, S., (1985, p.19-25, swe) 43-1011

Foundations
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Handbook of soil mechanics and foundation engineering. (1982, 1505p, jpn) 43-299
Studies of frozen strata and cryogenic phenomena. Klimovskii, I.V., ed, (1988, 153p., rus) 43-518
Studies of shallow ventilated foundations on permafrost. Berdichevskii, IU.V., et al, (1988, p.115-122, rus) 43-535
Present state of the Ponneurgen dam. Bianov, G.F., et al, (1988, p.36-40, rus) 43-561
Performance monitoring of onshore structures at Svalbard. Gregersen, O., et al, (1988, p.329-342, eng) 43-632
Foundation stabilization of an on-grade structure. Gill, J.D., (1984, p.1091-1099, eng) 43-672
Field studies of the solidity of tall concrete structures. Durcheva, V.N., (1988, 120p., rus) 43-740
New achievements in foundation construction on peat and weak ground (according to materials of the Baltic International Conference). Svetinskii, B.V., (1988, p.28-30, rus) 43-815
Foundation technology in cold regions. Quinn, W.F., (1987, p.305-310, eng) 43-865
Arctic construction, working group report. Marvin, E.L., et al, (1987, p.311-314, eng) 43-866
Repairs and protection of piles in hydraulic structures. Nikitin, P.P., (1988, p.55-56, rus) 43-896
Chemical soil stabilization and the environment. Sokolovich, V.E., (1988, p.233-236, eng) 43-1085
Strength of thawed and frozen dam soils under stress. Vasil'ev, I.M., et al, (1988, p.27-33, eng) 43-1087
Mechanization of pile work under winter conditions. Bad'in, G.M., (1987, 184p., rus) 43-1186
Thermosyphons and foundation design in cold regions. Haynes, F.D., et al, (1988, p.251-259, eng) 43-1346
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Subgrades and foundations on frozen ground Sal'nikov, P.I., ed, (1985, 117p., rus) 43-1648
Stability of structures on frozen ground. Sal'nikov, P.I., (1985, p.3-8, rus) 43-1649
Studies of tangential forces of frost heave in soils. Elgin, B.B., et al, (1985, p.19-25, rus) 43-1651
Interaction of foundations with frost-susceptible subgrades. Zheleznlak, I.I., (1985, p.37-43, rus) 43-1654
Thermal regime of freezing soils in northern Kazakhstan. Zhanalinov, B.N., et al, (1985, p.67-69, rus) 43-1659
Increase of pile-foundation durability in Transbaikal. Tupitsyna, V.N., (1985, p.69-78, rus) 43-1660
Construction of the Kemerovo regional breeding station on sagging soils. Kemerov, V.D., (1985, p.85-88, rus) 43-1662
Nonlinear method of designing foundation platforms for elevators. Vysokovskii, V.L., et al, (1985, p.88-97, rus) 43-1663
Calculation of stresses and deformations in flat foundations. Mirenkov, V.E., et al, (1985, p.104-110, rus) 43-1665
Foundation design on permafrost with heat pumps. Instanes, B., (1988, p.73-74, eng) 43-1727
Pile foundations in Arctic areas. Goff, R.D., (1974, 26p., eng) 43-1733
Design and installation of a pile foundation in a remote area of Alaska Hammer, T.A., et al, (1989, p.215-225, eng) 43-2104
Unexpected soils problem fails to slow building project. Munn, W.D., (1988, p.52-53, eng) 43-2399
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Effect of soil physics and chemistry on frost of granular materials. Van Loon, W.K.P., et al, (1989, p.341-352, eng) 43-3110
Field investigation of heaving pressure and frost heaving. Furmonavicius, L., et al, (1989, p.491-502, eng) 43-3122
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Development of frost in backfill of foundation. Hiekkanen, R., (1989, p.781-789, eng) 43-3146
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Thermal engineering and structural foundations. Farouki, O.T., (1989, p.257-262, eng) 43-4220
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Fracture zones
Ice movement characteristics of the Bezengi glacier during its advancement stage. Barykov, A.A., et al, (1987, p.95-99, rus) 43-236
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Application of fracture mechanics to ice/structure interactions. Nixon, W.A., (1988, p.1-12, eng) 43-150
Statistical analysis of fracture toughness and flexural strength of ice. Lal, M., (1988, 75p., eng) 43-774
Stability and fracture of the snow pack for glide avalanches. Lackinger, B., (1987, p 229-241, eng) 43-1233
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Lithology and fracture of rock glaciers Evin, M., (1988, p.137-158, fre) 43-2300
Strength of metals used at low temperatures. Solntsev, IU.P., ed, (1987, 168p., rus) 43-2447
Technical demands of cold-resistant cast steel for payloader's wheels. Gol'dbukht, E.E., et al, (1987, p.10-12, rus) 43-2449
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Mechanics of the fracture of equiaxed freshwater ice. Nixon, W.A., et al, (1989, p.23-29, eng) 43-2605
Fracture toughness of S2 columnar freshwater ice. Dempsey, J.P., et al, (1989, p.83-89, eng) 43-2613
Effects of end conditions on the strength and fracture of ice under compression. Lasonde, G.J., et al, (1988, p.99-108, eng) 43-2913
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Atmospheric disturbances triggering arctic sea ice fracture. Kozo, T.L., et al, (1988, p.633-642, eng) 43-2961
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Fracture of freshwater and urea model ice. Bentley, D.L., (1989, 142p., eng) 43-3610
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Brief overview of the fracture of ice. Parsons, B.L., (1988, p.103-112, eng) 43-4173
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Fram Strait
Evidence from Fram Strait (78N) for early glaciation. Jones, G.A., et al, (1988, p.56-59, eng) 43-783
Sea ice, climate and Fram Strait. Hunkins, K., (1985, p.50-52, eng) 43-1157
Particulate material in sea ice in the Fram Strait. Larssen, B.B., et al, (1987, p.313-315, eng) 43-2011
NOAA satellite observations of marginal ice zone in Fram Strait. (1988, 132p., eng) 43-3959
Sea ice thickness data: the many vs. the few. Eicken, H., et al, (1989, p.495-498, eng) 43-4431

France
Recent developments in artificial avalanche triggering in France. Borrel, G., (1987, p.623-626, fre) 43-1268

—Alps
Solifluction dynamics in the French Alps. Van Vliet-Lanoë, B., (1988, p.29-46, fre) 43-2294
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—Argentière Glacier
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—Caen
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—Pralognan-la-Vanoise
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—Ubaye River
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Frazil Ice
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Causative factors leading to the formation of ice jams Mattke, T.W., et al, (1989, p.170-178, eng) 43-2100
Workshop on Hydraulics of River Ice/Ice Jams, 5th, 1988. (1988, 445p., eng) 43-2162
Finnish river ice research project. Huokuna, M., (1988, p.15-41, eng) 43-2163

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River cooling and frazil and anchor ice formation. Tsang, G., (1988, p.393-416, eng) 43-2182
River ice and salmonids. Walsh, M., et al, (1986, p.D-4.1-D-4.26, eng) 43-2280
Sea-ice investigations during the Winter Weddell Sea Project. Ackley, S.F., et al, (1987, p.88-89, eng) 43-2749
Theory for frazil distribution in turbulent flow. Tsang, G., (1988, p.152-169, eng) 43-2989
Frazil slush accumulation in a reservoir. Kajiyama, Y., et al, (1988, p.170-178, eng) 43-2990
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Development of sea ice in the Weddell Sea. Lange, M.A., et al, (1989, p.92-96, eng) 43-3341
Elastic properties of frazil ice from the Weddell Sea, Antarctica. Lange, M.A., et al, (1989, p.208-217, eng) 43-3726
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Frazil and anchor ice and their role in ice cover development. Gosink, J.P., et al, (1989, 14p., eng) 43-4486
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Freeze drying
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Freeze thaw cycles
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On the design of polymeric composite structures for cold regions applications Lord, H.W., et al, (1988, p.435-458, eng) 43-303
Alpine periglacial zone Harris, S.A., (1988, p.369-413, eng) 43-334
Freeze-thaw coagulation. Kalousdian, S., (1980, 248p., eng) 43-475
Geophysical methods in studying seasonal thawing and forecasting cryogenic phenomena. Vasil'ev, P.S., (1988, p.140-144, rus) 43-539
Study of moisture migration in frozen ground. IAnitskiĭ, P.A., (1988, p.53-58, rus) 43-600
Freeze-thaw effects on granular structure of soils. Pawluk, S., (1988, p.485-494, eng) 43-701
Highly effective thermal insulation at the bases of airports and roads. Ivanov, V.N., (1988, 134p., rus) 43-760
Effects of frost action on soil aggregate stability. Mostaghimi, S., et al, (1988, p.435-439, eng) 43-823
Mechanical and physical properties of soils in cold regions Chamberlain, E.J., (1987, p.155-161, eng) 43-854
Snow/ice/frozen ground properties: working group report. Sterrett, K.F., et al, (1987, p.163-166, eng) 43-855
Repairs and protection of piles in hydraulic structures. Nikitin, P.P., (1988, p.55-56, rus) 43-896
Strength of thawed and frozen dam soils under stress Vasil'ev, I.M., et al, (1988, p.27-33, eng) 43-1087
Road engineering in connection with frost and permafrost. Linell, K.A., (1988, p.(5)I-(5)35, eng) 43-1098
Frozen soil and ground avalanches. Lovie, C., (1988, p.195-206, fre) 43-1164
Design of hydraulic earth structures and methods of determining soil properties. Kartelev, B.G., ed, (1987, 120p., rus) 43-1178
Stress deformation of ground. Gorelik, L.V., et al, (1987, p.4-9, rus) 43-1179
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Freeze-thaw weathering on the Niagara Escarpment, Canada. Fahey, B.D., et al, (1988, p.293-304, eng) 43-1354
Rock breakdown due to freeze-thaw in a maritime antarctic environment. Hall, K., (1988, p.369-382, eng) 43-1355
Results and goals of studying naleds in the BAM zone. Sokolov, B.L., et al, (1987, p.120-131, rus) 43-1437
Simulation of heat and water flow during freeze/thaw cycles of soil Pikul, J.L., Jr., (1988, 193p., eng) 43-1470
Study of processes of unfreezing objects from dispersed soils. Samusenko, A.V., (1988, p.115-122, rus) 43-1610
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Increase of pile-foundation durability in Transbaikal. Tupitsyna, V.N., (1985, p.69-78, rus) 43-1660
Performance of riprap in northern climates. (1988, 124p. + 4 appends., eng) 43-1667
Effect of climate on permafrost, Svalbard Archipelago. Kristensen, M., (1988, p.24-26, eng) 43-1720
Permafrost on Arctic coasts of North America. Hunter, J.A., (1988, p.27-34, eng) 43-1721
Lime treatment of asphalt, Parts 1 and 2. Final report. Petersen, J.C., et al, (1987, 70p., eng) 43-1745
Design and control of concrete mixtures. Kosmatka, S.H., et al, (1988, 205p., eng) 43-1746
City gives potholes icy reception. Bembry, E., (1988, p.54, eng) 43-1855
Freeze thaw cycles of asphalt concrete mixtures. Scherocman, J.A., et al, (1986, p.213-236, eng) 43-1860
Development and design of sludge freezing beds. Martel, C.J., Jr., (1988, 127p., eng) 43-1913
Soil toposequences in Carbon County, Wyoming: pedogenic processes in a semi-arid region. Evans, C.V., (1988, 178p., eng) 43-1914
Deterioration of concrete solidified heavy metal wastes by freeze-thaw action. El-Korchi, T., (1988, 213p., eng) 43-1923
Snowmelt increase through albedo reduction. Colbeck, S.C., (1988, 11p., eng) 43-1927
Early speculations on glacier flow and ice physics. Walker, J.C.F., et al, (1988, p.342-348, eng) 43-1991
Unfrozen water content of undisturbed frozen silt. Tice, A.R., et al, (1988, 17p., eng) 43-1998
Predicting freezing design depth of sludge-freezing beds. Martel, C.J., (1988, p.145-156, eng) 43-2063
Comparison of fragments of fossil deposits with experimental ones. Ozouf, J.C., (1987, p.60-63, fre) 43-2070
Modified Berggren method—a review. Zarling, J.P., et al, (1989, p.262-273, eng) 43-2108
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Approximate solution to the problem of freezing-thawing of rocks given a surface layer of insulation. Komarov, I.A., et al, (1987, p.260-280, rus) 43-2429
Geographic distribution of intensity and frequency of freeze-thaw cycles. Lienhart, D.A., (1988, p.465-469, eng) 43-2475
Implications of warm weather during Canadian Arctic winter. Gilbert, R., et al, (1988, p.395-403, eng) 43-2480
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Respiratory burst after freezing and thawing of soil: experiments with soil bacteria. Skogland, T., et al, (1988, p.851-856, eng) 43-2570
Soil temperature and water during diurnal freezing and thawing. Pikul, J.L., Jr., et al, (1989, p.3-10, eng) 43-2577
Response of runway pavement to freeze thaw cycles Allen, W.L., et al, (1989, 31p., eng) 43-2809
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Frost in geotechnical engineering; VTT Symposium 94, Vols 1 and 2 (1989, 946p. (2 vols.), eng) 43-3093
Simulation of freezing-thawing of soil materials. Bondarev, E.A., (1989, p.167-183, eng) 43-3097
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Frozen soil pulls water up from below. (1989, p.14-15, eng) 43-3288
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Cyanide effluent control by freeze/thaw processing. Meech, J.A., (1985, p.80-84, eng) 43-3896
Designing mine supports in permafrost. Izakson, V.IU., et al, (1988, 122p., rus) 43-4037
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Measurement of frost depth. McCool, D.K., et al, (1984, p.33-42, eng) 43-4313
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Freeze thaw tests
Structural fiber composite materials for cold regions. Dutta, P.K., (1988, p.124-134, eng) 43-873
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Durability of concrete structures. Coating protection against atmospheric acid attack. Orantie, K., et al, (1988, 41p. + appends., eng) 43-1706

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Effect of vibration on the air-void system and freeze-thaw durability of concrete. Stark, D.C., (1986, 10p., eng) 43-3486
Measurement of pore pressures in freezing and thawing soils Eigenbrod, K.D., et al, (1989, p.943-952, eng) 43-3791
Development and design of sludge freezing beds. Martel, C.J., (1988, 49p., eng) 43-4597

Freezeup
Depth-discharge relationships for ice-covered rivers. Santeford, H.S., et al, (1987, p.144-153, eng) 43-397
Timing and duration of river ice break-up. Prowse, T.D., et al, (1987, p.192-196, eng) 43-401
Ice regime reconnaissance, Yukon River, Yukon. Gerard, R., et al, (1984, p.1059-1073, eng) 43-670
Design of river intakes in cold climates. Hodgson, J.E., et al, (1984, p.1113-1127, eng) 43-674
Ice formation in channels with year-round service. Batalova, N.N., (1988, p.89-93, rus) 43-1785
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Finnish Ice Service. Grönvall, H., (1988, p.95-110, eng) 43-1972
Nearshore Great Lakes ice statistics. Bolsenga, S.J., et al, (1988, 42p., eng) 43-1973
Ice buildup in tailing basins. Barr, D W, (1989, p.202-214, eng) 43-2103
Mathematical thermal model of lake freezing and its testing. Shishkaev, S.M., (1988, p.18-24, eng) 43-2126
Ice cover distribution in Vermont and New Hampshire Atlantic salmon rearing streams. Calkins, D.J., et al, (1988, p.85-96, eng) 43-2166
Ice related flooding on Harry's River. Anderson, J.E., et al, (1988, p.369-391, eng) 43-2181
Variation in the stage of the ice period of the Yellow River. Wang, Y.G., et al, (1988, p.142-151, eng) 43-2988
Variability of ice growth characteristics in Lake Haruna, Japan. Ono, N., et al, (1988, p.209-218, eng) 43-2994
Hydrological yearbook 1981-1983. Leppäjärvi, R., ed, (1987, 238p., eng) 43-3492
Numerical model of water droplet trajectories. Andersson, A., et al, (1989, p.671-680, eng) 43-3767

Freezing
Atmospheric icing offshore eastern Canada. Mitten, P., (1986, p.325-341, eng) 43-277
Seasonal frost mounds. Pollard, W.H., (1988, p.201-229, eng) 43-328
Heat transfer and structure formation during processes of freezing the eutectic-forming systems. Brazhnikov, S.M., et al, (1988, p.44-46, rus) 43-549
Influence of freezing on liposomes in aqueous media. Özer, Y., et al, (1988, p.129-139, eng) 43-1569
Statistical structure of frost in the Aral Sea area. Palagina, L.L., (1988, p.35-38, rus) 43-1782
Density functional theory for the freezing of Lennard-Jones binary mixtures. Rick, S.W., et al, (1989, p.1188-1199, eng) 43-1820
Water activity change in aqueous solutions at subfreezing temperatures. Chen, C.S., (1988, p.256-258, eng) 43-1826
Allowable shut-in is estimated for wells in permafrost. Kutasov, I.M., et al, (1988, p.55-60, eng) 43-1969
Perturbation solution for spherical solidification by convective cooling. Milanez, L.F., et al, (1988, p.88-91, eng) 43-2336
Freezing of swamps in the middle part of the Ob' River region. Novikov, S.M., et al, (1988, p.55-69, rus) 43-2466
Assemble the frost indicator. Frund, D., (1988, p.35-40, eng) 43-2489
Melting and freezing. Yao, L.S., et al, (1989, p.1-95, eng) 43-2555
Enigmatic basal sea-ice layer of the Filchner-Ronne Ice Shelf. MacAyeal, D.R, et al, (1987, p.89-91, eng) 43-2750
Freezing of the hard-sphere liquid. Popović, M., et al, (1988, p.808-810, eng) 43-2841
Theory of freezing for monatomic systems. Laird, B.B., (1988, 167p., eng) 43-2890
Thermal storage for preventing road-surface freezing. Ikeda, M., et al, (1989, p.791-800, eng) 43-3147
Insulation effect of polypropylene beads concrete in pavement. Yanagisawa, E., et al, (1989, p.845-853, eng) 43-3153
On the supercooling during freezing of water saturated porous media. Chellaiah, S., et al, (1989, p.163-172, eng) 43-3283
Effect of freezing on photosynthesis of intertidal macroalgae. Dudgeon, S.R., et al, (1989, p.107-114, eng) 43-3823
Analytical ice shape predictions for flight in natural icing conditions. Berkowitz, B.M., et al, (1988, 39p., eng) 43-3969
Effects of low temperatures on biological systems. Grout, B.W.W., ed, (1987, 500p., eng) 43-3979
Higher plants at freezing temperatures. Grout, B.W.W., (1987, p.293-314, eng) 43-3983
Thermal conductivity of sludges. Vesilind, P.A., et al, (1989, p.241-245, eng) 43-3984
International Symposium on Cold Regions Heat Transfer, 1989. (1989, 314p., eng) 43-4193
Study on freezing of undercooled solution. Hayashi, Y., et al, (1989, p.85-90, eng) 43-4202
Transient freezing heat transfer in a water-saturated porous media. Sasaki, A., et al, (1989, p.291-296, eng) 43-4225
Dynamics of freezing and liquid instability. Bagchi, B., (1987, p.29-33, eng) 43-4338
Phase-change tracking using surface temperature. Choi, H.O., (1988, p.691-696, eng) 43-4457
Density functional theory of freezing with a self-consistent effective liquid. Baus, M., (1989, p.3131-3134, eng) 43-4620

See also: Artificial freezing; Concrete freezing; Ice formation; Pipeline freezing; Regelation; Sea water freezing; Seasonal freeze thaw; Soil freezing; Spray freezing; Vacuum freezing

Freezing depth
See also: Frost penetration

Freezing indexes
Errors in freezing index values calculated from monthly average temperatures. Haas, W.M., (1984, p.1075-1089, eng) 43-671
Frost penetration and thermal regime in dry gravel. McKeown, S., et al, (1988, p.111-123, eng) 43-872
Comprehensive study of cold climate airport pavement cracking. Haas, R., et al, (1987, p.198-245, eng) 43-1863
Ice conditions of Lake Ogawara. Hirayama, K., et al, (1988, p.415-426, eng) 43-2941
Ice rubble consolidation. Timco, G.W., et al, (1988, p.427-438, eng) 43-2942

Freezing nuclei
Possible mechanisms of crystal nucleation in clouds and their parametrization in numerical models. Mazin, I.P., (1988, p.7-13, rus) 43-1077

Freezing point depressants
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Freezing points
Heat transfer with phase changes. Zabaras, N., et al, (1988, p.554-561, eng) 43-666
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Solvent freezing point depression in swollen rubber gels. Honiball, D., et al, (1988, p.2413-2431, eng) 43-1693
Microdynamic behavior of water in clay gels below the freezing point. Fripiat, J, et al, (1984, p.279-286, eng) 43-1832
Role of the molecular sublayer in the melting or freezing of sea ice. Steele, M., et al, (1989, p.139-147, eng) 43-2079
Depression of soil moisture freezing point as a thermodynamic parameter. Fedorov, V I., (1989, p.239-249, eng) 43-3102
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See also: Melting points

Freezing potential (electrical)
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Freezing rate
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Snow surface drag of air movement on the Antarctic Plateau, Pt.1 Inoue, J, (1989, p 2207-2217, eng) 43-2491
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Ice flow and blockage investigation of shrouded propellers. Laskow, V., (1988, var.p., eng) 43-3204
Simple approach to air and water drag on sea ice. Myrhaug, D., (1989, p.466-476, eng) 43-3410
Ski tribology. Spring, E., (1989, p.108-119, eng) 43-4472

See also: Glacier friction; Ice friction; Internal friction; Metal ice friction; Metal snow friction; Plastics ice friction; Plastics snow friction; Rubber ice friction; Rubber snow friction; Skid resistance; Wood ice friction; Wood snow friction

Fronts (meteorology)
Winter storm structure and melting-induced circulations. Stewart, R.E., et al, (1989, p 5-23, eng) 43-4459
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Surface of Io: a new model. Hapke, B., (1989, p.56-74, eng) 43-4334
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Characteristic features of modern tidal flats in cold regions. Dionne, J.C., (1988, p.301-332, eng) 43-316
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Frost action *(cont.)*

Ice effect on reinforced concrete supports of offshore drilling structures. Shmaevich, L I., (1986, p 134-148, rus) 43-730

Seasonal road closures and highway meteorology Livet, J., (1988, p 60-65, fre) 43-836

Road engineering in connection with frost and permafrost. Linell, K.A., (1988, p.(5)1-(5)35, eng) 43-1098

Role of extruded expanded polystyrene in Ontario's provincial transportation system. MacMaster, J.B., et al, (1987, p.10-22, eng) 43-1387

Periglacial forms in Norway. Ödegård, R., et al, (1988, p.59-61, eng) 43-1726

Cold regions engineering conference, Feb. 6-8, 1989. (1989, 399p., eng) 43-2083

Performance of pavement at Central Wisconsin Airport. Stark, J., et al, (1989, p.92-103, eng) 43-2092

Deep frost effects on a longitudinal edge drain. Allen, W.L., (1989, p.343-352, eng) 43-2115

Solifluction dynamics in the French Alps. Van Vliet-Lanoë, B., (1988, p.29-46, fre) 43-2294

Mechanism of frost damage to concrete. Kleiner, V.D., (1988, p.56-59, rus) 43-2435

Frost in geotechnical engineering, VTT Symposium 94, Vols. 1 and 2. (1989, 946p. (2 vols.), eng) 43-3093

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Preventing measures against frost actions in soils. Phukan, A.P.E., (1989, p.749-769, eng) 43-3144

Physical changes in clays due to frost action. Chamberlain, E.J., (1989, p.863-893, eng) 43-3155

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Influence of frost action on the load exerted on buried pipe. Molin, J., (1985, p.554-565, eng) 43-3491

Deterioration of concrete water tanks in cold climates Grieve, P., (1989, p.51-54, eng) 43-3958

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See also: Hoarfrost

Frost forecasting

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Ice prediction enters new phase. Thornes, J., (1988, p.37-39, eng) 43-1426

Forecast of frost duration. Pandolfi, A.M., et al, (1987, p.339-343, eng) 43-2254

Forecasting technique for anthropogenic changes in cryogenic conditions. Garagulia, L.S., (1985, 224p., rus) 43-3073

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Frost heave

Frost upheaval of overwintering plants. Perfect, E., et al, (1988, p.70-75, eng) 43-14

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On salt heave of saline soil. Chen, X., et al, (1988, p.35-39, eng) 43-58

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Experimental study of frost heaving of a saturated soil Ishizaki, T., et al, (1988, p.65-72, eng) 43-62

Finite element simulation of frost heave in soils. Lewis, R.W., et al, (1988, p.73-80, eng) 43-63

Frost heave mechanism model based on energy equilibrium. Miyata, Y., (1988, p.91-98, eng) 43-65

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Frost expansion pressure and displacement of saturated soils. Ryokai, K., et al, (1988, p 115-120, eng) 43-68

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Deformation of oil and gas structures in northern West Siberia. Savel'ev, V.S., et al, (1988, p.185-188, eng) 43-143

Processing of results of pile tests in permafrost. Gur'ianov, I.E., (1987, p.105-107, eng) 43-213

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Two species of *Draba* in a Venezuelan paramo. Pfitsch, W.A., (1988, p.333-341, eng) 43-290

Handbook of soil mechanics and foundation engineering. (1982, 1505p., jpn) 43-299

Mathematical model of frost heave in granular materials. Piper, D., (1988, 248p., eng) 43-305

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Frost susceptibility of sandy gravel with different contents of soil. Peng, W., (1988, p.22-27, chi) 43-464

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Highly effective thermal insulation at the bases of airports and roads. Ivanov, V.N., (1988, 134p., rus) 43-760

Embankment stabilization techniques. Rooney, J.W., et al, (1986, p.13-34, eng) 43-767

Investigation of permafrost and climate change—Phase 3 (1987, 159p., eng) 43-779

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Foundation technology in cold regions. Quinn, W.F., (1987, p.305-310, eng) 43-865

Subalpine heaths as an indicator of a periglacial environment. Josefsson, M., (1988, p.215-223, eng) 43-924

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Frost heave prediction for clayey soils. Chen, X., et al, (1988, p.233-238, eng) 43-1344

Electrical freezing potential of soils. Kelsh, D.J., et al, (1988, 9p, eng) 43-1562

Study of processes of unfreezing objects from dispersed soils. Samusenko, A V., (1988, p.115-122, rus) 43-1610

Subgrades and foundations on frozen ground. Sal'nikov, P.I., ed, (1985, 117p., rus) 43-1648

Stability of structures on frozen ground. Sal'nikov, P.I., (1985, p.3-8, rus) 43-1649

Studies of tangential forces of frost heave in soils. Elgin, B.B., et al, (1985, p.19-25, rus) 43-1651

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Maintenance of a railway grade over permafrost in Canada. Hayley, D.W., (1988, p.43-48, eng) 43-1723

Frost and dimensioning of road structure. Turunen, P., (1988, p.27-33, fin) 43-1797

Measurement of frost heave forces on H-piles and pipe piles. Johnson, J.B., et al, (1988, 49p, eng) 43-2029

Freezing of soil and rocks. Fremond, M., (1987, p.47-52, fre) 43-2068

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Effect of overconsolidation on freezing of clayey silt. Konrad, J.M., (1989, p.9-21, eng) 43-2705

Response of runway pavement to freeze thaw cycles. Allen, W.L., et al, (1989, 31p, eng) 43-2809

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Sand and gravel as canal subgrade to prevent frost heave. Zhu, Q., et al, (1988, p.400-408, chi) 43-2854

Frost hazard of roads in marshlands of the Sanjiang Plain. Wang, C.H., (1988, p.409-417, chi) 43-2855

Current development of the study on frost susceptibility of soils. Chen, X.B., (1988, p.319-326, chi) 43-2875

Frost destruction and its prevention of reservoir revetment in plain area. Sui, X.Z., (1988, p.493-501, eng) 43-2948

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Frost heave properties of soils. Anderson, D.M., (1989, p.105-125, eng) 43-3095

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Current development on frost susceptibility prediction of soils in P.R. China. Chen, X., (1989, p 481-490, eng) 43-3121

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Application of direct freezing tests in dimensioning frost protection for roads. Stenberg, L., (1989, p.565-572, eng) 43-3129

Changes in grain size distribution in loess soils submitted to freezing. Wojtowicz, U.B., (1989, p.601-610, eng) 43-3132

Frost protection in design and construction in Japan. Kubo, H., (1989, p.613-631, eng) 43-3133

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Preventing measures against frost action in soils. Kinoshita, S., (1989, p.733-748, eng) 43-3143

Preventing measures against frost actions in soils. Phukan, A.P.E., (1989, p.749-769, eng) 43-3144

Development of frost in backfill of foundation. Hiekkanen, R., (1989, p.781-789, eng) 43-3146

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Effects of recurring thaws on the cold resistance of road structures. Borozinets, V.E., et al, (1987, p.243-252, rus) 43-3389

Finite element techniques for pipelines subjected to extreme loads. Row, D., et al, (1983, p 474-485, eng) 43-3420
Influence of frost action on the load exerted on buried pipe. Molin, J., (1985, p.554-565, eng) 43-3491
Radar profiling of Newton Airfield in Jackman, Maine. Martinson, C.R., (1989, 9p., eng) 43-3618
Reservoirs and water-containing structures. Dotsenko, T.P., ed, (1989, 190p. (pertinent, p.140-149), rus) 43-3628
Effect of freeze thaw cycles on clayey silt. Konrad, J.M., (1989, p.217-226, eng) 43-3824
Detailed observations on the nature of frost heaving at a field scale. Smith, M.W., et al, (1989, p.306-312, eng) 43-3826
Colorado fights frost heave with insulation. Upright, W., (1989, p.81-82, eng) 43-4083
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Experimental study of frost heaving of a saturated soil. Ishizaki, T., et al, (1988, p.65-72, eng) 43-62
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Study of moisture migration in frozen ground. IAnitskiĭ, P.A., (1988, p.53-58, rus) 43-600
Errors in freezing index values calculated from monthly average temperatures. Haas, W.M., (1984, p.1075-1089, eng) 43-671
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Phase composition of moisture in frozen peat. Gamaiunov, N.I., et al, (1988, p.29-34, rus) 43-692
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Frost penetration and thermal regime in dry gravel. McKeown, S., et al, (1988, p 111-123, eng) 43-872
Engineering geology today: theory, practice, problems. Sergeev, E.M., ed, (1988, 293p, rus) 43-883
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Studies of soil freeze-thaw from meteorological data in western Siberia. Skorbilin, N.A., (1988, p.122-134, rus) 43-1611
Mechanical properties of bitumen. Rosengren, A., (1986, 60p. + appends., swe) 43-1878
Predicting freezing design depth of sludge-freezing beds. Martel, C.J., (1988, p.145-156, eng) 43-2063
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Frost damages of the core of earth dams. Kuusiniemi, R., (1989, p.665-677, eng) 43-3137
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Hydrological yearbook 1981-1983. Leppäjärvi, R., ed, (1987, 238p., eng) 43-3492
Forest soil frost development in western Montana. Saul, L.A., et al, (1986, p.165-167, eng) 43-3918
Influence of the freeze depth of ground on the rise in ground water. Zinov'ev, M.L., (1988, p.25-31, rus) 43-4040
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Frost protection

Polystyrene foam for frost protection of roads in Sweden. Gandahl, R., (1987, p.1-9, eng) 43-1386
Role of extruded expanded polystyrene in Ontario's provincial transportation system. MacMaster, J.B., et al, (1987, p.10-22, eng) 43-1387
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Developments in the British approach to prevention of frost heave in pavements. Jones, R.H., (1987, p.33-40, eng) 43-1390
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Frost protection and thermal insulation of shallow-laid pipelines. Mäkelä, H., (1982, 78p., fin) 43-1823
Roller compacted concrete for highway applications. Gomez-Dominguez, J., (1988, 253p., eng) 43-1918
Need for weather and climate modification. List, R., (1987, p 61-86, eng) 43-2249
Frost resistance in crops. Flore, J.A., et al, (1987, p.139-150, eng) 43-2252
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Frost hazard of roads in marshlands of the Sanjiang Plain. Wang, C.H., (1988, p.409-417, chi) 43-2855
Dynamic state of air temperature in railroad tunnels in cold regions. Nie, F.M., (1988, p.450-453, chi) 43-2856
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Studying the frost- and brine-corrosion resistance of steel-fiber concretes. Trofimov, B.IA., et al, (1988, p.71-75, rus) 43-565
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Environmental influences on the bearing capacity of a road. Final report, Pt.3: Synthesis. Dysli, M., et al, (1984, 118p., fre) 43-778
Frost resistance of concrete containing admixtures, under different testing regimes. IAnbykh, N.N., (1988, p.24-27, rus) 43-894
Mathematical model for freeze-thaw durability of concrete. Bažant, Z.P., et al, (1988, p.776-783, eng) 43-967
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Chemical compounds capable of increasing frost resistance of plants. Zhirmunskaia, N.M., et al, (1988, p.124-128, eng) 43-1120
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Lime treatment of asphalt, Parts 1 and 2. Final report. Petersen, J.C., et al, (1987, 70p., eng) 43-1745
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Frost shattering experiments. Pt. 6, New results on limestone facies. (1974, 42p , fre) 43-3977
Periglacial patterned ground, Waterton-Glacier International Peace Park, Canada and U.S.A. Butler, D.R., et al, (1989, p.43-57, eng) 43-4393

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Freeze crystallization: transportable design case history. Heist, J.A., et al, (1989, p.343-346, eng) 43-2359
Transport of freezing cargoes: a handbook. Noskov, IU.A., ed, (1988, 206p , rus) 43-2895
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Octanol-water partition coefficients for organophosphonates. Britton, K.B., et al, (1988, 24p., eng) 43-1338
Map of snow, ice and frozen ground in China—explanation. (1988, c50p., eng) 43-1356
On the design of wind-augmented thermosyphons. Lock, G.S.H., et al, (1989, p.11-23, eng) 43-1575
Simultaneous heat and water model of a snow-residue-soil system. Flerchinger, G.N., (1988, 161p., eng) 43-1917
Remote sensing based continuous hydrologic modeling. Engman, E.T., (1984, p 201-209, eng) 43-1930
Drying of frozen soils. De Jong, E., et al, (1988, p.807-811, eng) 43-1996
Unfrozen water content of undisturbed frozen silt. Tice, A.R., et al, (1988, 17p., eng) 43-1998
Radio-carbon dated gelifluction lobe in Labrador. Evans, D.J.A., et al, (1988, p.657-662, eng) 43-2000
Frozen gravel: a study of compaction and thaw-settlement behavior. Haas, W.M., et al, (1989, p.308-319, eng) 43-2112
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Mudflows; collected articles, No.10. Stepanov, B.S., ed, (1988, 172p., rus) 43-2417
Rheological regularities in frozen soil mechanics. Vialov, S.S., et al, (1988, p.219-232, eng) 43-2665
Determination of rheological property parameters of frozen bases. Mirenburg, IU.S., et al, (1988, p.233-247, eng) 43-2666
Soil formation and soil properties in Spitsbergen. Klimowicz, Z., et al, (1988, p.61-72, eng) 43-2767
Annual variation of soil temperature in Spitsbergen. Mietus, M., (1988, p.87-94, eng) 43-2768
Soil temperature and advective changes in air temperature. Mietus, M., (1988, p.95-103, eng) 43-2769
State of the art and prospects of geocryology in China. Cheng, G.D., et al, (1988, p.221-227, chi) 43-2861
Review and prospects of regional geocryology in China. Cheng, G.D., (1988, p.296-299, chi) 43-2872
Review of the study on frozen ground for water conservancy engineering. Xu, S.X., (1988, p.342-343, chi) 43-2879
Permafrost problems in road engineering. Huang, X.M., (1988, p.344-351, chi) 43-2880
Geophysical prospecting of glaciers and permafrost in China. Huang, Y.Z., (1988, p.364-368, chi) 43-2884
New method of the unfrozen water content prediction in frozen soils. Kozlowski, T., (1989, p 283-291, eng) 43-3105
Frozen soil pulls water up from below. (1989, p.14-15, eng) 43-3288
Investigations of dielectric properties of some frozen materials. Arcone, S.A., et al, (1989, 18p., eng) 43-3476
Electrical grounding in cold regions. Henry, K., (1987, 17p., eng) 43-3639
Thermo-physical studies of the cryolithozone of Siberia. Pavlov, A.V., ed, (1983, 213p., rus) 43-3862
Rain on snow: shallow, transient snowpacks with frozen soils. Zuzel, J.F., et al, (1983, p.67-75, eng) 43-4354
Continuous frozen ground index for flood forecasting. Molnau, M., et al, (1983, p.109-119, eng) 43-4358
Comment on "Water movement into seasonally frozen soils" by Douglas L. Kane and Jean Stein. Burn, C.R., et al, (1985, p.1051-1054, eng) 43-4493
See also: Geocryology; Soil freezing

Frozen ground chemistry
All-Union conference "Soil cryogenesis theory," 5th, Pushchino, Feb. 6-10, 1989. Abstracts. (1989, 114p., rus) 43-3976

Frozen ground compression
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Thermal contraction and crack formation in frozen soil. Al-Moussawi, H.M., (1989, 243p , eng) 43-2892
Frozen strength characterization of NH&S test sites in Montana. Chamberlain, E.J., et al, (1988, var. p., eng) 43-3638
Moisture transfer in thawed and freezing ground. Fel'dman, G.M., (1988, 257p., rus) 43-4492

Frozen ground mechanics
State of the art: heat and mass transfer in freezing soils. Kay, B.D., et al, (1988, p.3-21, eng) 43-55
Frost expansion pressure and displacement of saturated soils. Ryokai, K., et al, (1988, p.115-120, eng) 43-68
State of the art: mechanical properties of frozen soil. Sayles, F.H., (1988, p.143-165, eng) 43-72
Mechanical characteristics of artificially frozen clays under triaxial stress condition. Chen, X., (1988, p.173-179, eng) 43-74
Mechanical properties of circular slabs of frozen sand and clay in bending tests. Izuta, H., et al, (1988, p.187-192, eng) 43-76
Creep formula for practical application based on crystal mechanics. Orth, W., (1988, p.205-211, eng) 43-79
Effect of frozen soil creep on stresses at the moving thaw front around a wellbore. Huneault, P., et al, (1988, p.279-284, eng) 43-88
Tunnel displacements under freezing and thawing conditions. Meissner, H., (1988, p.285-293, eng) 43-89
Palsas and related forms. Seppälä, M., (1988, p.247-278, eng) 43-330
Slope processes. Lewkowicz, A.G., (1988, p.325-368, eng) 43-333
Creep and strength behavior of frozen silt in uniaxial compression. Zhu, Y., et al, (1987, 67p., eng) 43-426
Determining the strength of coarse clastic soils. Ziangirov, R.S., et al, (1988, p.73-90, rus) 43-594
Frost heave in refrigerated buildings. Chapuis, R.P., (1988, p.535-540, eng) 43-705
Embankment design and construction in cold regions. Johnson, E.G., ed, (1988, 173p., eng) 43-765

Investigation of permafrost and climate change—Phase 3 (1987, 159p., eng) 43-779
Mechanical and physical properties of soils in cold regions Chamberlain, E.J., (1987, p.155-161, eng) 43-854
Volume changes accompanying creep of frozen soil. Knutsson, S., (1987, 13p., eng) 43-1112
Frozen soil and ground avalanches. Lovie, C., (1988, p.195-206, fre) 43-1164
Frost heave prediction for clayey soils. Chen, X., et al, (1988, p.233-238, eng) 43-1344
Time-dependent bond regain in driven piles in permafrost. Ladanyi, B., et al, (1986, p.2.164-2.169, eng) 43-1485
Methods and techniques in geocryological research Mel'nikov, V.P., ed, (1988, 162p., rus) 43-1595
Study of processes of unfreezing objects from dispersed soils. Samusenko, A.V., (1988, p.115-122, rus) 43-1610
Stability of structures on frozen ground. Sal'nikov, P.I., (1985, p.3-8, rus) 43-1649
Studies of tangential forces of frost heave in soils. Elgin, B.B., et al, (1985, p.19-25, rus) 43-1651
Frost heave in relation to the active layer depth Ivin, I.A., (1985, p.48-53, rus) 43-1656
Dynamic properties of thawed soils. Moiseichik, E.K., (1985, p.79-85, rus) 43-1661
Calculation of stresses and deformations in flat foundations. Mirenkov, V.E., et al, (1985, p.104-110, rus) 43-1665
Sharp cone testing of creep properties of frozen soils and ice. Ladanyi, B., et al, (1989, p.282-296, eng) 43-2110
Preliminary results from simulation of retaining wall displacement by frost action. Li, Y., et al, (1989, p.389-396, eng) 43-2119
Thermal deformation and stresses during rock mining. Kartoziia, B.A., et al, (1987, p.20-23, rus) 43-2263
Thermal properties of well casings Zimin, L.B., et al, (1987, p.75-80, rus) 43-2273
Studies on strength and creep behavior of frozen soils in China. Zhu, Y.L., (1988, p.332-337, chi) 43-2877
Geocryology of the European USSR Ershov, E.D., ed, (1988, 357p., rus) 43-3067
Experimental underground placer mining on Wilbur Creek. Skudrzyk, F.J., et al, (1987, p.89-119, eng) 43-3082
Deformations and strains in grounds subjected to freezing out and thawing. Ershov, E.D., et al, (1989, p.425-433, eng) 43-3118
Evaluation of frost heave properties of soils. Saarelainen, S.M.I., (1989, p.471-480, eng) 43-3120
Freeze-thaw related stability problems for a road in a steep silt slope. Brorsson, I., et al, (1989, p.645-654, eng) 43-3135
Site investigation on frost damages of roads at highland. Fukuda, M., et al, (1989, p.655-663, eng) 43-3136
Investigation of the plastic pipes operational reliability in permafrost areas. Riabets, IU.S., (1989, p.691-697, eng) 43-3139
Preventing measures against frost action in soils. Kinoshita, S., (1989, p.733-748, eng) 43-3143
Some peculiarities of creep behavior of frozen silt. Fish, A.M., (1989, p.721-724, eng) 43-3222
Creep settlement of a circular plate on frozen sand. Domaschuk, L., et al, (1989, p.725-729, eng) 43-3223
Moisture migration characteristics of frozen, dispersed soils. Lebedenko, IU.P., et al, (1987, p.150-157, rus) 43-3380
Effects of ground conditions on earthquake risk. Pavlov, O.V., ed, (1988, 223p. (pertinent p.168-183), rus) 43-4014
Designing mine supports in permafrost. Izakson, V.IU., et al, (1988, 122p., rus) 43-4037
Influence of the freeze depth of ground on the rise in ground water. Zinov'ev, M.L., (1988, p.25-31, rus) 43-4040
Moisture transfer in thawed and freezing ground. Fel'dman, G.M., (1988, 257p., rus) 43-4492

Frozen ground physics

State of the art: mechanical properties of frozen soil. Sayles, F.H., (1988, p.143-165, eng) 43-72
Model of infiltration in frozen soil accounting for water quality. Padilla, F., et al, (1988, p.263-271, fre) 43-294
Handbook of soil mechanics and foundation engineering. (1982, 1505p., jpn) 43-299
Mechanical and physical properties of soils in cold regions. Chamberlain, E.J., (1987, p.155-161, eng) 43-854
Snow/ice/frozen ground properties: working group report. Sterrett, K.F., et al, (1987, p.163-166, eng) 43-855
Infiltration into a seasonally frozen agricultural soil. Zuzel, J.F., et al, (1987, p.447-450, eng) 43-1477
Frozen ground physics. Lefkam, A.B., et al, (1988, p.65-71, rus) 43-1602
Analysis of frozen ground composition and phases by NMR. Podenko, L.S., et al, (1988, p.71-76, rus) 43-1603
Thermophysical properties of frozen rocks and soils. Ratnikov, S.A., et al, (1988, p.83-89, rus) 43-1605
Subgrades and foundations on frozen ground. Sal'nikov, P.I., ed, (1985, 117p., rus) 43-1648
Dynamic properties of thawed soils. Moiseichik, E.K., (1985, p.79-85, rus) 43-1661
Permafrost; Fifth International Conference; (Proceedings), Vol.3. (1988, 87p., eng) 43-1717
High-humus illuvial-metamorphic soils of western Chukotka. Bystriakov, G.M., (1988, p.1-12, eng) 43-2022
Determining heat and physical characteristics of frozen rocks. Kovalenko, V.N., et al, (1987, p.50-54, rus) 43-2270
Frost in geotechnical engineering; VTT Symposium 94, Vols. 1 and 2. (1989, 946p. (2 vols.), eng) 43-3093
Hydraulic conductivity measurements of partially frozen soil by needle probe method. Fukuda, M., et al, (1989, p 251-266, eng) 43-3103
Unfrozen water content of Finnish soils measured by NMR. Kujala, K., (1989, p.301-310, eng) 43-3107
Effect of soil physics and chemistry on frost of granular materials. Van Loon, W.K.P., et al, (1989, p.341-352, eng) 43-3110
Physical and chemical processes in soils during freezing and thawing. Ershov, E.D., et al, (1989, p.415-424, eng) 43-3117
Deformations and strains in grounds subjected to freezing out and thawing. Ershov, E.D., et al, (1989, p.425-433, eng) 43-3118
Frost susceptibility of soils in Aomori province, Japan. Moroto, N., et al, (1989, p.547-556, eng) 43-3127
Physical changes in clays due to frost action. Chamberlain, E.J., (1989, p.863-893, eng) 43-3155
Nature of the water migration mechanism in freezing soils. Sakharov, I.I., (1989, p.116-119, rus) 43-3175
Ground motion induced by an acoustic pulse, and its wintertime variations. Peck, L., (1988, p.361-385, eng) 43-3211
Moisture migration characteristics of frozen, dispersed soils. Lebedenko, IU.P., et al, (1987, p.150-157, rus) 43-3380
Acoustically induced ground motion in sand under winter conditions. Peck, L., (1989, p.37-54, eng) 43-3875
All-Union conference "Soil cryogenesis theory," 5th, Pushchino, Feb. 6-10, 1989. Abstracts. (1989, 114p., rus) 43-3976
Effects of ground conditions on earthquake risk. Pavlov, O.V., ed, (1988, 223p. (pertinent p.168-183), rus) 43-4014
Salt migration in freezing soils. Romanov, V.P., et al, (1989, p.57-65, rus) 43-4611
Cryogenic heaving in seasonal and perennial freezing of soils. Nevecheria, V.L., (1989, p.58-65, rus) 43-4613

Frozen ground settling

Design of hydraulic earth structures and methods of determining soil properties Kartelev, B.G., ed, (1987, 120p., rus) 43-1178
Effect of a decrease in deformation characteristics of materials on the stress-strain state of earth dams. Burman, G.V., (1987, p 9-12, rus) 43-1180
Burntwood Trailer Court case study of construction in permafrost. Feilden, R.E.K., et al, (1988, p.659-672, eng) 43-1331
Pillow power pumps up pipeline. Harris, M., (1988, p.12-14, eng) 43-1462
Geocryological features of sporadic permafrost in West Siberia Trofimov, A.V., et al, (1988, p.149-160, rus) 43-1614
Effect of seasonal freezing on melt pools beneath buildings Pichuev, V.V., (1985, p.31-37, rus) 43-1653
Construction of the Kemerovo regional breeding station on sagging soils. Kemerov, V.D., (1985, p 85-88, rus) 43-1662
Upper surface layer of permafrost and thermokarst. Shur, IU.L., (1988, 213p., rus) 43-2134
Thaw consolidation of frozen soils. Tong, C.J., (1988, p.327-331, chi) 43-2876
Mechanics of freezing and thawing in soils. Ladanyi, B., et al, (1989, p.73-103, eng) 43-3094
Freeze-thaw effects on thaw settlement and pore pressure Kujala, K., et al, (1989, p.523-533, eng) 43-3125
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Thaw settlement analysis for buried pipelines in permafrost Nyman, K.J., (1983, p.300-325, eng) 43-3417
Terrain and permafrost: their influence on northern construction. Hughes, O.L., (1989, p.109-118, eng) 43-3488
Bases and foundations for storage tanks. Ivanov, IU.K., et al, (1989, 223p. (pertinent p.188-214), rus) 43-3629

Frozen ground strength

Ground freezing 88, Vol.1. (1988, 405p., eng) 43-54
Cyclic thermal strain and crack formation in frozen soils. Andersland, O.B., et al, (1988, p.167-172, eng) 43-73
Direct shear test at a frozen/unfrozen interface. Goto, S., et al, (1988, p.181-185, eng) 43-75
Shear strength of soils with thawing and dynamic loads. Karlov, V.D., et al, (1988, p.193-196, eng) 43-77
Uniaxial compressive strength of frozen medium sand under constant deformation rates. Zhu, Y., et al, (1988, p.225-232, eng) 43-82
Freezing a temporary roadway for transport of a 3000 ton dragline. Maishman, D., et al, (1988, p.357-365, eng) 43-97
Characteristic features of the embedment of steel-tube piles in permafrost of the Tyumen oblast. Targulian, IU.O., et al, (1987, p.92-95, rus) 43-212
Processing of results of pile tests in permafrost. Gur'ianov, I.E., (1987, p.105-107, eng) 43-213
Strength and creep testing for artificial ground freezing. Hampton, C.N., (1988, 242p., eng) 43-304
Creep and strength behavior of frozen silt in uniaxial compression. Zhu, Y., et al, (1987, 67p., eng) 43-426
Analyzing the trends in the improvement of mounted rippers. Khmara, L.A., et al, (1988, p.108-112, rus) 43-591
Determining the strength of coarse clastic soils. Ziangirov, R.S., et al, (1988, p.73-90, rus) 43-594
Construction materials and field placement. Haas, W.M., (1988, p.114-126, eng) 43-770
Classification and laboratory testing of artificially frozen ground (1987). Discussion and author's closure. Youssef, H., (1988, p.137-140, eng) 43-874
Drilling in frozen ground, bitumens and concretes. Sellmann, P.V., et al, (1988, 10p., eng) 43-1024
Influence of water content on compressive strength of frozen sands. Enokido, M., et al, (1987, p.148-152, eng) 43-1025
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Ensuring the optimal heat regime for permafrost beds of building. Pustovoit, G.P., et al, (1988, p.41-44, eng) 43-1337
Probabilistic-statistical calculation of subgrades for buildings in permafrost. Khrustalev, L.N., et al, (1988, 250p., rus) 43-1453
Pile bearing strength in thawing permafrost. Torgashev, V.V., (1985, p.9-18, rus) 43-1650
In-situ plate-load tests of frozen silt and gravel. Speck, R.C., et al, (1989, p.252-261, eng) 43-2107
Strength of compacted frozen fill after thawing. Graham, J., et al, (1989, p.274-281, eng) 43-2109
Unfrozen water contents of six antarctic soil materials. Anderson, D.M., et al, (1989, p.353-366, eng) 43-2116
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Artificial thawing of permafrost designed by the Magadan Research Institute. Savenko, L., (1988, p.17, rus) 43-22
Experimental study of frost heaving of a saturated soil. Ishizaki, T., et al, (1988, p.65-72, eng) 43-62
Thermal characteristics of fine-grained soils. Ershov, E.D., et al, (1988, p.135-140, eng) 43-71
Tracking freezing front movement using boundary element method. Hromadka, T.V., II, (1987, 58p., eng) 43-428
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Determining the strength of coarse clastic soils. Ziangirov, R.S., et al, (1988, p.73-90, rus) 43-594
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Indicators of physical processes in permafrost. Kitaev, V.V., (1988, p.53-58, rus) 43-1600
Automatic data recording for geocryological studies. Peshekhonov, I.N., et al, (1988, p.89-95, rus) 43-1606
Studies of soil freeze-thaw from meteorological data in western Siberia. Skorbilin, N.A., (1988, p.122-134, rus) 43-1611
Thermal regime of freezing soils in northern Kazakhstan. Zhanalinov, B.N., et al, (1985, p.67-69, rus) 43-1659
Permafrost temperature and the changing climate Lachenbruch, A.H., et al, (1988, p.9-17, eng) 43-1718
Significance of climatic change for the permafrost environment. Smith, M.W., (1988, p.18-23, eng) 43-1719
Effect of climate on permafrost, Svalbard Archipelago. Kristensen, M., (1988, p.24-26, eng) 43-1720
Permafrost temperatures related to climate warming. Osterkamp, T.E., et al, (1987, 21p., eng) 43-1729
Is Alaska's permafrost melting. Esch, D.C., (1988, 2p., eng) 43-1824
Pile roughness and load capacity in frozen soils. Stelzer, D., et al, (1989, p.226-235, eng) 43-2105
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Permafrost temperatures from a geotechnical hole in the Beaufort Sea. Taylor, A., et al, (1989, p.119-123, eng) 43-2842
Hydrogeology of oil and gas bearing layers of the Siberian platform. Antsiferov, A.S., (1989, 176p., rus) 43-3069
Nomographs of soil annual average temperature. Chekhovskiĭ, A.L., et al, (1989, p 219-231, eng) 43-3100
Heat and moisture properties in frozen sandy soil; measurements and modeling. Lemmelä, R., et al, (1989, p.323-340, eng) 43-3109
Verification and application of a numerical model for frost front penetration. Sheng, D., et al, (1989, p.401-414, eng) 43-3116
Heat exchange characteristics in frozen and seasonally frozen soils. Kulikov, A.I., (1988, p.149-152, rus) 43-3616
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Heat-insulating screen and thermal interaction of a pipeline with frozen ground. IAnitskiĭ, P.A., (1989, p.80-86, rus) 43-4504
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Thermophysical properties of frozen rocks and soils. Ratnikov, S.A., et al, (1988, p 83-89, rus) 43-1605
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Searching for gas hydrate deposits in permafrost. Degtiarev, B.V., et al, (1988, p.110-115, rus) 43-1609
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Driving forces of moisture migration with cryogenic deformation. Lebedenko, IU.P., (1988, p.3-13, rus) 43-2414
Water and heat flows in frozen soils. Basic theory and operational modeling. Lundin, L.C., (1989, 49p., eng) 43-2845
Theoretical study on thermodynamics of frozen ground in China. Ding, D.W., (1988, p.312-318, chi) 43-2874
Prognosis and regulation of heat and moisture regime of frozen soils. Permiakov, P.P., et al, (1989, p.371-377, eng) 43-3113
Heat exchange characteristics in frozen and seasonally frozen soils. Kulikov, A.I., (1988, p.149-152, rus) 43-3616
Factors limiting snowmelt runoff in a permafrost environment. Marsh, P., (1987, p 61-68, eng) 43-3928
Thermal regime of frozen soils in burned-out forests of northern Yakutia. Stepanov, G.M., (1988, p.67-71, rus) 43-4068
Utilization of heat pipes for artificial permafrost storage. Tsuchiya, F., et al, (1989, p.279-283, eng) 43-4223
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Freezing of soil and rocks. Fremond, M., (1987, p.47-52, fre) 43-2068
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Thermal deformation and stresses during rock mining. Kartoziia, B.A., et al, (1987, p.20-23, rus) 43-2263
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Algorithm for computers for estimating rheological properties of perennially frozen coarse detrital rock. Gostiushkin, V.V., et al, (1988, p 41-47, rus) 43-2381
Driving forces of moisture migration with cryogenic deformation. Lebedenko, IU.P., (1988, p.3-13, rus) 43-2414
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Drilling through thawed layers of frozen rock. Maksimov, A.M., et al, (1989, p.1014-1019, eng) 43-2766
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Protecting working surfaces from adfreezing rock mass. Berezhnoĭ, IU.I., et al, (1988, p.136-140, rus) 43-2810
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Geocryology of the European USSR. Ershov, E.D., ed, (1988, 357p., rus) 43-3067
Some problems of freezing the rock mass. Plesniak, I., et al, (1989, p.379-390, eng) 43-3114
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Engineering geological investigations of the oceanic cryolithozone. Zhigarev, L.A., (1988, p.43-49, eng) 43-4260

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Determination of snow water equivalent of Norwegian snow cover. Kuittinen, R., (1988, 139p., eng) 43-2080
Radioluminescence of ice containing MgCl2 and CaCl2. Wypych, M., et al, (1989, p.139-143, eng) 43-2778
Gamma radiation snow water equivalent measurements. Carroll, T.R., et al, (1983, p.27-37, eng) 43-4350

Gas inclusions
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Gravitational separation of gases and isotopes in polar ice caps. Craig, H., et al, (1988, p.1675-1678, eng) 43-1202
Trapping of gas mixtures by amorphous water ice. Bar-Nun, A., et al, (1988, p.7749-7754, eng) 43-1422
Dynamic light scattering at a growing crystal interface: ice-water system. Vesenka, J.P., et al, (1988, p.5310-5315, eng) 43-1424
Dissolved noble gas anomaly due to ice formation. Top, Z., et al, (1988, p.796-799, eng) 43-1552
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Gas pipelines
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Designing industrial pipelines for thawing ground. Klement'ev, A.F., (1988, p.73-77, rus) 43-1020
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Urengoy gas pipeline (Siberian Arctic). Trollux, J., (1989, 12p., fre) 43-4029

Gas production
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Gas wells
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Ice captures methane in bubbles of ancient air. Gribbin, J., (1989, p.38, eng) 43-3285
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Geobotanical interpretation
Studies and mapping of forests using spaceborne scanner imagery obtained in winter. Kravtsova, V.I., et al, (1988, p.56-65, rus) 43-586

Geochemical cycles
Hydrogeology. Back, W., ed, (1988, 524p. + 3 maps, eng) 43-4292
Glacial deposits. Stephenson, D.A., et al, (1988, p.301-314, eng) 43-4295

Geochemistry
Glacial geology in uranium exploration, Dismal Lakes, NWT, Canada. Steele, K.G., (1988, p.183-194, eng) 43-1033
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Methane hydrates and global climate. Kvenvolden, K.A., (1988, p.221-229, eng) 43-1672
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Phenomenon of the cryogenic migration of chemical elements and its significance in finding deposits in permafrost regions. Mel'nikov, P.I., et al, (1988, p.963-967, rus) 43-2155
Methane hydrate—a major reservoir of carbon in the shallow geosphere? Kvenvolden, K.A., (1988, p.41-51, eng) 43-2320
Geochemistry of the active layer of glaciers. Arkhipov, S.M., et al, (1988, p.164-173, rus) 43-3274

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Isotopes in antarctic research: contributions of the GDR, III. (1988, 189p, eng) 43-4512
Geochronology
Evidence from Fram Strait (78N) for early glaciation. Jones, G.A., et al, (1988, p.56-59, eng) 43-783
Occurrence of toxic metals in antarctic ice, last 40 millennia. Batifol, F., et al, (1989, p 544-546, eng) 43-1775
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Sea-level fluctuation and coastal evolution Nummedal, D., ed, (1987, 267p, eng) 43-3391
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Structure and origin of perennially frozen deposits in marginal parts of the aggradation plains of northern Yakutia. Gravis, G.F., (1986, p.79-85, rus) 43-111
Development of A.I. Vocikov's ideas in geocryology Gavrilova, M.K., (1987, p.229-234, rus) 43-257
Handbook of soil mechanics and foundation engineering. (1982, 1505p., jpn) 43-299
Physical, chemical and mechanical bases of cryolithogenesis. Ershov, E.D., (1987, p.54-66, rus) 43-687
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Features of permafrost in the West Kunlun Mountains. Li, S.D., et al, (1989, p.161-167, eng) 43-3456
Geocryology of the USSR. Central Siberia. Ershov, E.D., ed, (198?, 413p, rus) 43-3615
Geocryology of the USSR: Western Siberia. Ershov, E.D., ed, (1989, 453p., rus) 43-3815
Thermo-physical studies of the cryolithozone of Siberia. Pavlov, A.V., ed, (1983, 213p., rus) 43-3862
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Physical geography of Transcaucasia. Gabrielian, G.K., ed, (1986, 309p., rus) 43-3068
The Arctic. King, H.G.R., comp, (1989, 275p., eng) 43-3605
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Geomorphology
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High arctic landscapes: comparison and reflexions. Rudberg, S., (1988, p.255-264, eng) 43-928
Nivation and glacio-geomorphology; minisymposium in Abisko, 1983. Akerman, J., ed, (1985, 72p., swe) 43-1008
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Eastern Beaufortin. Nicod, J., (1988, p.121-146, fre) 43-1163
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To the Arctic: an introduction to the far northern world. Young, S B., (1989, 354p, eng) 43-3080

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Beaufort Sea geophysical survey: scoping study. Harper, J.R., et al, (1985, 68p. + append., eng) 43-282

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Classification of cryogenic strata according to distribution. Fotiev, S.M., (1988, p.63-72, rus) 43-593

Use of satellite images in snowmelting runoff forecasts in Chile. Araya F., M., (1984, p.235-240, eng) 43-1932

Thermal analysis of automatic well temperature measuring system. Taylor, A., et al, (1989, p.95-101, eng) 43-2592

Thermal storage for preventing road-surface freezing. Ikeda, M., et al, (1989, p.791-800, eng) 43-3147

Alaska geothermal bibliography. Liss, S A et al, (1989, 44p., eng) 43-3234

Germany

Snowfall amounts and snow depths in Germany and NE USA. Bates, R.E, et al, (1988, p.107-117, eng) 43-602

Glacial deposits

Clay contamination of road stone layers on glacial till subgrades. Cochrane, S.R., (1985, p.87-91, eng) 43-2

Model of glacial tectonics applied to the ice pushed ridges in the central Netherlands. Weteren, D.F.M. van der, (1985, p.55-74, eng) 43-3

Holocene glaciolacustrine sedimentation in Muir Inlet and ice advance in Glacier Bay, Alaska, U.S.A. Goodwin, R.G., (1988, p.55-69, eng) 43-13

Effects of land clearing on soil genesis. Goldin, A., et al, (1988, p.467-473, eng) 43-126

Effects of land clearing on soil variability. Goldin, A., et al, (1988, p.473-477, eng) 43-127

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Nature and restoration of denuded areas in Iceland. Arnalds, O., et al, (1987, p.515-525, eng) 43-201

Analysis of glacial deposits in Kiglualik Mountains, Alaska. Kaufman, D.S., et al, (1988, p.273-284, eng) 43-289

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Microtextures of quartz grains from North Slope of Alaska. Hodel, K.L., et al, (1988, p.24-32, eng) 43-436

Catastrophic landslide deposits in the Karakoram Himalaya. Hewitt, K., (1988, p.64-67, eng) 43-473

Glacial geologic history of the Salmon Lake area, Seward Peninsula. Kaufman, D.S., et al, (1988, p.91-94, eng) 43-512

Stone avalanche in the Bartuytsete glacier area (Central Caucasus). Dokukin, M.D., (1988, p.348-353, rus) 43-570

Freeze-thaw effects on granular structure of soils. Pawluk, S., (1988, p.485-494, eng) 43-701

Strength and stress-strain characteristics of a glacial till soil. Atkinson, J.H., et al, (1988, p.428-439, eng) 43-704

Surface textures of grains from iceberg and submarine sediments in Lützow-Holm Bay. Shimizu, F., et al, (1988, p.129-139, jpn) 43-840

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Flood geomorphology in the glaciated terrain, New England. Patton, P.C., (1988, p.261-277, eng) 43-1550

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Till and moraine formation at some Heard I. glaciers. Lundqvist, J., (1988, p.225-234, eng) 43-1872

Glacial terraces on Mt. Akka and Mt. Kisuris, northern Sweden. Faltman, H., et al, (1988, p.263-268, eng) 43-1875

On the formulation of basal debris drag for the case of sparse debris Shoemaker, E.M., (1988, p.259-264, eng) 43-1978

Isotope analysis of basal ice near the margins of two glaciers. Gordon, J.E., et al, (1988, p.265-268, eng) 43-1979

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Engineering geology of glacial deposits. Engel's, A.A., et al, (1988, p.77-85, rus) 43-2421

Mudflow formation in the Sarkand River basin. Khaĭdarov, A.Kh., et al, (1988, p.155-161, rus) 43-2424

Retrogressive slumps in icy sediments. Harris, S.A., et al, (1988, p.441-455, eng) 43-2569

Glacier run out and melt water deposits of Russell Glacier, Greenland. Scholz, H., et al, (1988, p.55-74, eng) 43-2597

Evidence for the response of the antarctic ice sheet to climate warming. Prentice, M.L., et al, (1987, p.56-58, eng) 43-2731

Origin of drift mounds in Miers Valley, Antarctica. Clayton-Greene, J.M., et al, (1987, p.59-61, eng) 43-2732

Late Wisconsin glacial history of the South Orkney Plateau. Herron, M.J., (1987, p 63-65, eng) 43-2734

Late Quaternary ice-surface fluctuations of Beardmore Glacier. Denton, G.H., et al, (1989, p.183-209, eng) 43-3165

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Hydrogeology. Back, W., ed, (1988, 524p. + 3 maps, eng) 43-4292

Region 13, Western Glaciated Plains. Lennox, D.H., et al, (1988, p.115-128, eng) 43-4293

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Controlling wear on hydraulic installations. Bezinge, A., (1988, p.303-328, fre) 43-4443

Glacial transport processes at glacier margins. Clinch, J.M., (1988, 486p, eng) 43-4525

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Modification of landscapes by ice sheets, northern Scotland. Hall, A.M., et al, (1987, p.531-542, eng) 43-703

Role of ice in the geomorphology of a foreshore, St. Lawrence River estuary. Troude, J.P., et al, (1988, p.348-354, fre) 43-706

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Rock glaciers, Southwest Yukon. Johnson, P.G., (1988, p.277-280, eng) 43-1367

Erosion by continental ice sheets. White, W.A, (1988, p.137-150, eng) 43-2013

Submerged shorelines on continental shelves. Grosval'd, M.G., (1989, p.113-121, eng) 43-2229

Rock glaciers. Gorbunov, A.P., (1988, 106p., rus) 43-2283

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Soils and quaternary geology: a handbook for field scientists. Catt, J.A., (1986, 267p., eng) 43-3530

Glacial geology

Geotechnical investigations of glaciotectonic deformation in central and southern Alberta. Tsui, P.C., (1988, 2p, eng) 43-121

Geologic studies in Alaska by the U.S. Geological Survey during 1987. Galloway, J.P., ed, (1988, 215p., eng) 43-509

Glacial geologic history of the Salmon Lake area, Seward Peninsula. Kaufman, D.S., et al, (1988, p.91-94, eng) 43-512

Glaciotectonic structure and genesis of the Herdla Moraines, western Norway. Aber, J.S., et al, (1988, p.99-106, eng) 43-822

Periglacial geomorphology of the Appalachian and Interior Highlands. Clark, G.M., et al, (1988, p.191-220, eng) 43-920

Distribution patterns of loess materials and landforms—some distinctive features. Sollid, J.L., et al, (1988, p 265-270, nor) 43-929

Glacial geology in uranium exploration, Dismal Lakes, NWT, Canada. Steele, K.G., (1988, p.183-194, eng) 43-1033

Interpreting the production of 26Al in antarctic meteorites. Heydegger, H.R., (1987, 14p., eng) 43-1676

Glacial geology of Outback Nunataks, Victoria Land. Höfle, H.C., (1987, p.253-257, eng) 43-1765

Quaternary sediment patterns in the Weddell Sea: relations and environmental conditions. Futterer, D.K., et al, (1988, p.551-561, eng) 43-1787

Late glacial history of Copper River Basin, Alaska. Connor, C.L., (1984, 135p, eng) 43-1814

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Ice-formed landscapes on Mars. Lucchitta, B.K., (1987, p.387-398, fre) 43-2074

Morphological evidence of ancient ice caps on Mars. Battistini, R, (1987, p.399-411, fre) 43-2075

Morphological expression of cold on Mars. Bousquet, B., (1987, p.413-417, fre) 43-2076

Constraint to the Wisconsinan glacial history, Canadian Arctic Archipelago. Taylor, A., (1988, p.15-18, eng) 43-2322

Glacial moraines of the antarctic ice sheet at its contact with Bunger Hills. Wisniewski, E., (1984, p.91-102, pol) 43-2358

Living ice: understanding glaciers and glaciation. Sharp, R.P., (1988, 225p., eng) 43-2408

Glacial geology of the Reckling Moraine on the east antarctic ice sheet. Faure, G., et al, (1987, p 61-63, eng) 43-2733

Antarctic glacial history uncovered by ODP Leg 119. Hambrey, M.J., et al, (1989, p.99-106, eng) 43-2804
Research on periglacial geomorphology in China. Cui, Z.J., et al, (1988, p.304-311, chi) 43-2873
Rock glaciers of central Brooks Range, Alaska, U.S.A. Calkin, P.E., et al, (1987, p 65-82, eng) 43-3047
To the Arctic: an introduction to the far northern world. Young, S.B., (1989, 354p , eng) 43-3080
Placer gold mining in southeastern Alaska. Hoekzema, R., et al, (1987, p.267-289, eng) 43-3084
Subglacial drainage system in Switzerland. Sharp, M , et al, (1989, p.119-134, eng) 43-3085
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Glacial advances and retreats in Transantarctic Mountains. Miller, J.M.G., (1989, p.419-430, eng) 43-4286
Geologic evidence of the center of Pleistocene glaciation in the Kara shelf. Astakhov, V.I., (1976, p.1178-1181, rus) 43-4502
Subglacial geology of ice stream B, West Antarctica. Rooney, S.T., (1988, 165p , eng) 43-4524

Glacial hydrology

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Glacier water resources of Qilian Mountains. Yang, Z., (1988, p.36-46, chi) 43-466
Hydrologic characteristics of the Gongba Glacier in the Mount Gongga area. Cao, Z., (1988, p.57-65, chi) 43-468
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Fourth year of glaciological field work at Tasersiaq and Qapiarfiup sermia, West Greenland. Olesen, O.B., (1987, p.121-126, eng) 43-745
Continued glaciological work north-east of Jakobshavn, West Greenland. Thomsen, H.H., (1987, p.84-87, eng) 43-749
Last full summer of glacier-climate investigations at Qamanârssûp sermia, West Greenland. Braithwaite, R.J., (1987, p.95-99, eng) 43-751
Glacial mudflows in Central Caucasus: activities for the last millennium. Golodkovskaia, N.A., (1988, p.71-78, rus) 43-938
Mass balance reconstruction for the Golubin Glacier. Afzin, V.B., (1988, p.119-126, rus) 43-947
Model computation of moisture content in polythermal glaciers. Hutter, K., et al, (1988, p.12,205-12,214, eng) 43-1068
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Glacier measurements in Pasterze area, 1986. Wakonigg, H., (1987, p.191-197, ger) 43-1684
Mountain glacier basins of the USSR, 1969-1974 Bochin, N.A , ed, (1987, 300p., rus) 43-1774
Englacial and subglacial hydrology: a qualitative review. Hooke, R.L., (1988, 21p., eng) 43-1869
Rock glaciers of the Dalton Range, Kluane Ranges, south-west Yukon Territory, Canada. Johnson, P.G., et al, (1988, p.327-332, eng) 43-1989
Glaciological research in southern Chile, 1986. Reed, D.J., et al, (1988, p.392-405, eng) 43-2003
Hydrology of Bayelva, Spitsbergen. Repp, K., (1988, p 259-268, eng) 43-2019
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Hydrogeologic classification of wetlands in glaciated regions. Hollands, G.G., (1988, p.26-30, eng) 43-2237
Snow measurement in the mountain-glacial basin of Aktru (Altay Mts.). Sheremetov, R.T., et al, (1988, p.81-87, rus) 43-2353
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Ice/bed interface of Svalbard ice masses. Bamber, J.L., (1989, p.30-37, eng) 43-4137
Synthetic-aperture radio-echo experiment at Storglaciären, Sweden. Walford, M.E.R., et al, (1989, p.43-47, eng) 43-4139
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Hydrology of lakes in Central Wohlthat Massif. Haendel, D., et al, (1988, p.7-14, eng) 43-4513
Numerical scheme for calculating stresses and strain rates in glaciers. Van der Veen, C.J., (1989, p 363-377, eng) 43-4602

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Mudflows; collected articles, No.10. Stepanov, B.S., ed, (1988, 172p., rus) 43-2417
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Moraines and the dynamics of the Western Siberian glaciation. Arkhipov, S.A., ed, (1987, 158p., rus) 43-4382
Characteristics of debris flow caused by outburst of glacial lake in Boqu River, Xizang, China, 1981. Xu, D., (1988, p.569-580, eng) 43-4569

Glacial meteorology

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Daily range of air temperature on glacial and non-glacial surfaces of the Inyl'chek River basin. Bakirov, K.B., (1988, p.26-33, rus) 43-2386
Numerical experiments on fluctuation in glacial climate. Verbitskiĭ, M.IA., (1988, p.52-54, eng) 43-2599
Aspects of wind on West Gulkana Glacier, Alaska. Brazel, A.J., et al, (1988, p 93-105, eng) 43-2796
Winds at Summit Lake, Alaska, during Summer, 1986. Buckley, B.M., et al, (1988, p.107-114, eng) 43-2797
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Summer meteorological conditions in Kunlun Mountains. Ohata, T., et al, (1989, p.67-76, eng) 43-3443
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Icing in alimentation area of glacier in Spitsbergen. Izumi, K., (1988, p.121-129, jpn) 43-3525
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Glaciation

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Glacially crushed quartz by mountain and continental ice. Mahaney, W.C., et al, (1988, p.810-826, eng) 43-665
Lithospheric thickness, antarctic deglaciation history, and ocean basin discretization effects in a global model of postglacial sea level. Peltier, W.R., (1988, p.325-346, eng) 43-785
Nivation and glacio-geomorphology; minisymposium in Abisko, 1983. Åkerman, J., ed, (1985, 72p , swe) 43-1008
Nivation and glaciation in Scania and Lappland, Sweden. Rapp, A., et al, (1985, p.2-7, swe) 43-1009
Recent and Pleistocene local glaciation in Spain—a review. Nyberg, R., (1985, p.49-55, swe) 43-1016
Origin of the Greenland ice sheet. North, G.R., (1985, p.66-67, eng) 43-1161
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On the formulation of basal debris drag for the case of sparse debris. Shoemaker, E.M., (1988, p 259-264, eng) 43-1978
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Snow and ice chemistry of mountain glaciers in China. Wang, P., (1988, p.269-272, chi) 43-2867
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Proceedings of the Symposium on Ice Dynamics, 1988. (1989, 226p., eng) 43-3326
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Surging potential of ice sheets. Radok, U., (1985, 26p., eng) 43-1713
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Restoration stage in glacier oscillation. Bulnitskiĭ, A.B., (1988, p.63-70, rus) 43-3304
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Antarctica. Swithinbank, C., et al, (1988, 278p., eng) 43-412
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Arctic Science Conference, 39th, Fairbanks, AK, 1988: Abstracts. (1988, 264p., eng) 43-1373
Glaciers and the climate of Siberia. Maloletko, A.M., et al, (1987, 192p., rus) 43-1408
Areal losses of glaciers in Austria 1850-1920-1969. Gross, G., (1987, p.131-141, ger) 43-1679
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Synthetic aperture radar capabilities for snow and glacier monitoring. Rott, H., (1984, p.241-246, eng) 43-1933
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Central Andes rock glaciers: applied aspects. Corte, A.E., (1987, p.289-303, eng) 43-3058
Proceedings. (1989, 418p., eng) 43-3176
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Living ice: understanding glaciers and glaciation. Sharp, R.P., (1988, 225p, eng) 43-2408
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Symposium on Antarctic Glaciology, Bremerhaven, Sep. 7-11, 1987. (1988, 229p., eng) 43-1934
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Problems of the Arctic and Antarctic, Vol.59, 1989. Krutskikh, B.A., ed, (1989, 153p., eng) 43-2041
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Permeability coefficient of sea ice formed within sands and gravels fills. Murakı, Y., et al, (1988, p.252-262, eng) 43-2926

Gravimetric prospecting
Gravity survey on ice offshore South-East Greenland. Jakobsdóttir, S S., et al, (1987, p.69-72, engl 43-747
Investigating variations in the gravitational constant. Cooper, A P.R., et al, (1989, p.55-58, engl 43-2219

Gravity
Perspective: past, present, future—physical modeling techniques. Cermak, J.E., (1989, p.495-498, engl 43-3593

Grazing
Grazing land in tundra petroleum fields Voskoboĭnikova, N.N., et al, (1988, p 68-76, rus) 43-1541

Great Lakes
Water quality during winter river navigation seasons. Sletten, R S., (1988, 56p., engl 43-1201
Nearshore Great Lakes ice statistics. Bolsenga, S.J., et al, (1988, 42p., engl 43-1973
Modeling Laurentian Great Lakes evaporation, heat storage, and energy fluxes Croley, T E , II, (1989, 48p , engl 43-3473

Greenland
Resurvey of bore hole at Dye 3, South Greenland. Hansen, B.L., et al, (1988, p 178-182, engl 43-161
Potential for soil erosion in sheep farming area of South Greenland. Jacobsen, N.K., (1987, p.498-507, engl 43-198
Exploration base in the high Arctic; discussion and case study. Ammendrup, H., et al, (1988, p.309-318, engl 43-630
Development and opportunities in Greenland. Rosendahl, G.P., (1988, p.769-782, engl 43-661
Greenland ice cap aeromagnetic survey, 1985. Thorning, L., et al, (1987, p 86-90, engl 43-741
Glaciological investigations at the margin of the inland ice north-east of Jakobshavn, West Greenland. Thomsen, H.H., et al, (1987, p 102-108, engl 43-742
Stable isotope studies on the Greenland ice-sheet margin. Reeh, N., et al, (1987, p.108-114, engl 43-743
Geophysical investigations at the inland ice margin of the Pâkitsoq basin, central West Greenland Thorning, L., et al, (1987, p.114-121, engl 43-744
Fourth year of glaciological field work at Tasersiaq and Qapiarfiup sermia, West Greenland. Olesen, O.B., (1987, p.121-126, engl 43-745
Exceptionally high ablation in 1985 at Qamanârssûp sermia, West Greenland. Braithwaite, R.J., (1987, p.126-129, engl 43-746
Gravity survey on ice offshore South-East Greenland Jakobsdóttir, S.S., et al, (1987, p.69-72, engl 43-747
Ice-sampling programme in the Thule area, North Greenland. Reeh, N., et al, (1987, p.81-84, engl 43-748
Continued glaciological work north-east of Jakobshavn, West Greenland. Thomsen, H.H , (1987, p.84-87, engl 43-749
Electromagnetic reflection survey 1986 at the inland ice margin of the Pâkitsoq basin, central West Greenland. Thorning, L., et al, (1987, p 87-95, engl 43-750
Last full summer of glacier-climate investigations at Qamanârssûp sermia, West Greenland. Braithwaite, R.J., (1987, p.95-99, engl 43-751
Energy balance on outlet glaciers from the Inland Ice, West Greenland. Knudsen, N.T., et al, (1987, p.99-105, engl 43-752
Crustal enrichments in the Arctic aerosol. Heidam, N Z., (1985, p.2083-2097, engl 43-991
Palynology in a polar desert, eastern North Greenland Funder, S., et al, (1988, p.195-207, engl 43-1034
Changes in the high-latitude ocean as possible causes of atmospheric CO2 variations. Siegenthaler, U., (1985, p.37-38, engl 43-1154
Greenland ice sheet mass balance. Reeh, N., (1985, p.53-59, engl 43-1158
Potential climatic effects on the Greenland ice sheet. Bindschadler, R.A., (1985, p 60-61, engl 43-1159
Origin of the Greenland ice sheet. North, G.R., (1985, p 66-67, engl 43-1161
Isotopic composition of methane in polar ice cores. Craig, H., et al, (1988, p.1535-1539, engl 43-1563
Spectral reflectance of snow-covered/snow-free terrain Rott, H., et al, (1987, p 115-121, engl 43-1677
Derivation of positive-degree-days factor in West Greenland. Ambach, W., (1988, p.217-224, engl 43-2015
Hydrological background of a glacier-influenced hydropower station in Greenland. Kern-Hansen, C., (1989, p.269-280, engl 43-2020
DYE-2 and DYE-3—a 30 year engineering history. Osgood, S., et al, (1989, p.11-26, engl 43-2085
Investigating variations in the gravitational constant. Cooper, A.P.R., et al, (1989, p.55-58, engl 43-2219
Bedrock topography beneath Greenland ice sheet. Fisher, E., et al, (1989, p.2874-2882, engl 43-2394
Field stations for glacier-climate research, West Greenland. Braithwaite, R.J., et al, (1989, p.207-218, engl 43-3185
Glacier ablation from air temperature Braithwaite, R.J., et al, (1989, p.219-233, engl 43-3186
Altitudinal shift of the Greenland ice sheet equilibrium line. Ambach, W., et al, (1989, p.281-288, engl 43-3189
Technical development in Greenland. Rosendahl, G.P., (1988, p.171-188, engl 43-4242
Glaciers and hydropower for Nuuk/Godthåb, West Greenland. Braithwaite, R.J., (1989, 49p., engl 43-4487
North Greenland ice islands. Higgins, A.K., (1989, p.207-212, engl 43-4549

—Camp Century
Camp Century hole reopened. Hansen, B.L., et al, (1989, p.315-317, engl 43-4452

—Dye 3
Atmospheric transport and deposition of trace elements onto the Greenland Ice Sheet. Davidson, C.I., et al, (1985, p.2065-2081, engl 43-990

—Jakobshavens Isbrae
Equilibrium state of Jakobshavns Isbrae, West Greenland. Pelto, M.S , et al, (1989, p.127-131, engl 43-3347

—Johan Dahl Land
Effect of glaciers on annual run-off, Johan Dahl Land, south Greenland. Braithwaite, R.J., et al, (1988, p 200-207, engl 43-165

—Mesters Vig
Effects of oil spills on plant communities in northeast Greenland. Holt, S., (1987, p.490-497, engl 43-197

—Nordbogletscher
Winter accumulation reduces summer ablation on Nordbogletscher, South Greenland. Braithwaite, R.J., et al, (1988, p.21-30, engl 43-2595

Greenland Sea
MIZEX Ice floe trajectories through the Greenland Sea Symonds, G., et al, (1985, 68p., engl 43-286
Ice budget of the Greenland Sea. Moritz, R.E., (1988, 117p , engl 43-780
Water temperature in the polar zone of the Greenland Sea. Blinov, N.I., et al, (1986, p 68-81, rus) 43-1885
Greenland Sea convection in the winter of 1987-1988. Rudels, B., et al, (1989, p.3223-3227, engl 43-2395
Acoustic propagation across the East Greenland marginal ice zone. Gallagher, C.J., (1989, 82p , engl 43-3366
Aliphatic hydrocarbons and isomers of hexachlorocyclohexane in water, ice and snow. Dmitriev, F.A., et al, (1988, p 566-568, engl 43-3944

Ground effect machines
See also: Air cushion vehicles

Ground freezing
See also: Soil freezing

Ground Ice
Frost mounds formed by degradation at Slope Mountain, Alaska, U.S.A. Hinkel, K.M., (1988, p.76-85, engl 43-15
Regionalization of the Vilyuy reservoir, types and classification of its shores. Burlakov, V.M., (1987, p.34-42, rus) 43-45
Glossary of permafrost and related ground-ice terms. Harris, S.A., et al, (1988, 156p., engl 43-123
Ground ice and permafrost. Harry, D.G., (1988, p.113-149, engl 43-325
Seasonal frost mounds. Pollard, W.H., (1988, p.201-229, engl 43-328
Palsas and related forms. Seppälä, M., (1988, p.247-278, engl 43-330
Fan-delta sedimentation in a Spitsbergen fjord. (Volumes I and II). Evans, R., (1988, 738p., engl 43-344
Evaluation of frost data of various soils in a nation-wide observation network. Furugård, G., (1985, p.151-172, swe) 43-371
'Ice Hill': an example of 'retarded deglaciation' in Siberia. Astakhov, V.I., et al, (1988, p.29-40, engl 43-433
Damage action of ground ice on railway in the district of Yitulihe and its prevention. Yuan, F., (1987, p.103-104, chi) 43-493
Cryogenic structure of the Edoma ice-bearing deposits in Kolyma. Torgovkin, IA.I., (1988, p.97-100, rus) 43-532
Hydrostatic-system palsas at Toolik Lake, Alaska. Outcalt, S.I., et al, (1986, p.79-94, engl 43-543
Determining the strength of coarse clastic soils. Ziangirov, R.S., et al, (1988, p.73-90, rus) 43-594
Performance monitoring of onshore structures at Svalbard. Gregersen, O., et al, (1988, p.329-342, engl 43-632
Geologic origin and fill properties of the Barrow Unit materials. Mahmood, A., et al, (1984, p.1045-1058, engl 43-669
Hydrocarbons in permafrost ice, Marsh Creek area, Alaska. Cunningham, K.I., et al, (1988, 18p. + tables, engl 43-678
Time variations of the pollutant concentration background in different natural objects. Evseev, A.V., (1988, p.72-78, rus) 43-686
Physical, chemical and mechanical bases of cryolithogenesis. Ershov, E.D., (1987, p 54-66, rus) 43-687
Volume changes accompanying creep of frozen soil. Knutsson, S., (1987, 13p., engl 43-1112
Migration of tritium into permafrost near Mayo, Yukon Territory. Burn, C.R., et al, (1988, p.909-915, engl 43-1130
Bibliography of needle ice. Lawler, D.M., (1988, p.295-310, engl 43-1350
Frozen ground physics. Lelkam, A.B., et al, (1988, p 65-71, rus) 43-1602
Massive ground ice and ice-cored terrain near Sabine Point, Yukon Coastal Plain. Harry, D.G., et al, (1988, p.1846-1856, engl 43-2031
Isotopic analysis of ground ice from arctic Canada. Lorrain, R., (1987, p.37-45, fre) 43-2067
Ice-formed landscapes on Mars. Lucchitta, B.K., (1987, p.387-398, fre) 43-2074
Influence of ground ice variability on settlement in thawing permafrost. Collins, P.M., et al, (1989, p.297-307, engl 43-2111
Disintegration of frozen granular materials using high pressure water jets. Skudrzyk, F.J., et al, (1989, p.320-334, engl 43-2113
Transient processes of filtration of air and moisture in soil. Grechannyĭ, O.A., et al, (1987, p.41-45, rus) 43-2269
Arctic lowlands. Carter, L.D., et al, (1987, p.583-628, engl 43-2415
Mudflows; collected articles, No.10. Stepanov, B.S., ed, (1988, 172p., rus) 43-2417
Current development of the study on frost susceptibility of soils. Chen, X.B., (1988, p.319-326, chi) 43-2875
Problem of the ice-cored rock glacier. Barsch, D., (1987, p.45-53, engl 43-3045
Mackenzie environmetal monitoring project—Phase II, 1987 activities. (1988, 254p. (Pertinent p.132-133), engl 43-3061
Frost heave properties of soils. Anderson, D.M., (1989, p.105-125, engl 43-3095
Simulation of freezing-thawing of soil materials. Bondarev, E.A., (1989, p.167-183, engl 43-3097
Hydraulic conductivity measurements of partially frozen soil by needle probe method. Fukuda, M., et al, (1989, p.251-266, engl 43-3103
New method of the unfrozen water content prediction in frozen soils. Kozlowski, T , (1989, p.283-291, engl 43-3105
Unfrozen water content of Finnish soils measured by NMR. Kujala, K., (1989, p.301-310, engl 43-3107
Nature of the water migration mechanism in freezing soils. Sakharov, I.I., (1989, p.116-119, rus) 43-3175
Antarctic-type ice sheets in the Northern Hemisphere. Grosval'd, M.G., (1988, p 3-25, rus) 43-3299
Geocryological studies. Ershov, E.D., ed, (1987, 292p., rus) 43-3368
Origins of stratified layers of ground ice. Danilov, I.D., (1987, p.72-83, rus) 43-3372
Calculating the quantity of ground ice in alassy landscapes. Bosikov, N.P., et al, (1987, p.143-151, rus) 43-3662
Ground ice in moraine of Banks Island. French, H.M., et al, (1988, p.19-30, engl 43-3673
Engineering geophysics. Liakhovitskiĭ, F.M., et al, (1989, 251p., rus) 43-3706
Antarctic-style ice sheet in the Northern Hemisphere. Grosval'd, M.G., (1988, p.239-267, engl 43-4069
Creating artificial permafrost underground with heat pumps. Sawada, S., (1989, p 273-278, engl 43-4222
Urey Prize lecture: water on Mars. Squyres, S.W., (1989, p 229-288, engl 43-4390
Ground ice development during the Holocene in Canada. Burn, C.R., (1988, p.31-38, engl 43-4424
See also: Ice lenses; Ice veins; Ice wedges

Ground temperature
See also: Soil temperature

Ground thawing
Sensitivity of a thaw simulation to model parameters. Panday, S., et al, (1988, p.99-106, engl 43-66
Shear strength of soils with thawing and dynamic loads. Karlov, V.D., et al, (1988, p.193-196, engl 43-77
Laboratory determination of pore pressure during thawing of three different types of soil. Rydén, C.G., et al, (1988, p.213-217, engl 43-80
Soil freezing and thaw consolidation results for a major project in Helsinki. Vähäaho, I T , (1988, p.219-223, engl 43-81
Effect of frozen soil creep on stresses at the moving thaw front around a wellbore. Huneault, P., et al, (1988, p.279-284, engl 43-88
Climatic impact on thermokarst development in low-temperature permafrost. Shamanova, I.I., et al, (1987, p.306-312, engl 43-134
Some stability criteria in fluid and solid mechanics. Song, J.C., (1988, 115p., engl 43-309
Strength and bearing capacity of thawing soil. Knutsson, S., (1985, p.262-280, swe) 43-379
Effect of ground temperature and thawing depth on piles. Chang, B., (1988, p.15-21, chi) 43-463
Fossil-pingo lake peatlands in the Sanjang Plain. Song, H., et al, (1988, p.76-83, chi) 43-470
Geotechnical thermal analysis Zarling, J P , et al, (1988, p.35-92, engl 43-768
Environmental influences on the bearing capacity of a road. Final report, Pt.3: Synthesis. Dysli, M., et al, (1984, 118p., fre) 43-778
Foundation technology in cold regions. Quinn, W.F., (1987, p.305-310, engl 43-865
Designing industrial pipelines for thawing ground Klement'ev, A.F., (1988, p.73-77, rus) 43-1020
Experimental determination of pore pressure development in a thawing soil Axelsson, K., et al, (1987, 8p., engl 43-1111
Stress deformation of ground. Gorelik, L.V., et al, (1987, p.4-9, rus) 43-1179

Ground thawing *(cont.)*

Simple solution for thawing of multi-layered soil systems. Kuhlemeyer, R.L., (1988, p.673-688, eng) 43-1332

Effects of caterpillar-tracked transportation on permafrost thawing. Gladkov, V.P., (1988, p.36-48, rus) 43-1538

Models for improving engineering and geocryological research. Mel'nikov, V.P., et al, (1988, p.3-13, rus) 43-1596

Features of freezing of water-saturated soils. Gorelik, IA.B., et al, (1988, p.40-53, rus) 43-1599

Pile bearing strength in thawing permafrost Torgashev, V.V., (1985, p.9-18, rus) 43-1650

Effect of seasonal freezing on melt pools beneath buildings. Pichuev, V.V., (1985, p.31-37, rus) 43-1653

Dynamic properties of thawed soils. Moiseichik, E.K., (1985, p.79-85, rus) 43-1661

Solving the problem of the consolidation and thawing of frozen soils. Klement'ev, A F., et al, (1988, p.463-466, eng) 43-1802

Freezing of soil and rocks. Fremond, M , (1987, p.47-52, fre) 43-2068

Strength of compacted frozen fill after thawing. Graham, J., et al, (1989, p.274-281, eng) 43-2109

Influence of ground ice variability on settlement in thawing permafrost. Collins, P.M., et al, (1989, p.297-307, eng) 43-2111

Frozen gravel: a study of compaction and thaw-settlement behavior Haas, W M., et al, (1989, p.308-319, eng) 43-2112

Preliminary results of frost heave tests in a large cell. Konrad, J.M., et al, (1989, p.379-388, eng) 43-2118

Soil freezing under free ground water convection. Tsaplin, A.I., (1987, p.3-6, rus) 43-2260

Visco-plasticity of soils and design of structures. Zaretskiĭ, IU.K., (1988, 349p , rus) 43-2281

Peculiarities and regularities of river ice breakup in Yakutia. Lobovikova, Z.P., et al, (1988, p.14-21, rus) 43-2344

Effect of freezing and thawing on manure-treated soils. Mbagwu, J.S C., et al, (1989, p.191-199, eng) 43-2368

Effect of air temperature and soil conditions on snowmelt. Strikharchuk, V P., (1988, p.120-127, rus) 43-2393

Calculating the characteristics of mudflows. Stepanova, T.S , et al, (1988, p.3-10, rus) 43-2418

Soil temperature and water during diurnal freezing and thawing. Pikul, J.L., Jr., et al, (1989, p.3-10, eng) 43-2577

Two electric potential signatures of serial diurnal frost. Outcalt, S.I., et al, (1988, p.354-360, eng) 43-2827

Thaw consolidation of frozen soils. Tong, C.J., (1988, p.327-331, chi) 43-2876

Forecasting technique for anthropogenic changes in cryogenic conditions. Garagulia, L S., (1985, 224p., rus) 43-3073

Mechanics of freezing and thawing in soils. Ladanyi, B., et al, (1989, p.73-103, eng) 43-3094

Frost heave properties of soils. Anderson, D.M., (1989, p.105-125, eng) 43-3095

Simulation of freezing-thawing of soil materials. Bondarev, E.A., (1989, p.167-183, eng) 43-3097

Freezing and thawing of soils in cylindrical coordinates. Lunardini, V.J., (1989, p.185-208, eng) 43-3098

Temperature effects on freezing and thawing of soil. Bondarev, E.A., et al, (1989, p.209-218, eng) 43-3099

Nomographs of soil annual average temperature. Chekhovskiĭ, A.L., et al, (1989, p.219-231, eng) 43-3100

Model for simulating freezing and thawing of unsaturated soils. Karvonen, T., et al, (1989, p.267-281, eng) 43-3104

Effect of freeze thaw cycles on soil mass and heat transfer. Kurilko, A.S., et al, (1989, p.311-321, eng) 43-3108

Prognosis and regulation of heat and moisture regime of frozen soils. Permiakov, P.P., et al, (1989, p.371-377, eng) 43-3113

Numerical solutions for freezing and thawing of soils. Shen, M., et al, (1989, p.391-400, eng) 43-3115

Physical and chemical processes in soils during freezing and thawing. Ershov, E.D., et al, (1989, p.415-424, eng) 43-3117

Freeze-thaw effects on thaw settlement and pore pressure. Kujala, K., et al, (1989, p.523-533, eng) 43-3125

Physical changes in clays due to frost action. Chamberlain, E.J , (1989, p.863-893, eng) 43-3155

Permafrost compressibility during thawing and construction problems. Khrustalev, L N , et al, (1987, p.221-227, rus) 43-3386

Permafrost and ground water in Kunlun Mountains Aoki, Y., et al, (1989, p.105-110, eng) 43-3448

Microstructural change from freeze-thaw of cohesive soils. Aoyama, K., et al, (1988, p.131-138, jpn) 43-3526

Load restrictions for flexible pavements during spring thaw. Rutherford, M.S., (1989, 476p., eng) 43-3612

On a finite element model for freezing and thawing soils. Axelsson, K., et al, (1989, p.342-353, eng) 43-3739

Measurement of pore pressures in freezing and thawing soils. Eigenbrod, K.D., et al, (1989, p.943-952, eng) 43-3791

Bearing capacity of season-freezing and thawing soils by horizontal stress change. Zhusupbekov, A.Z., (1989, p.953-961, eng) 43-3792

Soil freezing and thawing in the middle taiga of the European USSR. Dernugin, A.A., (1989, p.76-82, rus) 43-4067

Role of freezing and thawing processes in thinning of soils. Sapozhnikov, T.M., et al, (1987, p.17-21, eng) 43-4426

Moisture transfer in thawed and freezing ground. Fel'dman, G.M., (1988, 257p , rus) 43-4492

Thaw halo formation dynamics in frozen ground surrounding pipes. Danielian, IU.S., et al, (1987, p.113-119, rus) 43-4505

Thaw halo formation in frozen ground with the laying of several pipelines. Danielian, IU.S., et al, (1987, p.145-151, rus) 43-4508

Ground water

Water migration in unsaturated freezing soils. Gao, W., et al, (1988, p.59-64, eng) 43-61

Acidification of shallow groundwaters during the spring melt period. Craig, D., et al, (1988, p.89-98, eng) 43-302

Snow melting on pavements by the heat of ground-water pipelines. Kumagai, M., et al, (1988, p.285-309, jpn) 43-457

Geologic origin and fill properties of the Barrow Unit materials. Mahmood, A., et al, (1984, p.1045-1058, eng) 43-669

Phase composition of moisture in frozen peat. Gamaiunov, N.I., et al, (1988, p 29-34, rus) 43-692

Discussions on environmental protection in the North. Solomonov, N.G., (1987, 176p., rus) 43-716

Formation of loess structure, and settlement. Komissarova, N.N., et al, (1988, p.186-194, rus) 43-885

NASA Mars Project: evolution of climate and atmosphere. Clifford, S.M., et al, (1988, p.1585, 1595-1596, eng) 43-1052

Effect of a decrease in deformation characteristics of materials on the stress-strain state of earth dams. Burman, G.V., (1987, p.9-12, rus) 43-1180

Aluminum in meltwater, Chalk River and Turkey Lakes watersheds. Chew, H., et al, (1988, p 66-71, eng) 43-1359

Ground water flow in tundra rivers and water supply. Vetoshkina, N.N., (1988, p.87-98, rus) 43-1543

Water-well data from the Houston area, Matanuska-Susitna Borough, Alaska. Maynard, D.L., (1988, 14p., eng) 43-1685

Water-quality investigations in Juneau, Alaska. Motyka, R.J., (1988, 20p., eng) 43-1688

Evaluation of ground-water quality monitoring in Alaska. Maynard, D.L., (1988, 39p., eng) 43-1691

Alaska ground-water quality. Madison, R.J., et al, (1987, 8p , eng) 43-1734

Influence of well casing materials on chemical species in ground water. Parker, L.V., et al, (1988, p 450-461, eng) 43-1813

U.S. Geological Survey ground-water studies in Alaska. Zenone, C., (1988, 2p., eng) 43-1825

Development of a membrane for *in-situ* optical detection of TNT. Zhang, Y., et al, (1988, 6p., eng) 43-1842

Movement of meltwater in small basins. Bengtsson, L., (1988, p.237-244, eng) 43-2017

Transient processes of filtration of air and moisture in soil. Grechannyĭ, O.A., et al, (1987, p.41-45, rus) 43-2269

Melting of an ice surface in porous medium. Kazmierczak, M., et al, (1988, p.352-358, eng) 43-2316

Water resources of the North Slope, Alaska. Sloan, C.E., (1987, p.233-252, eng) 43-2372

Interaction between permafrost and groundwater. Wang, B.L., et al, (1988, p.143-150, chi) 43-2849

Hyorogeology of oil and gas bearing layers of the Siberian platform. Antsiferov, A.S., (1989, 176p., rus) 43-3069

Some problems of freezing the rock mass. Plesniak, J., et al, (1989, p.379-390, eng) 43-3114

Current development on frost susceptibility prediction of soils in P.R. China. Chen, X., (1989, p.481-490, eng) 43-3121

Freeze-thaw effects on thaw settlement and pore pressure. Kujala, K., et al, (1989, p.523-533, eng) 43-3125

Frozen soil: water up from below. (1989, p.14-15, eng) 43-3288

Permafrost and ground water in Kunlun Mountains. Aoki, Y., et al, (1989, p.105-110, eng) 43-3448

Ground water during snow melting in landslide area. Inaba, K., et al, (1988, p.61-75, jpn) 43-3522

Influence of well casing composition on trace metals in ground water Hewitt, A.D., (1989, 18p., eng) 43-3619

Proceedings. (1989, 199p., eng) 43-3665

Benzene transport in groundwater under freezing conditions. Lilly, M.R., (1989, p.175-187, eng) 43-3667

Subsurface transport of oil pollutants under freezing conditions. Zukowski, M.D., et al, (1989, p.189-198, eng) 43-3668

Heat and water balances on glaciers. Takahashi, S., et al, (1989, p.147-152, eng) 43-4212

Protection of ground-water monitoring wells against frost heave. Gates, W.C.B., (1989, p.241-251, eng) 43-4340

Models of groundwater level fluctuations. Lemmelä, R., et al, (1988, p.35-46, eng) 43-4381

Late-winter characteristics of the Fairbanks alluvial aquifer. Lilly, M.R., et al, (1987, p.127-140, eng) 43-4429

See also: Soil water; Subpermafrost ground water; Suprapermafrost ground water; Water table

Grounded ice

Model tests of load transmission through grounded ice rubble. Timco, G.W., et al, (1989, p.269-274, eng) 43-2636

Transmission of loads through grounded ice rubble. Sayed, M., (1989, p.259-275, eng) 43-2821

Glacial history of inner Ross Embayment. Denton, G.H., et al, (1989, p.151-182, eng) 43-3164

Sedimentation and Quaternary glacial history of Marguerite Bay. Kennedy, D.S., et al, (1989, p.255-276, eng) 43-3168

Measurements of load transmission through grounded ice rubble. Marshall, A.R., et al, (1989, p.575-585, eng) 43-3759

Steady thermomechanical flow along two-dimensional flow lines in large grounded ice sheets. Dahl-Jensen, D., (1989, p.10,355-10,362, eng) 43-4344

Grounding

See also: Electrical grounding

Grouting

Field studies of the solidity of tall concrete structures. Durcheva, V.N., (1988, 120p., rus) 43-740

Chemical soil stabilization and the environment. Sokolovich, V.E., (1988, p.233-236, eng) 43-1085

Arctic grout pile. Holubec, I., et al, (1989, p.731-737, eng) 43-3224

Grouting joints in large panel buildings. Gol'dguber, B.M., (1988, p.30-31, rus) 43-3534

Gullies

Formation of gullies in the southeastern part of West Siberia. Putilin, A.F., (1988, 81p., rus) 43-714

Ice formation during the development of ravine thermal erosion. Poznanin, V.L., (1988, p.53-58, rus) 43-3256

Hail

Some advantages of using polarisation diversity illustrated through the analysis of radar data from a storm in Central Alberta. Holt, A.R., et al, (1988, p 237-240, eng) 43-1511

Hail problem and some studies of hailstorms in China. Wang, A.S., (1987, p.361-364, eng) 43-2256

Acoustic signature measurements of precipitation during CASP. Nystuen, J.A., et al, (1989, p 237-257, eng) 43-4463

Hail clouds

Growth and movement of hailstones in convective clouds. Lomidze, N.E., et al, (1988, p.148-152, rus) 43-1412

Radar characteristics of wet and dry hailstones. Vorob'ev, B.M., (1988, p.133-141, rus) 43-1433

Dual linear polarisation time series as an aid to hydrometeor identification. Caylor, I.J., et al, (1988, p 241-242, eng) 43-1512

Hail problem and some studies of hailstorms in China. Wang, A.S., (1987, p.361-364, eng) 43-2256

Numerical simulations of hailstorm feeder-cloud initiation. Cheng, L., (1989, p.279-305, eng) 43-4559

Hail prevention

Need for weather and climate modification. List, R., (1987, p.61-86, eng) 43-2249

Hail research and hail suppression. Waldvogel, A., (1987, p.87-109, eng) 43-2250

Laboratory hail studies. Prodi, F., (1987, p.111-136, eng) 43-2251

Introduction of Nowcasting system development in China. Liang, B.J., et al, (1987, p.331-334, eng) 43-2253

Hailstone growth

Heat- and mass transfer during cooling and hardening of water drops in air streams. Filatkin, V.N , et al, (1988, p.86-88, rus) 43-550

Conditions of hail formation. Kaviladze, M.Sh., et al, (1988, p.208-212, eng) 43-1371

Growth and movement of hailstones in convective clouds. Lomidze, N.E., et al, (1988, p.148-152, rus) 43-1412

Hail research and hail suppression. Waldvogel, A., (1987, p.87-109, eng) 43-2250

Laboratory hail studies. Prodi, F., (1987, p.111-136, eng) 43-2251

Preliminary study on artificial and natural hailstones. Prodi, F , et al, (1987, p.357-360, eng) 43-2255

Patterns of hailstone embryo type in Alberta hailstorms. Knight, N.C., et al, (1980, p.325-332, eng) 43-3952

Growth and crystal orientation of hailstones. Levi, L., et al, (1980, p.333-346, eng) 43-3953

Study of the initial stage of the accretion of ice. Nasello, O.B., et al, (1980, p.365-372, eng) 43-3954

Precipitation and hail formation mechanisms in a Colorado storm. Heymsfield, A.J., (1980, p.469-476, eng) 43-3956

Hailstone structure

Radar characteristics of wet and dry hailstones. Vorob'ev, B.M., (1988, p.133-141, rus) 43-1433

Hail research and hail suppression. Waldvogel, A., (1987, p.87-109, eng) 43-2250

Laboratory hail studies. Prodi, F., (1987, p.111-136, eng) 43-2251

Preliminary study on artificial and natural hailstones. Prodi, F., et al, (1987, p.357-360, eng) 43-2255
Patterns of hailstone embryo type in Alberta hailstorms. Knight, N.C., et al, (1980, p.325-332, eng) 43-3952
Growth and crystal orientation of hailstones. Levi, L., et al, (1980, p.333-346, eng) 43-3953

Hailstones

Processing and interpretation of alternately polarised weather radar echoes. Zrnic, D.S., et al, (1988, p.243-246, eng) 43-1513
On determination of maximum hailstone sizes from hailpad observations. Smith, P.L., et al, (1989, p.71 76, eng) 43-4259

See also: Artificial hailstones

Handbooks

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Hardening

See also: Concrete hardening

Hardness

Lime treatment of asphalt, Parts 1 and 2 Final report. Petersen, J.C., et al, (1987, 70p., eng) 43-1745
Shattering permafrost with the percussion power device of a stripping machine Labutin, V.N., et al, (1988, p 87-92, rus) 43-3632

See also: Ice hardness; Snow hardness

Haze

Obscuration and background dynamics in and over snow. Hogan, A.W., (1987, p.181-185, eng) 43-856
Progress in Arctic air chemistry, 1980-1984. Rahn, K.A., (1985, p.1987-1994, eng) 43-982
Winter variability in arctic haze aerosols at Barrow, Alaska. Halter, B.C., et al, (1985, p.2033-2037, eng) 43-986
Soot in the Arctic snowpack. Clarke, A.D., et al, (1985, p.2045-2053, eng) 43-988
Arctic air pollution and large scale atmospheric flows. Iversen, T., et al, (1985, p.2099-2108, eng) 43-992
Some antecedents of Arctic haze episode, Mar. 1983. Raatz, W.E., (1985, p.2121-2126, eng) 43-994
Air mass characteristics in the vicinity of Barrow, Alaska, 9-19 March 1983. Raatz, W.E., et al, (1985, p.2127-2134, eng) 43-995
Character of pollution aerosols over the Norwegian Arctic, 1983. Raatz, W.E., et al, (1985, p.2135-2142, eng) 43-996
Observations of Arctic haze during polar flights from Alaska to Norway. Raatz, W.E., et al, (1985, p.2143-2151, eng) 43-997
Characterization of aircraft-collected particles in Alaskan Arctic aerosol. Sheridan, P.J., et al, (1985, p.2159-2166, eng) 43-999
Particulate sulfur and chlorine in Arctic aerosols, Spring 1983. Winchester, J.W., et al, (1985, p.2167-2173, eng) 43-1000
Horizontal inhomogeneities in the particulate carbon component of the Arctic haze. Hansen, A.D.A., et al, (1985, p.2175-2180, eng) 43-1001
Radiative effects of Arctic haze during pollution episode, spring 1983. Wendling, P., et al, (1985, p.2181-2193, eng) 43-1002
Airborne CO2 measurements in the Arctic during spring 1983. Conway, T.J., et al, (1985, p.2195-2201, eng) 43-1003
Vertical distribution of aerosols in the Norwegian Arctic Pacyna, J.M., et al, (1988, p.2213-2222, eng) 43-1203
Chemical air mass systems in Alaska. Shaw, G.E., (1988, p.2239-2248, eng) 43-1204
Experimental investigation of Arctic haze at Alert, N.W.T., March 1985. Trivett, N.B.A., et al, (1988, p 341-376, eng) 43-1427
Impact of ice-supersaturated layers on atmospheric radiance. Cutten, D.R., (1989, p.179-193, eng) 43-2407
Arctic haze. Ruhnke, L.H., et al, (1987, p.285-288, eng) 43-3298
Arctic haze air pollution in polar regions. Heintzenberg, J., (1989, p.50-55, eng) 43-3832
Radiative energy budget in the cloudy and hazy Arctic. Tsay, S.C., et al, (1989, p.1002-1018, eng) 43-4288
Radiative energy budget in the cloudy and hazy Arctic. Tsay, S.C., et al, (1989, p.1002-1018, eng) 43-4402

Health

Toxicity of calcium magnesium acetate used as deicer Hiatt, G.F.S., et al, (1988, p.20-26, eng) 43-2208

Heard Island

Till and moraine formation at some Heard Island glaciers Lundqvist, J., (1988, p.225-234, eng) 43-1872

Heat

Iceberg cutting with a hot wire. Gammon, P.H., et al, (1988, p.261-278, eng) 43-1347

See also: Latent heat; Specific heat

Heat balance

Determining the intensity of ice accretion from brines when using spray-cones. Sosnovskiĭ, A.V., (1987, p.149-154, rus) 43-248
Heat balance structure of forest landscapes in West Siberia. Abdullaev, A.A., (1988, p.321-326, rus) 43-568
Geotechnical thermal analysis. Zarling, J.P., et al, (1988, p.35-92, eng) 43-768
Role of the phase transformation heat of ice in the energy balance at the ocean-atmosphere interface. Lebedev, A.A., (1988, p.6-23, rus) 43-798
Energy balance of snow fields, Colorado Olyphant, G.A., et al, (1988, p.1962-1968, eng) 43-2023
Ice buildup in tailing basins. Barr, D.W., (1989, p.202-214, eng) 43-2103
Regulation of the thermal regime in northern mines and pits, resource-saving systems. Shuvalov, IU.V., (1988, 192p., rus) 43-2152
Using the borehole jack to determine changes in river ice strength. Prowse, T.D., et al, (1988, p.283-303, eng) 43-2177
Water temperature and ice in Danube River delta. Min'kovskaia, R.IA., (1988, p.86-94, rus) 43-2392
Heat balance of swamps in Western Siberia. Moskvin, IU.P., (1988, p.30-37, rus) 43-2464
Coupled energy balance climate-sea ice model. Ledley, T.S., (1988, p.15,919-15,932, eng) 43-2490
Semianalytic energy balance climate model with explicit sea ice and snow physics. Harvey, L.D.D., (1988, p.1065-1085, eng) 43-3074
Thermal storage for preventing road-surface freezing. Ikeda, M., et al, (1989, p.791-800, eng) 43-3147
Modeling Laurentian Great Lakes evaporation, heat storage, and energy fluxes. Croley, T.E., II, (1989, 48p., eng) 43-3473
Liquid precipitation in the thermal and water balance of melting naleds. Delkin, B.N., (1987, p.5-14, rus) 43-3653
Summer energy balance of alpine tundra in Canadian Rockies. Bowers, J.D., et al, (1989, p.135-143, eng) 43-4087
Effect of snow cover on the climate. Cohen, J., (1988, p.27-41, eng) 43-4114
Heat and moisture exchange of antarctic fast ice with the atmosphere in Alasheev Bight. Nazintsev, IU.L., (1989, p.54-62, eng) 43-4370
Energy balance of the intertidal zone of western Hudson Bay I: ice-free period. Silis, A., et al, (1989, p.327-345, eng) 43-4560
Energy balance of the intertidal zone of western Hudson Bay II: ice-dominated periods and seasonal patterns. Rouse, W.R., et al, (1989, p.346-366, eng) 43-4561
Thermal measurements in snow. Jordan, R., et al, (1986, p.183-193, eng) 43-4634

See also: Glacier heat balance; Permafrost heat balance

Heat capacity

Heat capacity and glass transition behavior of amorphous ice. Handa, Y.P., et al, (1988, p.3323-3325, eng) 43-174
Snowmelt rate methods used in forecasting runoff from mountains. Ferner, S., et al, (1985, p.107-116, eng) 43-4274

Heat conductivity

See also: Thermal conductivity

Heat flux

Polynyas in the southern ocean. Gordon, A.L., et al, (1988, p.90-97, eng) 43-784
Glaciological investigations of Store Supphellebre, West-Norway. Orheim, O., (1970, 48p., eng) 43-791
Soil heat flux and ice growth in snow cover. Marsh, P., et al, (1987, p 497-524, eng) 43-1310
Roll vortices during Arctic cold air outbreaks over open water. Hein, P.F., et al, (1988, p.177-199, eng) 43-1378
Simulation of heat and water flow during freeze/thaw cycles of soil. Pikul, J.L., Jr., (1988, 193p., eng) 43-1470
Estimating turbulent surface heat fluxes over polar, marine surfaces. Andreas, E.L., (1988, p 65-68, eng) 43-1495
On the design of wind-augmented thermosyphons. Lock, G.S.H., et al, (1989, p.11-23, eng) 43-1575
Soil heat flux in permafrost: characteristics and accuracy of measurement. Halliwell, D.H., et al, (1987, p.571-584, eng) 43-2037
Heat, carbon and water fluxes in a 12-box model of the world ocean. Garcon, V.C., et al, (1988, p.161-177, eng) 43-2243
Implications of Mackenzie Delta permafrost regime for climatic history. Allen, D.M., et al, (1988, p.3-13, eng) 43-2321
Heat balance of swamps in Western Siberia. Moskvin, IU.P., (1988, p.30-37, rus) 43-2464
Water and heat flows in frozen soils. Basic theory and operational modeling. Lundin, L.C., (1989, 49p., eng) 43-2845
Ice control thermal bubbler plumes. point source configuration. Baddour, R.E., (1988, p.59-71, eng) 43-2980
Growth of ice covers in reservoirs. Sado, K., et al, (1988, p.199-208, eng) 43-2993
Ocean heat flux in northern seas. Häkkinen, S., et al, (1989, p.6145-6157, eng) 43-3199
Phase changes following the initiation of a hot turbulent flow over a cold solid surface. Huppert, H.E., (1989, p.293-319, eng) 43-3292
Dynamics of the antarctic ice sheet. Budd, W.F., et al, (1989, p.16-22, eng) 43-3329
Modelling flow and depth-age profiles in Greenland ice. Dahl-Jensen, D., (1989, p.31-36, eng) 43-3331
Factors limiting snowmelt runoff in a permafrost environment. Marsh, P., (1987, p.61-68, eng) 43-3928
Cooling of cryoagents by the pumping-out of vapor. Kirichenko, IU.A., et al, (1989, p.63-68, eng) 43-4399
Two-wavelength method of measuring path-averaged turbulent surface heat fluxes. Andreas, E.L., (1989, p.280-292, eng) 43-4400

See also: Heat transfer; Ice heat flux; Snow heat flux

Heat loss

Protecting wall panel joints of buildings from atmospheric effects. Samarin, S.A., (1988, 104p., rus) 43-761
Heat loss in pulp flows on ash dumps at freezing temperatures. Panteleev, V.G., et al, (1987, p 4-11, rus) 43-1187

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See also: Temperature measurement

Heat pipes

Snow melting on pavements by the heat of ground-water pipelines. Kumagai, M., et al, (1988, p.285-309, jpn) 43-457
Startup from the frozen state and performance of heat pipes. Jang, J.H., (1988, 217p., eng) 43-2891
Creating artificial permafrost underground with heat pumps. Sawada, S., (1989, p.273-278, eng) 43-4222
Utilization of heat pipes for artificial permafrost storage. Tsuchiya, F., et al, (1989, p.279-283, eng) 43-4223

Heat recovery

Winter performance of residential heat pump. Tarnawski, V.R., et al, (1988, p.271-278, eng) 43-1319
Primary effluent as a heat source for heat pumps. Phetteplace, G.E., et al, (1988, p.141-146, eng) 43-2160
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Heat-removal characteristics of concentric-tube thermosyphon and heat pump. Fukusako, S., et al, (1989, p.233-238, eng) 43-4218

Heat sources

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Thermal analysis of heated lockwalls for ice control. Nakato, T., et al, (1988, p.23-33, eng) 43-2976

Heat transfer

State of the art: heat and mass transfer in freezing soils. Kay, B.D., et al, (1988, p.3-21, eng) 43-55
Thermal and hydraulic conductivity of unsaturated frozen sands. Van Loon, W.K.P., et al, (1988, p.81-90, eng) 43-64
Frost heave mechanism model based on energy equilibrium. Miyata, Y., (1988, p.91-98, eng) 43-65
Frost expansion pressure and displacement of saturated soils. Ryokai, K., et al, (1988, p.115-120, eng) 43-68
Thermal characteristics of fine-grained soils. Ershov, E.D., et al, (1988, p.135-140, eng) 43-71
Heat transfer and observed values of a refrigerated LPG underground tank. Goto, S., et al, (1988, p.331-337, eng) 43-94
Studying certain characteristics of the surface layer of air above glaciers. Arepov, P.P., et al, (1987, p.137-139, rus) 43-245
Heat transfer characteristics of glaze ice accretions on an airfoil. Pais, M.R., (1988, 172p., eng) 43-345
Albedo of break-up ice covers. Prowse, T.D., (1987, p.197-202, eng) 43-402
Adherent layer of ground in permafrost. Zhu, L., (1988, p.8-14, chi) 43-462
Mathematical modeling of two-dimensional crystallization in a cylinder at radiative-conductive heat exchange. Karvaĭskiĭ, A.IA., et al, (1988, p.124-126, rus) 43-547
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Experimental studies of heat- and mass-transfer kinetics in salinized, freezing disperse rocks. Ershov, E.D., et al, (1988, p.39-41, rus) 43-552
Formation of thermal and moisture regime of macroporous media in regions with severe climatic conditions. Mukhetdinov, N.A., (1988, p.87, rus) 43-554
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Analysis of thermal pile design using computer modeling techniques. Teubner, M.D., et al, (1984, p.1101-1112, eng) 43-673
Embankment case histories on permafrost. Esch, D.C., (1988, p.127-159, eng) 43-771
Hydrophysical research in the melioration of lands with water surplus Kaliuzhnyĭ, I.L., et al, (1988, 260p., rus) 43-837

Heat transfer *(cont.)*

Formation of thermal regime in the snow cover-ground system. Zyiagin, V.V., et al, (1988, p.140-144, rus) 43-952

Quasistationary model of thermal interaction between a pipeline and frozen ground. Bronfenbrener, L.E., et al, (1987, p.68-73, rus) 43-1019

Modeling microphysical processes in clouds during seeding. Khvorostianov, V.I., et al, (1988, p.101-106, rus) 43-1082

Turbulent effects on river ice cover melting. Sarraf, S., (1988, p.178-189, eng) 43-1327

Simple solution for thawing of multi-layered soil systems. Kuhlemeyer, R.L., (1988, p.673-688, eng) 43-1332

Experimental study of frozen fringe characteristics. Akagawa, S., (1988, p.209-223, eng) 43-1342

Thermosyphon for horizontal applications. DenHartog, S.L., (1988, p.319-321, eng) 43-1351

Process of melting by rolling contact. Bejan, A., (1988, p.2273-2283, eng) 43-1379

Thermal conductivity of wet porous media. Azizi, S., et al, (1988, p.2305-2317, fre) 43-1380

Numerical prediction of frost formation on cooled heat exchangers. Sami, S.M., et al, (1988, p.81-94, eng) 43-1457

Meridional heat transport by the ice and ocean in the western Arctic. Pease, C.H., (1988, p.16-19, eng) 43-1493

Measuring instrument for heat flow and temperatures in soils. Silifon'kin, V.I., et al, (1988, p.95-101, rus) 43-1607

Arctic engineering principles applied to antarctic construction. Myers, G.D., (1988, p 18-19, eng) 43-1712

Flow developers for melting ice—experimental results Ashton, G.D., (1989, p.151-160, eng) 43-2098

Primary effluent as a heat source for heat pumps. Phetteplace, G.E., et al, (1988, p.141-146, eng) 43-2160

Thermal properties of mines in the North Shurgin, B.V., ed, (1987, 81p, rus) 43-2259

Soil freezing under free ground water convection. Tsaplin, A.I., (1987, p.3-6, rus) 43-2260

Forecasting and thermal processes during mine excavation by soil freezing. Varenyshev, V.M., et al, (1987, p.14-17, rus) 43-2261

Frozen ground barriers and supply of cold for mine-shaft drilling. Korolev, I.O., (1987, p.27-30, rus) 43-2265

Heat and mass transfer during thermal mine drilling. Fomin, S.A., et al, (1987, p.30-33, rus) 43-2266

Heat transfer between freezing column and soil. Bondarev, E.A., et al, (1987, p.34-37, rus) 43-2267

Determining heat and physical characteristics of frozen rocks. Kovalenko, V.N., et al, (1987, p.50-54, rus) 43-2270

Melting of an ice surface in porous medium Kazmierczak, M., et al, (1988, p.352-358, eng) 43-2316

Perturbation solution for spherical solidification by convective cooling. Milanez, L.F., et al, (1988, p.88-91, eng) 43-2336

Applications of mathematical methods in geocryology Garagulia, L.S., ed, (1987, 167p., rus) 43-2410

Ice formation over cooled cylinder in natural convection. Cheng, K.C., et al, (1989, p.191-194, eng) 43-2425

Melting and freezing. Yao, L.S., et al, (1989, p.1-95, eng) 43-2555

Surface ablation and heat transfer in the near-ground air layer. Szarejko, Z., et al, (1986, p.153-165, eng) 43-2832

Startup from the frozen state and performance of heat pipes Jang, J.H., (1988, 217p., eng) 43-2891

Heat transfer between water and ice cover Matoušek, V., et al, (1988, p.367-377, eng) 43-3009

Natural convective heat transfer of cold water Ho, C.J., et al, (1988, p.894-900, eng) 43-3087

Effects of natural convection on ice formation around a cylinder Cheng, K.C., et al, (1988, p.931-937, eng) 43-3088

Freezing and thawing of soils in cylindrical coordinates. Lunardini, V.J., (1989, p 185-208, eng) 43-3098

Nomographs of soil annual average temperature. Chekhovskiĭ, A.L., et al, (1989, p.219-231, eng) 43-3100

Hydraulic conductivity measurements of partially frozen soil by needle probe method. Fukuda, M., et al, (1989, p.251-260, eng) 43-3103

Model for simulating freezing and thawing of unsaturated soils. Karvonen, T., et al, (1989, p.267-281, eng) 43-3104

Effect of freeze thaw cycles on soil mass and heat transfer Kurilko, A.S., et al, (1989, p.311-321, eng) 43-3108

Heat and moisture properties in frozen sandy soil, measurements and modeling. Lemmela, R., et al, (1989, p.323-340, eng) 43-3109

Prognosis and regulation of heat and moisture regime of frozen soils. Permiakov, P.P., et al, (1989, p.371-377, eng) 43-3113

Determination of frost susceptibility of soils. Jessberger, H.L., et al, (1989, p.449-469, eng) 43-3119

Application of direct freezing tests in dimensioning frost protection for roads. Stenberg, L., (1989, p.565-572, eng) 43-3129

Convective heat transfer in water over melting ice sheet. Lunardini, V.J., (1986, p.42-51, eng) 43-3218

Solidification dynamics of a flowing molten fluid. Chun, M.H., (1989, p.1-10, eng) 43-3282

Arctic sea ice characteristics related to atmospheric processes. Barry, R.G., et al, (1989, p.9-15, eng) 43-3328

Formation mechanisms of a daily thermal regime of a cryogenic landscape surface. Bryksin, V.N., (1987, p.168-183, rus) 43-3382

Thermal characteristics of a double roof Baumgartner, A.M., et al, (1989, p.107-117, eng) 43-3557

Simulation to predict snow sliding and lift-off on buildings. Lepage, M.F., et al, (1989, p.128-141, eng) 43-3559

Calculation of maximum snow load on roofs. Sandvik, R., (1989, p.317-324, eng) 43-3576

Heat conduction with freezing or thawing. Lunardini, V.J., (1988, 329p, eng) 43-3847

Moisture transfer in building structures: numerical methods. Ojanen, T., et al, (1989, 102p., fin) 43-3964

Predicting two-dimensional heat transfer in an electrothermal deicer pad. Wright, W.B., (1988, 138p., eng) 43-3968

Analytical ice shape predictions for flight in natural icing conditions. Berkowitz, B.M., et al, (1988, 39p., eng) 43-3969

Snowmelt models for shallow and short-living snowpacks. Baumens, W., (1988, p.108-120, eng) 43-4121

International Symposium on Cold Regions Heat Transfer, 1989. (1989, 314p., eng) 43-4193

Cold regions heat transfer Cheng, K.C., et al, (1989, p.1-25, eng) 43-4194

Review of pure conduction with freezing. Lunardini, V.J., (1989, p.27-32, eng) 43-4195

Ice formation phenomena. Hirata, T., et al, (1989, p.33-38, eng) 43-4196

Numerical solutions for laminar heat transfer with freezing and thawing. Nakamura, H., et al, (1989, p.39-44, eng) 43-4197

Heat transfer from water flowing through a chilled-bed open channel. Richmond, P.W., et al, (1989, p.51-58, eng) 43-4199

Cooling and freezing process of water. Narumi, A., et al, (1989, p.73-78, eng) 43-4200

System of removal, storage and air-conditioning usage of snow. Umemura, T., et al, (1989, p.101-106, eng) 43-4205

Development of solids circulating heat collector from air. Takeuchi, H., et al, (1989, p.135-140, eng) 43-4211

Heat transfer involving convective melting. Saitoh, T., et al, (1989, p.169-174, eng) 43-4213

Coupled heat transfer of a two-phase closed thermosyphon with solidification. Wu, C.Z., et al, (1989, p.183-188, eng) 43-4214

Transient freezing heat transfer in a water-saturated porous media. Sasaki, A., et al, (1989, p.291-296, eng) 43-4225

Freezing around a vertical cylinder in porous media. Wang, C.Y., et al, (1989, p.297-302, eng) 43-4226

Snow water equivalent model during rain-on-snow events. Berg, N.H., et al, (1983, p.155-158, eng) 43-4366

Phase change heat transfer around cylindrical heat source. Sasaguchi, K., et al, (1989, p.43-49, eng) 43-4373

Thaw rate and parameters of sprinkler preparation of ice-filled sediments. Bulskikh, A.A., et al, (1989, p.351-355, eng) 43-4470

See also: Heat flux; Permafrost heat transfer

Heat transfer coefficient

Optical test methods for buildings and structures. Testing the quality of thermal insulation. IAlyshev, F.Kh., (1988, 80p., rus) 43-2575

Growth of ice covers in reservoirs. Sado, K., et al, (1988, p.199-208, eng) 43-2993

Heating systems for large volume buildings. Klimovitskiĭ, M.S., et al, (1989, p.82-86, rus) 43-3861

Safeguarding cooling towers against moisture and freezing. Duzhikh, F.P., et al, (1988, p.52-55, rus) 43-4100

International Symposium on Cold Regions Heat Transfer, 1989. (1989, 314p., eng) 43-4193

Ice formation phenomena. Hirata, T., et al, (1989, p.33-38, eng) 43-4196

Experimental study of melting of ice about horizontal cylinders. Torikoshi, K., et al, (1989, p 45-50, eng) 43-4198

Characteristics of a heat exchanger with the melting of fallen snow. Aoki, K., et al, (1989, p.91-94, eng) 43-4203

De-icing heat-transfer characteristics. Fukusako, S., et al, (1989, p.123-128, eng) 43-4209

Coupled heat transfer of a two-phase closed thermosyphon with solidification. Wu, C.Z., et al, (1989, p.183-188, eng) 43-4214

Freezing around a vertical cylinder in porous media. Wang, C.Y., et al, (1989, p.297-302, eng) 43-4226

Study on keeping of underground fire cistern from freezing. Inaba, H., et al, (1989, p.303-308, eng) 43-4227

Heat calculations of complex systems of underground pipelines (recommendations). Danielian, IU.S., et al, (1987, 70p., rus) 43-4491

Heat-insulating screen and thermal interaction of a pipeline with frozen ground. IAnitskiĭ, P.A., (1989, p.80-86, rus) 43-4504

Thermal regime of pipelines during simultaneous laying in frozen ground. Danielian, IU.S., et al, (1988, p.95-100, rus) 43-4506

Thermal interaction between communication corridors and frozen ground. Danielian, IU.S., et al, (1987, p.153-159, rus) 43-4507

Heating

Engine heaters: benefits and maintenance. (1988, p 66, eng) 43-1450

Foundation design on permafrost with heat pumps. Instanes, B., (1988, p.73-74, eng) 43-1727

Taming winter weather. (1988, p.24-28, eng) 43-1849

Heating of railway switches by CFF during snowstorms. Stalder, O., et al, (1988, p.33-35, fre) 43-1877

Ice buildup in tailing basins. Barr, D.W., (1989, p.202-214, eng) 43-2103

Rail pull-aparts: old problem, new solution. (1988, p.26, eng) 43-2406

Improving placer and ore mining technology. Kitzhner, F.M., ed, (1987, 106p., rus) 43-2779

Heating of frozen rocks during underground mining. Alekseev, A.F., et al, (1988, p.82-85, rus) 43-2784

Thermal storage for preventing road-surface freezing. Ikeda, M., et al, (1989, p.791-800, eng) 43-3147

Heating systems for large volume buildings. Klimovitskiĭ, M.S., et al, (1989, p.82-86, rus) 43-3861

International Symposium on Cold Regions Heat Transfer, 1989. (1989, 314p., eng) 43-4193

Performance of compression heat pump system. Tamura, I., et al, (1989, p.221-226, eng) 43-4216

Ground heat extraction and storage with a heat pump. Ochifuji, K., et al, (1989, p.227-231, eng) 43-4217

Heat-removal characteristics of concentric-tube thermosyphon and heat pump. Fukusako, S., et al, (1989, p 233-238, eng) 43-4218

Reykjavik, Iceland: a northern capital. Thorvaldsson, T.S., et al, (1988, p.191-204, eng) 43-4243

See also: Concrete heating; Electric heating; Pipeline heating; Radiant heating; Transition heating

Heaving

See also: Frost heave

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Height finding

Swath altimetry of oceans and terrain. Rapley, C.G., et al, (1987, p.319-322, eng) 43-1793

Ice and bedrock survey of New Schwabenland and Berkner I. Hoppe, H., et al, (1988, p.42-45, eng) 43-1942

New procedure for the graphic mapping of changes in elevation of the surface of a glacier. Kuz'michenok, V.A., (1988, p.103-109, rus) 43-2390

Navy applications of Geosat altimetry. Cummings, T.K., (1988, p.39-43, eng) 43-2664

JARE glaciological research, Queen Maud Land, 1986-1987. Nishio, F., et al, (1989, 59p., eng) 43-3071

See also: Cloud height indicators

Helicopters

Anti-icing/deicing capability for U.S. Army helicopters part 1. Werner, J.B., (1975, 253p., eng) 43-1789

Anti-icing/deicing capability for U.S. Army helicopters part 2. Werner, J.B., (1975, 220p., eng) 43-1790

Air cushion vehicles in Arctic offshore oil development. Dickins, D.F., (1989, p.261-277, eng) 43-2440

NASA's rotorcraft icing research program. Shaw, R.J., et al, (1988, p.802-832, eng) 43-3817

Generic icing effects on forward flight performance of a model helicopter rotor. Tinetti, A.F., et al, (1989, p.63-85, eng) 43-4343

Heterogeneous nucleation

Interaction of antinucleating chemical with ice nucleation bacterium. Watanabe, M., et al, (1988, p.1869-1871, eng) 43-1132

Ice nucleating bacteria and water nucleation temperature. Stewart, W.E., Jr., et al, (1988, p.147-149, eng) 43-3818

Nonmonotonic kinetics of heterogeneous nucleation of ice crystals in a supercooled fog. Gorbunov, B.Z., et al, (1989, p.1017-1022, eng) 43-4379

Freezing of supercooled water drops in ionized air. Dubrovich, N.A., (1988, p.851-855, eng) 43-4548

High pressure ice

New high-pressure phases of ice. Demontis, P., et al, (1988, p.2284-2287, eng) 43-21

Energies of the phases of ice at low temperature and pressure relative to ice Ih. Handa, Y.P., et al, (1988, p.919-924, eng) 43-437

Water ice phases II, III, and IV: plastic deformation and phase relationships. Durham, W.B., et al, (1988, p.10,191-10,208, eng) 43-506

High-pressure Raman spectroscopic study of the ice Ih-ice IX phase transition. Garg, A.K., (1988, p.467-480, eng) 43-2240

New transformations between crystalline and amorphous ice. Hemley, R.J., et al, (1989, p.638-640, eng) 43-2585
Transformation of ice VIII to amorphous ice Klug, D D., et al, (1989, p.2390-2392, eng) 43-2903
High pressure ice. Klein, M L., et al, (1989, p 441-454, eng) 43-3248
High pressure tests
Air instead of water used in sub-arctic line testing. Smith, J.D., et al, (1988, p.11-12, eng) 43-4531
Highway planning
Permafrost problems in road engineering. Huang, X.M., (1988, p.344-351, chi) 43-2880
Highways
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Himalaya Mountains
Analysis of the synoptic weather pattern associated with extensive avalanching in Western Himalaya. Rangachary, N., et al, (1987, p.311-316, eng) 43-1240
Geotechnical aspects of snow pack stability in the Himalayan region. Pathak, R.C., (1987, p.353-354, eng) 43-1244
Some aspects of snow cover development and avalanche formation in the Indian Himalaya. Mohan Rao, N., et al, (1987, p 453-462, eng) 43-1254
Discontinuities in a valley glacier transverse velocity profile. Kick, W., (1989, p.89-91, eng) 43-3340
Quaternary glaciation of Mt. Qomolangma-Xixabangma region. Zheng, B., (1988, p.525-543, eng) 43-4567
History
Antarctic ice sheet response to changes. Robin, G. de Q., (1988, p.31-50, eng) 43-1095
Synthesis of archaeological and palynological data from Alaska and Canada. Anderson, P.M., (1983, 578p., eng) 43-1815
Cold regions heat transfer. Cheng, K.C., et al, (1989, p.1-25, eng) 43-4194
Center of attraction—the North Pole. Arikaĭnen, A.I., (1988, 220p, rus) 43-4605
Hoarfrost
Model to predict the surface structures, local densities and Ludlam limit of rime accretions. McComber, P., et al, (1987, p.61-72, eng) 43-390
Numerical prediction of frost formation on cooled heat exchangers Sami, S.M., et al, (1988, p 81-94, eng) 43-1457
Accuracy of information for ice load estimation. Mytarev, M.N., (1988, p.150-158, rus) 43-1779
Mountain-top riming at sites in California and Nevada, U.S.A. Berg, N.H., (1988, p.429-447, eng) 43-2484
Experimental results on the tensile strength of atmospheric ice. Druez, J., et al, (1989, p.405-410, eng) 43-2651
Effect of voltage polarity on ice accretions on short string insulators. Farzaneh, M., et al, (1989, p.419-426, eng) 43-2653
Nucleation of frost on cold surfaces. Sahin, A.Z., (1989, 225p., eng) 43-2887
Development of an automatic weather station for cold regions. Strangeways, I.C., (1984, p.12-23, eng) 43-4311
Reducing dew and frost on the domes of net pyrradiometers. McGinn, S.M., et al, (1989, p.528-531, eng) 43-4405
See also: Depth hoar
Holography
Holographic study of frost damage. Rastogi, P.K., et al, (1988, p.142-143, eng) 43-2588
Use of holography for airborne cloud physics measurements. Brown, P.R.A., (1989, p.293-306, eng) 43-4401
Hot oil lines
Quasistationary model of thermal interaction between a pipeline and frozen ground. Bronfenbrener, L.E., et al, (1987, p.68-73, rus) 43-1019
Designing industrial pipelines for thawing ground Klement'ev, A.F., (1988, p.73-77, rus) 43-1020
Hot springs
New data on the mineral well of Sytygan-Sylba (Yakut ASSR). Cherepanova, A.P., (1988, p.90-97, rus) 43-531
Houses
Energy considerations in the design of northern housing. Larsson, N.K., (1985, 32p., eng) 43-1311
House in cold climates—current technologies. Dunets, A., et al, (1989, p.27-40, eng) 43-2086
Construction materials for low-storied housing in the North and Siberia. Khrulev, V.M., et al, (1989, 152p., rus) 43-3633
Review of Harbin's challenge to winter. Liu, D., (1988, p.113-129, eng) 43-4240
Architecture and urban design in Sweden. Eek, H., (1988, p.321-346, eng) 43-4251
Architecture of arctic regions: a selected bibliography. White, A.G., (1987, 7p., eng) 43-4387
Hovercraft
See also: Air cushion vehicles
Human factors
Establishing stations for monitoring environmental background in the Far North Krasovskaia, T.M., et al, (1987, p.285-291, eng) 43-132
Man-induced activation of exogenic processes in taiga. Evseeva, N.S., (1987, p.292-299, eng) 43-133
Natural and man-induced snow-ice phenomena in Spitsbergen. Il'ina, E.A., et al, (1987, p.157-161, rus) 43-250
Formation of gullies in the southeastern part of West Siberia. Putilin, A.F., (1988, 81p., rus) 43-714
Space-time distribution of atmospheric ice nucleating agents above Ukraine. Silaev, A.V., et al, (1988, p.142-153, rus) 43-1084
Pattern of pollutant transfer into the Arctic troposphere. Karimova, G.U., et al, (1988, p.168-181, rus) 43-1177
Environmental effects of Polish Polar Station at Svalbard, Krzyszowska, A., (1986, p.227-246, eng) 43-1207
Fragility of the plant cover in the Arctic. Eckardt, F.E., (1988, p.7-17, eng) 43-1445
Trail erosion variables in Alaska. Jubenville, A., et al, (1987, p.450-452, eng) 43-1478
Effects of geological exploration on the environment of Bol'shezemel'skaya Tundra. Brattsev, A.P., ed, (1988, 128p., rus) 43-1534
Development of geological surveys in the northern zone of the Timan-Pechora Province. Khudiaev, V.M., (1988, p.5-11, rus) 43-1535
Technological damage to tundra vegetation during exploratory drilling. Chalysheva, L.V., (1988, p.49-56, rus) 43-1539
Ergonomics and Arctic navigation. Ells, J., (1988, p.75-77, eng) 43-3281
Anthropogenic warming in North Alaska?. Michaels, P.J., et al, (1988, p.942-945, eng) 43-3469
Impact of atmospheric chemistry on climate. Crutzen, P.J., et al, (1989, p.249-266, eng) 43-3691
Human factors engineering
Human chronobiology in polar regions. Arendt, J., (1989, 9p., eng) 43-4022
Humidity
Observation of relative humidity jump during snow drifting. Sato, A., et al, (1988, p.397-403, jpn) 43-460
Kolmogorov Constants for temperature, humidity, and refractive index spectra. Andreas, E.L., (1988, p.2399-2406, eng) 43-1278
Modeling attic humidity as a function of weather, building construction, and ventilation rates. Gorman, T.M., (1988, 160p., eng) 43-1921
Summer field season weather observations, West Gulkana Glacier and environs: 1986, 1987. Brazel, A.J., et al, (1988, p.123-142, eng) 43-2799
Permafrost compressibility during thawing and construction problems Khrustalev, L.N., et al, (1987, p.221-227, rus) 43-3386
Spectra and cospectra of atmospheric turbulence over snow. Andreas, E.L., (1986, p.209-233, eng) 43-4636
Hummocks
Earth hummocks (thufur). Schunke, E., et al, (1988, p.231-245, eng) 43-329
Construction of an arctic barrier island by alternating sea-ice pileup and overwash. Barnes, P.W., et al, (1988, p.180-182, eng) 43-513
All around but ice. Kozlovskiĭ, A.M., (1988, 112p., rus) 43-1801
See also: Frost mounds; Pingos
Hydrates
Thermal cross section for the permafrost and hydrate stability zones in the Kuparuk and Prudhoe Bay oil fields. Lachenbruch, A.H., et al, (1988, p.48-51, eng) 43-511
Negative octahedral snowflakes or Tyndall figures in tetrahydrofuran clathrate hydrate. McLaurin, G.E., et al, (1988, p.711-712, eng) 43-1491
Searching for gas hydrate deposits in permafrost. Degtiarev, B.V., et al, (1988, p 110-115, rus) 43-1609
Methods of experimental determination of hydrate saturation of porous media. Degtiarev, B.V., (1988, p.145-149, rus) 43-1613
Methane hydrates and global climate. Kvenvolden, K.A., (1988, p.221-229, eng) 43-1672
Methane hydrate—a major reservoir of carbon in the shallow geosphere?. Kvenvolden, K.A., (1988, p.41-51, eng) 43-2320
Ice captures methane in bubbles of ancient air Gribbin, J., (1989, p.38, eng) 43-3285
Hydraulic fill
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Hydraulic jets
Various applications of hydraulic jets (Bertin & Cie). Cayla, J., (1988, p.67-91, eng) 43-1751
Disintegration of frozen granular materials using high pressure water jets. Skudrzyk, F.J., et al, (1989, p.320-334, eng) 43-2113
Hydraulic well drilling of frozen rocks. IAkovlev, A.V., et al, (1987, p.38-40, rus) 43-2268
Drill-anchor for iceberg towing. Kolle, J.J., (1989, p.469-476, eng) 43-2659
Open water in lake ice due to submerged power plant outlet. Tesaker, E., et al, (1988, p.72-80, eng) 43-2981
Ice flow and blockage investigation of shrouded propellers. Laskow, V., (1988, var.p., eng) 43-3204
Evaluation of a water jet barrier in ice conditions. Laperriere, F., (1988, p.157-159, eng) 43-3650
Hydraulic structures
Data acquisition for refrigerated physical model. Zufelt, J.E., (1987, p 338-341, eng) 43-8
Environmental impact of hydroelectric power plants in the Far North. Vozin, V.F., ed, (1987, 103p., rus) 43-42
Consequences of ice jamming in the lower pool of the Vilyuy hydroelectric power plant, the possibility of their forecasting and control. Kil'mianinov, V.V., et al, (1987, p.22-28, rus) 43-44
Regionalization of the Vilyuy reservoir, types and classification of its shores. Burlakov, V.M., (1987, p.34-42, rus) 43-45
Changes in natural conditions in the hydraulic power system environment in the Far North. Olovin, B.A., et al, (1987, p.42-57, rus) 43-46
Influence of the Vilyuy electric power plant on its environment. Ignat'ev, N.L., et al, (198[illegible] p.76-78, rus) 43-49
Changes in the regime of the Yenisey and Angara rivers due to flow regulation. Odrova, T.V., (1987, p.84-95, rus) 43-51
Ice problems at hydropower installations and hydraulic structures. Majewski, W., (1986, p.3-24, eng) 43-259
Calculation of dynamical load of single drifting ice on pier and other hydraulic structures. Shu, J., (1987, p 65-72, chi) 43-487
Formation of thermal and moisture regime of macroporous media in regions with severe climatic conditions. Mukhetdinov, N.A., (1988, p.87, rus) 43-554
Impact of ice floes against hydrotechnical structures. Andreev, R.L., et al, (1987, 3p., eng) 43-608
Technology development for future polar petroleum activity. Sackinger, W.M., (1988, p.43-53, eng) 43-611
Ice loads and impacts on the semi-submersible Aker D-6. Kulsvehagen, T., (1988, p.159-177, eng) 43-619
Impact of ice bergy bits on a concrete semisubmersible. Putot, C., et al, (1988, p.191-207, eng) 43-621
Temporary moorings built of ice. Gosman, V., et al, (1987, p.44, rus) 43-700
Subsea wellhead system for an Arctic caisson rig, Beaufort Sea. Fardy, K.J., et al, (1988, p.403-408, eng) 43-713
Studying changes in geological media due to building large hydraulic structures. Varga, A.A., et al, (1988, p.139-152, rus) 43-739
Field studies of the solidity of tall concrete structures. Durcheva, V.N., (1988, 120p., rus) 43-740
Technical operation of sea port structures. Kostiukov, V.D., ed, (1987, 128p., rus) 43-756
Analyzing the process of icing of marine hydraulic structures. Demin, IU.A., et al, (1987, p.88-94, rus) 43-758
Methods of preparing laboratory ice with specified physical properties. Petrov, I.G., et al, (1988, p.77-94, rus) 43-807
Repairs and protection of piles in hydraulic structures. Nikitin, P.P., (1988, p.55-56, rus) 43-896
Chemical soil stabilization and the environment. Sokolovich, V.E., (1988, p 233-236, eng) 43-1085
Strength of thawed and frozen dam soils under stress. Vasil'ev, I.M., et al, (1988, p.27-33, eng) 43-1087
Calculating winter temperature conditions in a pile of loam. Kuznetsov, G.I., et al, (1987, p.36-44, rus) 43-1182
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Measuring piezometric level in severe climatic conditions. Vishnevskaia, L.M., (1987, p.48-51, rus) 43-1392
Stresses in hydraulic structures, Sayan-Shushenskaya hydroelectric power plant. Baryshkov, N.K., et al, (1987, p.71-74, rus) 43-1396
Ice loads on hydraulic structures in the Volga River. Semenov, IU.A., (1988, p.165-171, rus) 43-1780
Preliminary study of scour under an ice jam. Wuebben, J.L., (1988, p.177-192, eng) 43-2171
Simple model for collision of floating bodies. Nawwar, A.M., et al, (1989, p.309-314, eng) 43-2640
Impact of icebergs with a semi-submersible platform. Lever, J.H., et al, (1989, p.393-403, eng) 43-2650
Some meteorological service problems in the exploitation of the northern seas. Dement'ev, A.A., (1989, p.80-87, eng) 43-3232
Deterioration of concrete exposed to freezing and thawing. Cordon, W.A., (1988, p.375-415, eng) 43-3367
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Controlling wear on hydraulic installations. Bezinge, A., (1988, p.303-328, fre) 43-4443
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Hydraulics
Depth-discharge relationships for ice-covered rivers. Santeford, H.S., et al, (1987, p.144-153, eng) 43-397
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Workshop on Hydraulics of River Ice/Ice Jams. 5th, 1988 (1988, 445p., eng) 43-2162

Hydraulics *(cont.)*

Ice control with thermal/bubbler plumes: line source configuration. Baddour, R.E., (1988, p 435-445, eng) 43-2184

Hydraulic conditions in open channels with ice cover. Majewski, W., et al, (1988, p.112-121, eng) 43-2985

Hydraulics of ice jam development. Mayer, I., et al, (1988, p.304-315, eng) 43-3003

Mathematical model for river ice processes. Shen, H.T., et al, (1988, p 356-366, eng) 43-3008

Natural convective heat transfer of cold water. Ho, C.J., et al, (1988, p 894-900, eng) 43-3087

Hydrocarbons

Hydrocarbons in permafrost ice, Marsh Creek area, Alaska. Cunningham, K.I., et al, (1988, 18p. + tables, eng) 43-678

Bering Sea Monitoring Program. Houghton, J.P., et al, (1987, var.p., eng) 43-754

Aliphatic and polycylic aromatic hydrocarbons in urban rain, snow and fog. Leuenberger, C., et al, (1988, p 695-705, eng) 43-1071

Exploration status and future perspectives in the Barents Sea. Johansen, B., (1987, 7p. + maps + charts, eng) 43-1100

Hydrocarbon generation in strata of perennially frozen rock. Mel'nikov, P.I., et al, (1989, p.118-128, rus) 43-2445

Aliphatic hydrocarbons and isomers of hexachlorocyclohexane in water, ice and snow. Dmitriev, F.A., et al, (1988, p.566-568, eng) 43-3944

Yield stress of frozen hydrocarbon fuels. Neihof, R.A., (1989, p 843-848, eng) 43-4558

Hydrodynamics

Controlled river ice cover breakup; part 2. Theory and numerical model studies. Ferrick, M.G., et al, (1986, p.293-305, eng) 43-275

Turbulent effects on river ice cover melting. Sarraf, S., (1988, p.178-189, eng) 43-1327

Iceberg collision reliability model. Isaacson, M., et al, (1989, p.293-299, eng) 43-2639

Mathematical modeling of ocean circulation. Marchuk, G.I., et al, (1988, 302p., rus) 43-2837

Hydrodynamic modeling of ice drift in Far Eastern seas. Pokrashenko, S.A., (1988, p.49-53, rus) 43-3635

Wave interaction between two floating bodies. Björkenstam, U., et al, (1989, p.627-637, eng) 43-3763

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Soliton dynamics of hydrogen-bonded networks. Pnevmatikos, S., (1988, p.1534-1537, eng) 43-1489

One-dimensional ice made clear. Maddox, J., (1988, p.677, eng) 43-1490

MNDO study of linear-chain ice crystal. Choe, M.S., et al, (1988, p.7379-7384, eng) 43-2026

Of restless bondage. Dore, J., (1988, p 25-28, eng) 43-2586

Hydrogeochemistry

Water-quality investigations in Juneau, Alaska. Motyka, R.J., (1988, 20p., eng) 43-1688

Hydrogeochemistry of surface waters in Kunlun Mountains. Sheng, W.K., (1989, p.119-122, eng) 43-3450

Water quality of lakes and rivers in Tibet. Fushimi, H., et al, (1989, p.129-137, eng) 43-3452

Hydrogeology

Ground water flow in tundra rivers and water supply. Vetoshkina, N.N., (1988, p 87-98, rus) 43-1543

Water level calculation for northeast European rivers. Kokovkin, A.V., (1988, p.99-112, rus) 43-1544

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Hydrogeology of oil and gas bearing layers of the Siberian platform. Antsiferov, A.S., (1989, 176p., rus) 43-3069

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Region 28, permafrost region. Sloan, C.E., et al, (1988, p.263-270, eng) 43-4294

Glacial deposits. Stephenson, D.A., et al, (1988, p.301-314, eng) 43-4295

Facies models to delineate spatial trends in glacial sediments. Anderson, M.P., (1989, p.501-511, eng) 43-4619

Hydrography

Southern ocean—the Antarctic: present and past. (1988, p.1-179, eng) 43-1093

Notes on southern ocean hydrography, sea-ice and bottom water formation Foldvik, A., et al, (1988, p.3-17, eng) 43-1094

Using mathematical models for analysis of flooding-data reliability. Kochelaba, E.I., et al, (1988, p.13-21, rus) 43-1769

Hydrogeologic classification of wetlands in glaciated regions. Hollands, G.G., (1987, p.26-30, eng) 43-2237

Hydrology of Arctic wetlands. Robertson, S.B., (1988, p.262-269, eng) 43-2238

Physical oceanography. Johnson, W.R., (1988, p.29-38, eng) 43-2428

Fluctuations in water levels and the hydrographic system of a glacier. Sokolov, D.P., (1988, p.111-117, rus) 43-2687

Effect of placer gold mines on streams in Alaska. Van Maanen, J.L., et al, (1988, 105p., eng) 43-3216

Stream types and floods in the Kunlun Mountains. Ai, S.T., (1989, p.123-127, eng) 43-3451

Physical oceanography instrumentation for the polar regions: a review. Morison, J.H., (1989, p.173-185, eng) 43-3513

Hydrograph recession limbs—a case of hydrologic *deja vu*. Van Haveren, B.P., (1988, p.148-154, eng) 43-4006

Hydrology

Ecohydrological approach to floral and vegetational patterns in Arctic landscape ecology. Molenaar, J.G. de, (1987, p.414-424, eng) 43-190

Winter data resources of the Swedish Meteorological and Hydrological Institute. Lindkvist, T., (1985, p.30-34, swe) 43-357

Snow surveys. George, T.A., (1987, p.209-210, eng) 43-404

Annual runoff on the northern slope of Qilian Mountain. Lai, Z., (1988, p.47-56, chi) 43-467

Stormflow and forest treatment. Hibbert, A.R., et al, (1987, p.189-194, eng) 43-582

Hydrologic reconnaissance of the Chilkat River basin, southeast Alaska. Bugliosi, E.F., (1988, 28p., eng) 43-776

Thermophysics of stratified fresh-saline antarctic lakes. Krass, M.S., (1988, p.76-89, rus) 43-796

Ground water flow in tundra rivers and water supply. Vetoshkina, N.N., (1988, p 87-98, rus) 43-1543

Flood climates. Hayden, B.P., (1988, p.13-26, eng) 43-1547

Flood hydroclimatology. Hirschboeck, K.K., (1988, p.27-49, eng) 43-1548

Spring-runoff features according to meteorological data. Manukalo, V.A., et al, (1988, p.30-36, rus) 43-1771

Highest water levels in Dniester River and its tributaries. Vishnevskiĭ, P.F., (1988, p.36-48, rus) 43-1772

Statistical structure of frost in the Aral Sea area. Palagina, L.L., (1988, p.35-38, rus) 43-1782

Water temperature in the polar zone of the Greenland Sea. Blinov, N.I., et al, (1986, p.68-81, rus) 43-1885

Hydrology: an introduction for wetland managers. Kusler, J., (1988, p.4-24, eng) 43-2236

Hydrology of Arctic wetlands. Robertson, S.B., (1988, p.262-269, eng) 43-2238

Hydrology of Arctic wetlands. Robertson, S.B., (1988, p.262-269, eng) 43-2238

Problems of swamp hydrology. Novikov, S.M., ed, (1988, 152p., rus) 43-2461

Hydrological regime of the Krasnoyarsk and Sayan-Shushenskoye reservoirs. Kosmakov, I.V., et al, (1988, p.5-22, rus) 43-2808

Review of the study on frozen ground for water conservancy engineering. Xu, S.X., (1988, p 342-343, chi) 43-2879

Hydrological cycle as simulated by an atmospheric general circulation model. Mitchell, J.F.B., (1983, p.429-446, eng) 43-3039

Rock glacier stream discharge in Canadian Rockies. Gardner, J.S., et al, (1987, p.161-174, eng) 43-3053

Central Andes rock glaciers: applied aspects. Corte, A.E., (1987, p.289-303, eng) 43-3058

Cryohydrogeological massifs with shallow, discontinuous freezing. Romanovskiĭ, V.E., et al, (1987, p.109-117, rus) 43-3375

Hydrological yearbook 1981-1983. Leppäjärvi, R., ed, (1987, 238p., eng) 43-3492

Compilation of deuterium data at Schirmacher Hills. Kowski, P., et al, (1988, p.55-97, eng) 43-4516

See also: Glacial hydrology; Permafrost hydrology; Snow hydrology; Surface waters

Hydrolysis

Ice surface hydrolysis of diisopropylfluorophosphate (DFP). Leggett, D.C., (1987, p 809-815, eng) 43-1876

Hydrometeors

See also: Precipitation (meteorology)

Hydrothermal processes

Influence of northern reservoirs on natural environments. Shirokov, V.M., (1987, p.3-8, rus) 43-43

Problems of mapping naled phenomena. Alekseev, V.R., (1987, p.140-142, rus) 43-246

Microstructure of frozen rocks. Ershov, E.D., et al, (1988, 182p., rus) 43-285

Breakdown of potassium feldspars during cryolithogenesis. Poklonnyĭ, S.A., (1988, p.108-114, rus) 43-534

Water erosion of frozen fines. Akovlev, A.V., (1988, p.131-135, rus) 43-537

Present state of the Ponneurgen dam. Bilanov, G.F., et al, (1988, p 36-40, rus) 43-561

Regularities governing the formation of composition and properties of loess in southern East Siberia and northern Mongolia. Riashchenko, T.G., (1988, p.98-106, rus) 43-596

Study of moisture migration in frozen ground. Anitskiĭ, P.A., (1988, p.53-58, rus) 43-600

Physical, chemical and mechanical bases of cryolithogenesis. Ershov, E.D., (1987, p.54-66, rus) 43-687

General mathematical model of a quasi-stationary ice cover. Potapenko, V.IU., et al, (1989, p.21-27, eng) 43-2043

Open water in lake ice due to submerged power plant outlet. Tesaker, E., et al, (1988, p.72-80, eng) 43-2981

Hygrometers

See also: Moisture meters

Hygroscopic water

Scanning calorimetry of freezing and nonfreezing water in hydrated proteins. Liu, Y., et al, (1988, p.1093-1096, eng) 43-1196

Hypothermia

See also: Cold exposure

Ice

Ice storage cooling system at Fort Stewart, GA. Sohn, C.W., et al, (1988, 53p., eng) 43-1313

Greenpeace book of Antarctica. May, J., (1988, 192p., eng) 43-1480

Ice-motion determination by means of satellite positioning systems. Hinze, H., et al, (1988, p.36-41, eng) 43-1941

Interaction of the wheel of pneumatic vehicles with changing environments. Surkov, P.M., (1988, p.114-116, rus) 43-2343

Particularities of ship propulsion in broken ice. Derevianchenko, M.T., et al, (1984, 7p., eng) 43-2693

New classification of snow and ice on roads. Maeno, N., et al, (1988, p.304-313, eng) 43-2931

To the Arctic: an introduction to the far northern world. Young, S.B., (1989, 354p., eng) 43-3080

Current research in the geological sciences in Canada, May 1987-April 1988. Bolton, T.E., comp, (1988, 101p. (pertinent p.26-39), eng) 43-3528

See also: Artificial ice; Bottom ice; Capillary ice; Colored ice; Cubic ice; Dendritic ice; Deuterium oxide ice; Doped ice; Dry ice (trademark); Extraterrestrial ice; Fast ice; Floating ice; Fossil ice; Frazil ice; Glacier ice; Glaciology; Glaze; Ground ice; Grounded ice; High pressure ice; Interstitial ice; Lake ice; Land ice; Naleds; Pack ice; River ice; Salt ice; Sea ice; Snow ice; Spongy ice; Superheated ice; Underwater ice; Vitreous ice; Young ice

Ice accretion

Selecting methods of counteracting the icing of lighters. Alkashev, F.I., et al, (1987, p 64-68, rus) 43-34

Glaciation of caves in the Ural Mountains. Mavliudov, B.R., (1987, p.123-129, rus) 43-242

Determining the intensity of ice accretion from brines when using spray-cones. Sosnovskiĭ, A.V., (1987, p.149-154, rus) 43-248

Model to predict the surface structures, local densities and Ludlam limit of rime accretions. McComber, P., et al, (1987, p.61-72, eng) 43-390

Environmental conditions in the Barents Sea in regard to icing. Løset, S., et al, (1988, p.393-407, eng) 43-635

Ice accretion on drilling platforms off the east coast of Canada. Brown, R.D., et al, (1988, p 409-421, eng) 43-636

Ice accretion in the Barents Sea—instrumentation of the "Ross Rig". Borthwick, I., et al, (1988, p.423-434, eng) 43-637

Arctic and offshore research. (1988, 44p., eng) 43-763

Oxygen isotope evidence of freshwater pools and ice accretion below multiyear landfast sea ice, northern Ellesmere Island. Jeffries, M.O., (1987, p.405-412, eng) 43-917

Atmospheric and sea spray icing. Andersson, A., (1987, 6p., eng) 43-1115

Airfoil icing measurement using ultrasonic transducers. Hansman, R.J., Jr., et al, (1988, p 531-537, eng) 43-1123

Navier-Stokes solution to the flowfield over ice accretion shapes. Scott, J.N., et al, (1988, p.710-716, eng) 43-1124

Effects of simulated glaze ice on NACA 6012 airfoil. Bragg, M.B., (1988, p 849-854, eng) 43-1318

Atmospheric icing and broadcast antenna reflections. Ryerson, C.C., (1988, 13p., eng) 43-1400

Example of the behavior of an aircraft with accumulated ice: latent instability. Telford, J.W., (1988, p.1093-1108, eng) 43-1420

Mass balance of Ice Stream B, West Antarctica. Whillans, I.M., et al, (1988, p.187-193, eng) 43-1965

Local heat-transfer characteristics of glaze-ice accretions on an NACA 0012 airfoil. Pais, M.R., et al, (1988, p.1136-1141, eng) 43-2028

Mapping icing rates on sea-going ships. Zakrzewski, W.P., et al, (1988, p.661-675, eng) 43-2122

Droplet accretion, rime growth, and secondary ice crystal formation. Dong, Y Y., et al, (1989, p.127-142, eng) 43-2159

Ice buildup in underground explorations with the aid of pneumatic drills. Kuz'min, G.P., et al, (1987, p 60-66, rus) 43-2292

Assessing the durability of concrete in freezing and thawing. Detwiler, R.J., et al, (1989, p.29-35, eng) 43-2334

Level, ice and thermal regime of Voronezh Reservoir Bolotov, G.I., (1987, p.94-113, rus) 43-2436

Ice accretions on the shore of Lake Baykal in spring. Moskalets, V.F., (1987, p.150-155, rus) 43-2437

Ice accretion on a cylinder bathed in cold air and seawater spray Fukusako, S., et al, (1989, p 81-90, eng) 43-2488

Effect of voltage polarity on ice accretions on short string insulators. Farzaneh, M., et al, (1989, p.419-426, eng) 43-2653

Cable rime accretion measurements on a Laurentian Mountain. McComber, P., et al, (1989, p.427-434, eng) 43-2654

Ice rubble consolidation Timco, G W., et al, (1988, p 427-438, eng) 43-2942

Numerical model of ice accretion on structures. Svensson, U., et al, (1988, p.436-445, eng) 43-3015

Power line icing in mountains. Druez, J., et al, (1988, p 477-485, eng) 43-3018

Modeling of atmospheric icing on small scale. Anno, Y., (1988, p.498-503, eng) 43-3020

Physical and chemical processes in soils during freezing and thawing. Ershov, E.D., et al, (1989, p 415-424, eng) 43-3117

Peculiarities of a snow-firn sequence and variations of the marginal parts of the Filchner-Ronne Ice Shelf. Diurgerov, M.B., et al, (1988, p.103-108, rus) 43-3310

Icing technology bibliography. (1987, 149p, eng) 43-3411

Atmospheric icing of transmission lines. Henry, K., (1987, 15p, eng) 43-3640

Study of the initial stage of the accretion of ice. Nasello, O.B., et al, (1980, p.365-372, eng) 43-3954

Hyperfine bubble structures in ice grown by droplet accretion. Prodi, F., et al, (1980, p.373-384, eng) 43-3955

Soviet marine icing data. Zakrzewski, W.P., et al, (1989, 125p, eng) 43-4034

De-icing heat-transfer characteristics Fukusako, S., et al, (1989, p.123-128, eng) 43-4209

Observations on the formation of spongy ice from fresh water. Lock, G.S.H., et al, (1989, p.129-133, eng) 43-4210

Generic icing effects on forward flight performance of a model helicopter rotor. Tinetti, A.F., et al, (1989, p.63-85, eng) 43-4343

See also: Ice growth; Icing rate

Ice acoustics

Navy Arctic research. Curtain, T.B., (1988, p.15-19, eng) 43-220

SPRI participation in the winter Marginal Ice Zone Experiment, MIZEX-87. Rottier, P., (1989, p.33-36, eng) 43-2218

Study of noise characteristics of antarctic ice sheets in radiowave decimeter range. Bogorodskiĭ, V.V., et al, (1988, p.92-99, rus) 43-2228

Acoustic emission from the Arctic ice sheet. Langley, A.J., (1989, p 692-701, eng) 43-2401

Low-frequency transmission loss in the Arctic SOFAR channel for shallow sources and receivers. Yang, T.C., (1989, p.1139-1147, eng) 43-2838

Impact sound source useful for Arctic remote sensing. De Heering, P., (1989, p.166-172, eng) 43-3512

Acoustic scattering from the arctic ice canopy. McDaniel, S.T., (1989, p.2378-2382, eng) 43-4374

Bistatic, high-frequency, under-ice, acoustic scattering model Pt.I: theory; Pt.II: applications. Bishop, G.C., (1989, p.1903-1924, eng) 43-4377

Ice adhesion

Adhesion strength of piles in saline ice. Inoue, M., et al, (1986, p.89-104, eng) 43-263

Adhesiveness of ice on polymer materials. Andersson, A., (1987, 16p, eng) 43-1113

Adhesiveness of ice on rubber materials. Andersson, L.O., (1988, p.271-280, eng) 43-2928

Adfreeze strength of sea ice to steel pipe piles. Ohtsuki, F., et al, (1988, p 281-293, eng) 43-2929

Icing technology bibliography. (1987, 149p, eng) 43-3411

Study of ice adhesion and sintering. Shen, W., et al, (1989, p.373-382, eng) 43-3582

Adhesion of ice to polymer materials. Andersson, L.O., (1989, p.786-795, eng) 43-3777

Development of an automatic weather station for cold regions. Strangeways, I.C., (1984, p.12-23, eng) 43-4311

Generic icing effects on forward flight performance of a model helicopter rotor Tinetti, A.F., et al, (1989, p.63-85, eng) 43-4343

Ice age

See also: Pleistocene

Ice age theory

New results in oxygen isotope studies of the Vostok Station ice core. Kotliakov, V.M., et al, (1987, p.83-85, rus) 43-232

Interactions between ice sheets and climate in the Northern Hemisphere. Neeman, B.U., et al, (1988, p.11,175-11,191, eng) 43-724

Antarctic-type ice sheets in the Northern Hemisphere. Grosval'd, M.G., (1988, p.3-25, rus) 43-3299

Antarctic-style ice sheet in the Northern Hemisphere Grosval'd, M.G., (1988, p.239-267, eng) 43-4069

Sheet glaciation of the arctic shelf and plains in northern Eurasia. Danilov, I.D., (1987, p.80-88, rus) 43-4234

Ice air interface

Studying certain characteristics of the surface layer of air above glaciers. Arapov, P.P., et al, (1987, p.137-139, rus) 43-245

Salts in pond waters of the Labyrinth; lithium and boron contents. Takamatsu, N., et al, (1988, p.103-112, eng) 43-839

Coupled air-ice-ocean models. Hibler, W.D., III, (1987, p.131-137, eng) 43-850

Air/ocean/ice models: working group report. Tipper, R.C., et al, (1987, p.139-142, eng) 43-851

Physical oceanography and tracer chemistry of the southern ocean. (1988, 128p, eng) 43-1173

Ice, snow and vegetation in climatic response to external changes. Harvey, L.D.D., (1988, p.191-224, eng) 43-1481

Meridional heat transport by the ice and ocean in the western Arctic. Pease, C.H., (1988, p.16-19, eng) 43-1493

Estimating turbulent surface heat fluxes over polar, marine surfaces. Andreas, E.L., (1988, p.65-68, eng) 43-1495

Model of the atmospheric boundary layer over sea ice during winter Overland, J.E., (1988, p.69-72, eng) 43-1496

Looking at the Earth from space Geller, M.A., (1988, p.95-102, eng) 43-1502

Radio scattering of antarctic ice sheet Uratsuka, S., et al, (1988, p.157-160, eng) 43-1506

Sea ice remote sensing of the Canadian East Coast McNutt, L., et al, (1988, p.421-422, eng) 43-1519

Wandering Gondwanaland's impact on summer temperatures Ledley, T.S., (1988, p.1397-1400, eng) 43-2033

Coupled energy balance climate-sea ice model Ledley, T.S., (1988, p.15,919-15,932, eng) 43-2490

Numerical model of the atmospheric boundary layer over a marginal ice zone Kantha, L.H., et al, (1989, p.4959-4970, eng) 43-2723

Ice forces on the Nanisivik wharf Frederking, R., et al, (1988, p.463-472, eng) 43-2945

Study on ice static pressure on ice cover in reservoir. Sui, X.Z., (1988, p.483-492, eng) 43-2947

Power line icing in mountains. Druez, J., et al, (1988, p.477-485, eng) 43-3018

Modeling of atmospheric icing on small scale. Anno, Y., (1988, p.498-503, eng) 43-3020

Extinction and scattering of radiation by ice cylinders. Petrushin, A.G., (1987, p.1004-1008, eng) 43-3198

Ice captures methane in bubbles of ancient air Gribbin, J., (1989, p.38, eng) 43-3285

Interactions between Arctic weather conditions and sea ice Maslanik, J.A., et al, (1989, p.113-117, eng) 43-3344

Atmosphere subgroup discussions Andreas, E.L., (1984, p.97-98, eng) 43-3360

Simple approach to air and water drag on sea ice. Myrhaug, D., (1989, p 466-476, eng) 43-3410

Summer meteorological conditions in Kunlun Mountains. Ohata, T., et al, (1989, p.67-76, eng) 43-3443

Summer weather and climate in Kunlun Mountains. Kang, X.C., et al, (1989, p 77-81, eng) 43-3444

Glacier radiation balance in Kunlun Mountains. Xie, Y.Q., et al, (1989, p.83-87, eng) 43-3445

Glacier heat and water fluxes in Kunlun Mountains. Takahashi, S., et al, (1989, p.89-98, eng) 43-3446

Local circulation in glacier area of Kunlun Mountains. Kang, X.C., et al, (1989, p.99-104, eng) 43-3447

Aerosol transport from sources to ice sheets. Shaw, G.E., (1989, p.13-27, eng) 43-3678

Mechanisms of deposition of atmospheric contaminants to snow. Davidson, C.I., (1989, p.29-51, eng) 43-3679

Transformation of snow to ice and the occlusion of gases Schwander, J., (1989, p.53-67, eng) 43-3680

Environmental records in alpine glaciers. Wagenbach, D., (1989, p 69-83, eng) 43-3681

Studies of sea ice forcing during MIZEX'87. Sandven, S., et al, (1989, p.1073-1083, eng) 43-3804

Thermo-physical studies of the cryolithozone of Siberia Pavlov, A.V., ed, (1983, 213p, rus) 43-3862

Observations of ice particles in clear air. Barnes, A.A., Jr., (1980, p.311-315, eng) 43-3950

Subtropical Tibetan ice sheet. Grosval'd, M.G., et al, (1988, p.95-106, rus) 43-4229

Problems of the Arctic and the Antarctic: collection of articles. Krutskikh, B.A., ed, (1989, 152p., eng) 43-4367

Heat and moisture exchange of antarctic fast ice with the atmosphere in Alasheev Bight Nazintsev, IU L., (1989, p.54-62, eng) 43-4370

Ice bearing capacity

See also. Ice cover strength

Ice blasting

Using ice to blast off crud. Oguchi, T., (1989, p.49-50, eng) 43-2487

Blasting and blast effects in cold regions. Part 3: explosions in ground materials. Mellor, M., (1989, 62p, eng) 43-3651

Ice booms

Imjin River ice boom. Perham, R.E., (1988, 10p, eng) 43-1398

Structural design of new type three legged ice barrier. Nishizawa, S., et al, (1988, p.591-600, eng) 43-2957

Model studies on ice control structure. Decsi, E., et al, (1988, p.53-58, eng) 43-2979

Modeling ice restraint forces in an ice boom. Perham, R.E., (1988, p.198-206, eng) 43-3033

Ice bottom surface

Peculiarities of sea ice desalination in winter. Grishchenko, V.D., (1988, p 55-64, rus) 43-804

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Ice feature maps of the Arctic Ocean. LeSchack, L.A., (1987, p.373-383, eng) 43-915

Oxygen isotope evidence of freshwater pools and ice accretion below multiyear landfast sea ice, northern Ellesmere Island. Jeffries, M.O., (1987, p.405-412, eng) 43-917

Periodicities and keel spacings of the ice bottom surface. Key, J.R., et al, (1989, p 1-10, eng) 43-1574

ROV dives under Great Lakes ice. Bolsenga, S.J., et al, (1989, p.89-93, eng) 43-1582

Mesoscale interaction of ocean and atmosphere in the Greenland Sea. Bogorodskiĭ, P.V., et al, (1987, p.54-58, eng) 43-2021

Flow developers for melting ice—experimental results. Ashton, G.D., (1989, p.151-160, eng) 43-2098

Bedrock topography beneath Greenland ice sheet Fisher, E., et al, (1989, p.2874-2882, eng) 43-2394

Measuring ice motion—from below Belliveau, D.J., et al, (1989, p.10-14, eng) 43-2571

Under-ice thickness distribution of the Arctic Basin as recorded in 1958 and 1970. McLaren, A.S., (1989, p.4971-4983, eng) 43-2724

Determination of roughness coefficient of the underside of ice cover. Majewski, W., et al, (1988, p.122-130, eng) 43-2986

River bed variation in sections susceptible to ice jamming. Ren, Z.W., (1988, p.326-335, eng) 43-3005

Ice thickness and subglacial topography of the Tuyuksu Glacier. Bobrova, L.I., et al, (1988, p.73-76, rus) 43-3258

Underside scarring of floating ice shelves. Musil, G.J., (1989, p.118-123, eng) 43-3345

Relations between top and bottom ice topography. Johnsen, A.S., (1989, p.77-86, eng) 43-3714

Acoustic scattering from the arctic ice canopy. McDaniel, S.T., (1989, p.2378-2382, eng) 43-4374

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Ice breaking

Economic calculations and icebreaker services. Arikainen, A., (1988, p.19-20, rus) 43-136

Problems and tendencies in studies of ice propulsion of ships. Kashtelian, V.I., et al, (1988, 17p, eng) 43-410

Ice navigation. (1988, p.22-25, eng) 43-415

Segmented model technology for ice resistance determination. Godon, A.M., et al, (1988, p.113-124, eng) 43-616

Ice strength indexer. Baker, D.N., et al, (1987, 35p. + appends., eng) 43-683

Mechanics of destruction and some problems of ice destruction. Gol'dshtein, R.V., et al, (1987, 41p. + appends., eng) 43-719

On modelling of ship motion in level ice. Zuev, V.A., et al, (1987, 6p. + appends., eng) 43-720

R-class icebreaker testing requirements. Glen, I.F., (1988, 29p. + appends, eng) 43-775

New modelling ice. Beliakov, V.B., (1986, 8p., eng) 43-1193

Wave propagation in a solid ice pack Lin, A.K., et al, (1988, p.1702-1712, eng) 43-1482

Cutting the polar ice. Kelly, D.F., (1986, p.26-29, eng) 43-1503

Fracturing of an ice sheet by ship-induced, ice-coupled waves. Yuen, C., et al, (1989, p.75-82, eng) 43-1580

Ice-rubble accumulation beneath barges in ice-covered waters. Ettema, R., et al, (1988, p.397-412, eng) 43-1674

Ice removal from port Chicoutimi. Desgagnés, G., (1988, p.93-102, fre) 43-1752

Commercial ice-breaking with a 7-tonne hovercraft. Jones, D., (1988, p.103-113, eng) 43-1753

Modelling the resistance of ice to ship motion. Gramusov, E.M., (1984, 8p., eng) 43-1836

Ice breaking *(cont.)*
Formulae on level ice resistance to motion of a river icebreaker Zuev, V A , et al, (1978, 7p , eng) 43-1837
Strengthenings of ships for navigation in ice. (1986, c52p., eng) 43-1838
Model simulation of ramming tests conducted with the USCGC *Polar Star.* Comfort, G., (1988, 146p. + appends , eng) 43-1879
Effect of parallel midbody on the resist. ce of ships in level ice. Baker, D.N., et al, (1988, 13p. + appends , eng) 43-1925
Model tests of the Louis S. St Laurent original bow fitted with strakes. Carter, D., (1988, 13p. + appends., eng) 43-1974
Dynamics of the ice-crushing process Jordaan, I.J., et al, (1988, p.318-326, eng) 43-1988
Effects of icebreakers' forms on ice breaking capability. Ionov, B.P , (1988, 12p , eng) 43-2142
Design of cargo ships used in ice-infested waters. Popov, IU.N., (1988, 14p , eng) 43-2143
Second Icebreaking Technology Expedition with R V *Polarstern.* Final report, Vol.1. Schwarz, J., et al, (1987, 354 leaves, ger) 43-2430
Experimental study on properties of multi-layer sea ice of Bohai Sea. Li, H.S., et al, (1989, p.43-46, eng) 43-2608
Peak pressures from a damage model for ice in compression McKenna, R F , et al, (1989, p 67-73, eng) 43-2611
Dynamic ride up and crushing of short ice ridges on conical structures. Nordgren, R P , et al, (1989, p.287-291, eng) 43-2638
Calculation of ice sheet stress-strain state by numerical method. Kozin, V.M., et al, (1989, p.315-318, eng) 43-2641
Review of ship performance in level ice. Jones, S J., (1989, p.325-342, eng) 43-2643
Experimental study of the icebreaking cycle in 2-D. Valanto, P., (1989, p 343-349, eng) 43-2644
Ice thickness in McMurdo Sound Leventer, A , et al, (1987, p.94-96, eng) 43-2752
Modeling of ice class shafting and propeller systems. Final report. Cowper, D.N.B , et al, (1988, 38p., eng) 43-2801
Failure mechanisms for laboratory, first-year and multi-year ice. Blanchet, D., et al, (1989, p.77-124, eng) 43-2815
Ice forces on fixed and floating conical structures. Wessels, E , et al, (1989, p.231-257, eng) 43-2820
Laboratory study on ice formation in navigation channels Ettema, R., et al, (1988, p.1-11, eng) 43-2974
Development of a river ice-prow Part 2 Tatinclaux, J.C , (1988, p.44-52, eng) 43-2978
Fracture experiments on freshwater and urea model ice Bentley, D.L., et al, (1988, 152p , eng) 43-3040
Fracture of freshwater and urea model ice Bentley, D.L., (1989, 142p., eng) 43-3610
Fracture of multi-year sea ice under triaxial stress. Sammonds, P.R., et al, (1989, p.279-288, eng) 43-3733
Dynamic response of an icebeam with flooding water effect. Wang, S.L., et al, (1989, p.311-320, eng) 43-3736
Plane strain fracture toughness K(IC) of sea ice. Zhang, M.Y , et al, (1989, p.332-341, eng) 43-3738
Ice failure model incorporating size effects Sayed, M., et al, (1989, p.596-605, eng) 43-3761
Straightforward method for calculation of ice resistance of ships Lindqvist, G., (1989, p.722-735, eng) 43-3772
Experimental study on breaking ice cover. Zuev, V.A., et al, (1984, 14p , eng) 43-3855
Icebreaking vessel research. Joensuu, A., (1989, 12p., eng) 43-4030
M.V. *Arctic* ice transiting performance, continuous mode. Final report. Albery, A.C.R., et al, (1984, var. p., eng) 43-4154
Effects of icebreakers' forms on ice breaking capability. Ionov, B.P., (1988, 7p., eng) 43-4441
See also: Ice cutting; Icebreakers

Ice breakup
Dynamic ice breakup on the Connecticut River, VT. Ferrick, M.G., et al, (1988, 16p., eng) 43-5
Survey of ice breakup processes, Canadian Beaufort Sea coastal zone. (1987, 15p. + appends. + maps, eng) 43-217
Controlled river ice cover breakup, part 1. Hudson River field experiments Ferrick, M G , et al, (1986, p.281-291, eng) 43-274
Controlled river ice cover breakup, part 2. Theory and numerical model studies. Ferrick, M.G., et al, (1986, p 293-305, eng) 43-275
Ice jam characteristics, Liard-Mackenzie rivers confluence: discussion and reply. Flato, G., et al, (1988, p.275-278, eng) 43-300
Study of dynamic ice breakup on the Connecticut River near Windsor, Vermont. Ferrick, M.G , et al, (1987, p.163-177, eng) 43-399
Timing and duration of river ice break-up. Prowse, T.D., et al, (1987, p.192-196, eng) 43-401
Albedo of break-up ice covers Prowse, T.D., (1987, p.197-202, eng) 43-402
Cause of ice jams, Nenjiang. Li, Y., (1987, p.122-128, chi) 43-497
Ice regime reconnaissance, Yukon River, Yukon. Gerard, R., et al, (1984, p.1059-1073, eng) 43-670
Design of river intakes in cold climates. Hodgson, J.E., et al, (1984, p.1113-1127, eng) 43-674
Damage resulting from a sudden river ice breakup. Doyle, P.F., (1988, p 609-615, eng) 43-1360
Configuration and properties of a breakup jam. Beltaos, S., (1988, p.685-697, eng) 43-1361
Elements of floating-debris control systems. Perham, R.E., (1988, 54p. + appends., eng) 43-1808
Nearshore Great Lakes ice statistics. Bolsenga, S.J., et al, (1988, 42p., eng) 43-1973
Dynamic ice breakup control for the Connecticut River near Windsor, Vermont. Ferrick, M.G., et al, (1988, p.245-258, eng) 43-2018
Causative factors leading to the formation of ice jams. Mattke, T.W., et al, (1989, p.170-178, eng) 43-2100
Finnish river ice research project. Huokuna, M., (1988, p.15-41, eng) 43-2163
Historical ice jam flood data. Stanley, S., et al, (1988, p.115-137, eng) 43-2168
Ice jams, release and surge wave propagation, Mackenzie River. Parkinson, F.E , et al, (1988, p.209-223, eng) 43-2173
Some thoughts on break-up and ice jams. Gerard, R., et al, (1988, p.225-239, eng) 43-2174
Using the borehole jack to determine changes in river ice strength. Prowse, T.D., et al, (1988, p.283-303, eng) 43-2177
Breakup prediction on a non-regulated river. Andres, D.D , (1988, p.305-325, eng) 43-2178
Peculiarities and regularities of river ice breakup in Yakutia. Lobovikova, Z.P., et al, (1988, p.14-21, rus) 43-2344
Relationship between river ice breakup and atmospheric circulation. Lobovikova, Z.P., et al, (1988, p.21-35, rus) 43-2345
Forecasting of the water level during ice breakup. Kil'mianinov, V.V., et al, (1988, p.44-48, rus) 43-2347
Forecasting river ice breakup in relation to water level. Liser, I.IA., (1988, p.48-53, rus) 43-2348
Extended forecasting of ice breakup on Keti River (Maksimkin Yar settlement). Bogdanova, V F , (1988, p.53-55, rus) 43-2349
Forecasting of maximal water level on Lena River due to ice jams. Kil'mianinov, V V , (1988, p.55-67, rus) 43-2350
Model tests of load transmission through grounded ice rubble. Timco, G.W., et al, (1989, p 269-274, eng) 43-2636
Thermal budget of river ice covers during breakup. Prowse, T.D , et al, (1989, p.62-71, eng) 43-2707
Ice cover breakup on the Susquehanna River. Ruggles, R.W., et al, (1988, p.229-238, eng) 43-2996
Forecast of Yimin River in Eerguna water system. Xu, J.F., et al, (1988, p.271-281, eng) 43-3000
Ice jams and breakup: problems, progress and prospects Gerard, R., (1988, p.26-46, eng) 43-3022
Hydrological yearbook 1981-1983. Leppäjärvi, R , ed, (1987, 238p., eng) 43-3492
Ice jamming characteristics of the Mackenzie Delta, N W T Bigras, S.C., (1988, p.129-139, eng) 43-4123
Framework for control of dynamic ice breakup by river regulation Ferrick, M.G., et al, (1989, 14p , eng) 43-4385

Ice bridges
See also: Ice crossings

Ice caps
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Ice caves
Snow and ice melting in karst cavities. Mavliudov, B.R., (1988, p.123-128, rus) 43-3269

Ice composition
Monitoring of environmental background pollution. Vol 4. Izrael', IU.A., ed, (1987, 384p , rus) 43-26
Distribution of macro- and microelements in ice of the Vavilov Glacier. Korzun, A.V., et al, (1987, p 239-245, rus) 43-27
Distribution and conditions of formation of glacial icings on Spitsbergen Gokhman, V.V., (1987, p.249-260, eng) 43-129
Chernobyl fallout in Northern Hemisphere glaciers. Pourchet, M., et al, (1988, p.183-187, eng) 43-162
System of factors and processes affecting the formation of chemical composition of aqueous and water-snow ice. Ivanov, A.V , (1987, p 74-80, rus) 43-231
Incorporation of sulfur dioxide into snow and depositing ice. Valdez, M.P., (1988, 189p., eng) 43-307
Chromatographic behavior of anions and the first row transition metal ions. Arbogast, J.K., (1988, 150p., eng) 43-413
Evaporation of chemical agents from ice and snow. Leggett, D.C., (1988, 10p , eng) 43-425
Hydrocarbons in permafrost ice, Marsh Creek area, Alaska. Cunningham, K.I., et al, (1988, 18p. + tables, eng) 43-678
Limnological investigations of Lake Unter-See Kaup, E.B., et al, (1988, p.101-111, rus) 43-797
Peculiarities of sea ice desalination in winter. Grishchenko, V.D., (1988, p.55-64, rus) 43-804
Cryo-oscillations. Belousov-Zhabotinskii (BZ) oscillations in frozen and undercooled solution. Vajda, T., et al, (1988, p 661-665, eng) 43-831
Salts in pond waters of the Labyrinth; lithium and boron contents Takamatsu, N., et al, (1988, p.103-112, eng) 43-839
Comment on the paper "The cometary breakup hypothesis re-examined". Boutron, C.F., (1988, p.215-220, eng) 43-876
Regarding the validity of polar trace metal data: a response. LaViolette, P.A., (1988, p.221-224, eng) 43-877
Regularities governing water crystallization in disperse rocks. Golubev, V.N., (1988, p.31-36, rus) 43-933
Air pollution trends in the Canadian High Arctic. Barrie, L A , et al, (1985, p.2055-2063, eng) 43-989
Field investigation of load-curvature characteristics of reinforced ice. Fransson, L., et al, (1987, 22p., eng) 43-1110
Conditions of hail formation Kaviladze, M.Sh., et al, (1988, p.208-212, eng) 43-1371
Trapping of gas mixtures by amorphous water ice. Bar-Nun, A., et al, (1988, p.7749-7754, eng) 43-1422
Neutron activation analysis of snow and ice in Antarctica. Koyama, M., et al, (1988, p.235-249, eng) 43-1442
Mineralogy of insoluble particles in ice over the last climatic cycle. Gaudichet, A., et al, (1988, p.1471-1474, eng) 43-1483
Study of antarctic meteorites and polar ice using radionuclides. Elmore, D., et al, (1988, p.85-86, eng) 43-1617
Uranium-series dating of antarctic ice. Fireman, E.L., (1988, p.118-119, eng) 43-1628
Dominion Range ice core. Mayewski, P.A., (1988, p.120-121, eng) 43-1629
Oxygen-isotope studies and isotopic dates from Antarctica. Grootes, P.M., et al, (1988, p.122, eng) 43-1630
Carbon fixed by nitrifying bacteria during ice cover in McMurdo Sound. Priscu, J.C., et al, (1988, p.171-172, eng) 43-1638
Making artificial snow for laboratory use. Sommerfeld, R.A., et al, (1988, 3p , eng) 43-1700
Interplanetary dust particles from preindustrial aged ice Zolensky, M.E., et al, (1988, p.599-605, eng) 43-1761
Occurrence of toxic metals in antarctic ice, last 40 millennia. Batifol, F., et al, (1989, p.544-546, eng) 43-1775
Accumulation and ice-core studies on Filchner-Ronne Ice Shelf, Antarctica. Graf, W., et al, (1988, p.23-31, eng) 43-1939
Numerical models of steady-state thickness and basal ice configurations of the central Ronne Ice Shelf, Antarctica. Lange, M.A., et al, (1988, p.64-70, eng) 43-1946
Location of impurities in antarctic ice. Wolff, E.W., et al, (1988, p.194-197, eng) 43-1966
Analysis of trace elements in the BHQ ice core, Law Dome, Antarctica. Liu, Y.G., et al, (1988, p.297-300, eng) 43-1985
Chemical composition of ice containing tephra layers. Palais, J.M., et al, (1988, p.315-330, eng) 43-2006
Deuterium concentration and growth rate of antarctic first-year ice. Souchez, R., et al, (1988, p.1385-1388, eng) 43-2032
Alternate interpretation of the conductivity of HCl-doped ice. Devlin, J.P., (1988, p.5967-5968, eng) 43-2188
Photochemistry of solid ozone. Sedlacek, A.J., et al, (1989, p.509-511, eng) 43-2202
Glaciology of the east antarctic ice sheet at the Allan Hills. Faure, G., et al, (1987, p.74-75, eng) 43-2740
Ur-series dated ice, 100,000 to 350,000 yr old at Allan Hills. Fireman, E.L., (1987, p.74-77, eng) 43-2741
Transantarctic Mountains ice core study Mayewski, P.A., (1987, p.78, eng) 43-2742
Drifting sea ice algae north of Elephant I., Oct. 1986. Ligowski, R , et al, (1988, p 217-229, eng) 43-2771
Iridium in volcanic dust from blue ice fields. Koeberl, C., (1989, p.317-322, eng) 43-2835
Snow and ice chemistry of mountain glaciers in China. Wang, P., (1988, p.269-272, chi) 43-2867
Mineral components in the active layer of Spitsbergen glaciers. Arkhipov, S.M., et al, (1988, p 62-71, rus) 43-3257
Laws governing deformation of debris-laden ice. Golubev, V N., et al, (1988, p.76-78, rus) 43-3259
Geochemistry of the active layer of glaciers Arkhipov, S.M., et al, (1988, p.164-173, rus) 43-3274
Correlation of tephra layers in antarctic ice by trace element abundances and refractive indices of glass shards. Fukuoka, T., et al, (1987, p.103-118, eng) 43-3409
Isotopic composition in Queen Maud Land deposits. Satake, H., et al, (1986, p.57-69, jpn) 43-3641
Glaciological investigations in Siberia, Vol.2. Antipov, A.N., ed, (1987, 162p., rus) 43-3652
Chemical composition of indigenous ice in the lower Amur River region. Ivanov, A.V., et al, (1987, p.28-38, rus) 43-3655
Environmental record in glaciers and ice sheets. Oeschger, H., ed, (1989, 403p , eng) 43-3677

How do glaciers record environmental processes and preserve information White, J.W.C, et al, (1989, p.85-98, eng) 43-3682
Temporal variations of trace gases in ice cores. Khalil, M.A.K., et al, (1989, p.193-205, eng) 43-3688
Past environmental long-term records from the Arctic. Dansgaard, W., et al, (1989, p 287-317, eng) 43-3693
Biosynthesis and photosynthates in sea ice algae. Smith, R.E.H., et al, (1989, p.591-605, eng) 43-3698
Aliphatic hydrocarbons and isomers of hexachlorocyclohexane in water, ice and snow. Dmitriev, F.A., et al, (1988, p.566-568, eng) 43-3944
Interstellar and cometary H2O CO ices. Sandford, S.A., et al$4 700 $Allamandola, L.J., (1988, p.201-224, eng) 43-3985
Evolution of interstellar and precometary ice analogs. Allamandola, L.J., et al, (1988, p 225-252, eng) 43-3986
Organic solids produced by irradiation of carbon ices. Khare, B.N., et al, (1989, p.(2)42-(2)53, eng) 43-4337
Residues from irradiation of carbon ices. Khare, B.N., et al, (1989, p.350-361, eng) 43-4391
Lead determination in ice by laser atomic fluorescence spectrometry. Bolshov, M.A., et al, (1989, p.1758-1762, eng) 43-4537
Chemical and structural properties of sea ice in the southern Beaufort Sea. Meese, D.A., (1989, 294p., eng) 43-4573
Mechanical properties of multi-year sea ice Richter-Menge, J.A., et al, (1988, 27p, eng) 43-4593

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Ice interaction with offshore structures Cammaert, A B, et al, (1988, 432p., eng) 43-1
Tensometric testing of transport ships Likhomanov, V.A., et al, (1987, p.46-54, rus) 43-32
Possibility of increasing the Arctic draught of "Noril'sk"-type ships according to ice-strake strength. Karavanov, S.B., (1987, p.54-63, rus) 43-33
Regionalization of the Vilyuy reservoir, types and classification of its shores Burlakov, V M, (1987, p.34-42, rus) 43-45
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Changes in the regime of the Yenisey and Angara rivers due to flow regulation. Odrova, T V, (1987, p.84-95, rus) 43-51
Geographic interpretation of satellite survey data. Vasil'ev, L.N., ed, (1988, 132p., rus) 43-108
Geographic interpretation of remote sensing data on river estuaries and shelf zones. Krasnozhon, G.F., (1988, p.41-58, rus) 43-109
Damming of the Vilyuy River channel at the construction site of the Vilyuy III Hydroelectric Station Pantelcev, V.S., (1987, p 692-697, eng) 43-139
Ice problems on the Yellow River. Chen, Z., (1986, p.25-47, eng) 43-260
Review of Kulluk's performance after three years' operations in the Beaufort Sea. Pilkington, G.R, et al, (1986, p.145-176, eng) 43-267
Rational design of lock mechanical devices operating under ice conditions. Balanin, V., et al, (1986, p.307-321, eng) 43-276
Polar seas—a biological comparison. Hempel, G., (1987, p.173-189, ger) 43-408
Temperature and ice in Mississippi River near a nuclear power station. Schwarz, J, et al, (1973, 17p + tables, eng) 43-420
Oceanography of the Baffin Bay and Nares Strait, Sep. 1986. Bourke, R H, et al, (1988, 32p. + appends., eng) 43-421
Ice conditions along the Allegheny and Monongahela Rivers. Gatto, L.W., (1988, 106p., eng) 43-431
Inventory of ice problem sites and remedial ice control structures. Perham, R.E, (1988, 9p., eng) 43-432
Oceanographic conditions on the northern Bering Sea shelf: 1984-1985. Salo, S., et al, (1988, 55p, eng) 43-516
Icy epic of the *Mossovet*. Matiiasevich, A., (1988, p.42-46, rus) 43-572
Oceanographic data from 28th JARE, Nov 1986 to Apr 1987. Michida, Y, et al, (1988, 75p., eng) 43-590
Technology development for future polar petroleum activity Sackinger, W M, (1988, p 43-53, eng) 43-511
Current and future petroleum activities in Canada. Hnatiuk, J., et al, (1988, p.55-69, eng) 43-612
New large model basin for testing of Arctic offshore structures. Kostilainen, V., et al, (1988, p.147-158, eng) 43-618
Ice loads and impacts on the semi-submersible Aker D-6. Kulsvehagen, T., (1988, p.159-177, eng) 43-619
Impact of ice bergy bits on a concrete semisubmersible. Putot, C., et al, (1988, p.191-207, eng) 43-621
Gulf of Bothnia—a testing area for Arctic offshore installations Högbom, T., et al, (1988, p.249-260, eng) 43-625
Erosion around ice-resistant structures caused by waves. Khalfin, I.Sh, et al, (1988, p.275-285, eng) 43-627
Solutions to instrumentation problems experienced in offshore programmes Reith, J, et al, (1988, p 435-445, eng) 43-638
Argos and the 1990's system efficiency in polar regions. Vassal, C., (1988, p.455-470, eng) 43-640
Problems in using floating production units in Arctic conditions. Korppoo, S., et al, (1988, p.507-521, eng) 43-644
Gravity modular concrete structure for Arctic environment. Chateau, G, (1988, p.593-604, eng) 43-648
Ice regime reconnaissance, Yukon River, Yukon. Gerard, R, et al, (1984, p.1059-1073, eng) 43-670
Experience with drillship operations in the U.S. Beaufort Sea. Hinkel, R.M., et al, (1988, p 35-48, eng) 43-710
Arctic Island abandonment: planning and implementation for Mukluk Island. Anderson, L.M, et al, (1988, p.49-60, eng) 43-711
Ice resistance to ship motion. Ionov, B.P., (1987, 13p. + appends., eng) 43-718
Exploratory drilling on the shelf. Aseev, A.G., et al, (1988, 198p., rus) 43-755
R-class icebreaker testing requirements. Glen, I.F., (1988, 29p. + appends., eng) 43-775
Ice budget of the Greenland Sea. Moritz, R.E., (1988, 117p., eng) 43-780
Alaska synthetic aperture radar (SAR) facility project. Carsey, F., et al, (1987, p.593-596, eng) 43-781
Deep-sea research by the R/V *Polarstern* Expedition, 1987. (1988, p.665, 676-678, eng) 43-782
Long range forecasting of ice conditions in the Barents and Kara seas. Gudkovich, Z.M., et al, (1988, p.32-40, rus) 43-801
Experience in real-time forecasting of the relief, level and drift of ice in Arctic seas with a 6-8 day lead. Vanda, IU.A., et al, (1988, p.41-45, rus) 43-802
Statistical models of sea ice cover as navigation medium. Buzuev, A.IA, et al, (1988, p.120-130, rus) 43-810
Air/ocean/ice models, working group report. Tipper, R.C., et al, (1987, p.139-142, eng) 43-851
DOD floating ice problems. Cox, G.F.N, (1987, p.151-154, eng) 43-853
Arctic construction: working group report. Marvin, E.L., et al, (1987, p.311-314, eng) 43-866
Remote sensing of ice covered seas. Weeks, W.F., et al, (1987, p.327-332, eng) 43-868
Computer processing of ice data analyses obtained from side looking radar. Prokof'ev, I.A., et al, (1987, p.86-90, rus) 43-890
Workshop on Extreme Ice Features, Banff, Alta., Nov. 3-5, 1986. (1987, 463p., eng) 43-899
Beaufort Gyre ice trajectories Cornett, S, (1987, p.11-37, eng) 43-900
Multi-year ice statistics. Spedding, L.G, et al, (1987, p.81-120, eng) 43-904
Methods of risk analysis. Bercha, F.G., (1987, p.305-333, eng) 43-910
Remote sensing of extreme ice hazards. Leavitt, E., et al, (1987, p.335-347, eng) 43-911
Operational response to hazardous ice features. Pilkington, G.R., (1987, p.349-358, eng) 43-912
Ultimate extreme ice feature: antactic icebergs. Thomson, R.B, (1987, p.369-371, eng) 43-914
Ice feature maps of the Arctic Ocean. LeSchack, L.A., (1987, p.373-383, eng) 43-915
Exploration status and future perspectives in the Barents Sea. Johansen, B., (1987, 7p + maps + charts, eng) 43-1100
Numerical simulation of North Atlantic sea ice variability, 1951-1980. Walsh, J.E., (1985, p.43-46, eng) 43-1155
Monitoring of the Arctic climate. Voskresenskii, A.I., ed, (1988, 205p, rus) 43-1174
New modelling ice. Beliakov, V.B, (1986, 8p, eng) 43-1193
Beaufort Sea Mesoscale Circulation Study—preliminary results. Aagaard, K., et al, (1988, 171p, eng) 43-1284
Ice cover and stream flow in the Yukon River, 1985/86. Alford, M.E., et al, (1988, 36p., eng) 43-1440
Sea ice remote sensing of the Canadian East Coast. McNutt, L., et al, (1988, p.421-422, eng) 43-1519
Sea ice type classification of SAR imagery. Wackerman, C.C., et al, (1988, p.425-428, eng) 43-1521
Regional Ice Model (RIM) for operational applications. Neralla, V.R., et al, (1988, p 135-153, eng) 43-1565
Checking the floe of ice: real-time processing of digital image data. Ramsay, B.R., et al, (1988, p.17-20, eng) 43-1573
Study on ice meltponds. Lapp, D., (1982, 62p. + appends., eng) 43-1666
Ice-rubble accumulation beneath barges in ice-covered waters. Ettema, R., et al, (1988, p.397-412, eng) 43-1674
Antarctic ice charts 1985-1986. (1987, 426p., eng) 43-1675
Report of the International Ice Patrol in the North Atlantic Season of 1986. (1988, 71p., eng) 43-1817
Modelling the resistance of ice to ship motion. Gramusov, E.M., (1984, 8p, eng) 43-1836
Ice transfer in the Barents Sea. Zubakin, G.K., (1987, p.113-117, rus) 43-1882
Long range forecasting of ice conditions in the Barents Sea. Potanin, V.A., (1987, p.117-124, rus) 43-1883
IGARSS '88 remote sensing, moving towards the 21st century, Vol.3. (1988, p.1231-1858, eng) 43-1889
Radar observations of Arctic sea ice during winter MIZEX '87. Shuchman, R.A., et al, (1988, p.1419-1422, eng) 43-1890
Mapping of seasonal sea ice off Labrador with C-band SAR imagery. Holt, B., et al, (1988, p.1423-1424, eng) 43-1891
SAR imagery of the Grand Banks pack ice pack and its relationship to surface features. Argus, S.D., et al, (1988, p.1425-1428, eng) 43-1892
Ice information during severe ice event, from SAR imagery. Carsey, F., et al, (1988, p.1431-1433, eng) 43-1893
Estimating sea ice concentration from satellite passive microwave data and a physical model. Rothrock, D.A., et al, (1988, p.1677-1683, eng) 43-1895
Shipborne passive microwave sea ice experiment in the East Greenland Sea: May-July 1987 Garrity, C., (1988, p.1691-1692, eng) 43-1897
Preliminary observations of polar sea ice with the special sensor microwave imager. Cavalieri, D.J., (1988, p.1693-1694, eng) 43-1898
Real-time analysis of digital sea ice image data. Ramsay, B., et al, (1988, p.1707-1711, eng) 43-1901
Finnish Ice Service. Grönvall, H., (1988, p.95-110, eng) 43-1972
Nearshore Great Lakes ice statistics. Bolsenga, S.J., et al, (1988, 42p, eng) 43-1973
Phases of the ice season in the Baltic Sea (North of latitude 57N). Leppäranta, M., et al, (1988, 83p., eng) 43-1975
Index of sea ice variations in the nordic seas. Sear, C.B., (1988, p.339-355, eng) 43-2038
Remarks on the Arctic Ocean and ice-drifting in Beaufort Sea. Jarlan, G., (1987, p 25-35, fre) 43-2066
Rebuilding infrastructure for pleasure boating. Wortley, C.A., et al, (1989, p.188-201, eng) 43-2102
Winter vessel performance and trafficability. Wells, D., et al, (1987, 33p, eng) 43-2139
Arctic vessel performance and trafficability data base, 1983-87. Wells, D., et al, (1988, 80p., eng) 43-2148
Trafficability and performance of M.V. *Arctic* in ice regimes. Browne, R.P., et al, (1988, 56p. + tables, eng) 43-2149
Vessel performance study for the MV *Arctic* 1987; Appends A, B, C. (1988, 2 pieces, eng) 43-2151
Calculation of the ice resistance of ships. Zuev, V., (1988, 5p. + figs, eng) 43-2161
Workshop on Hydraulics of River Ice/Ice Jams, 5th, 1988 (1988, 445p., eng) 43-2162
Ice jam flooding and antecedent conditions, St. John River Humes, T.M., et al, (1988, p.43-61, eng) 43-2164
Ice cover distribution in Vermont and New Hampshire Atlantic salmon rearing streams. Calkins, D.J., et al, (1988, p 85-96, eng) 43-2166
Computing stream discharge for ice-affected periods. Melcher, N.B., (1988, p 241-253, eng) 43-2175
Stream flow under ice conditions Pelletier, P.M., (1988, p.255-282, eng) 43-2176
Ice related flooding on Harry's River. Anderson, J.E., et al, (1988, p.369-391, eng) 43-2181
Ice pack conditions drive production, transport design. LeBlanc, L., (1989, p.26-28, eng) 43-2185
Water temperature and ice in Danube River delta. Min'kovskaia, R.IA., (1988, p 86-94, rus) 43-2392
Performance assessment in geotechnical design of arctic offshore structures. Been, K., et al, (1989, p.113-123, eng) 43-2617
Environmental loads on structures NPD—guidelines for loads and load effects. Kvitrud, A., et al, (1989, p.133-138, eng) 43-2619
Emergency preparedness in arctic areas. Sandberg, L., (1989, p.155-159, eng) 43-2622
Eulerian-Lagrangian model for the prediction of ice hazards in shallow waters. Bruno, M.S., (1989, p.229-233, eng) 43-2631
Review of ship performance in level ice. Jones, S.J., (1989, p.325-342, eng) 43-2643
Experimental study of the icebreaking cycle in 2-D. Valanto, P., (1989, p.343-349, eng) 43-2644
Ice loads on propellers of small ferry. Jussila, M., et al, (1989, p.351-358, eng) 43-2645
Analytical investigation of ship resistance in broken or pack ice. Aboulazm, A.F., et al, (1989, p.359-363, eng) 43-2646
Offshore development in Cook Inlet, Alaska. Visser, R.C., (1989, p.435-442, eng) 43-2655
Floating and bottom founded unit for arctic drilling operations. Jolles, W.H., et al, (1989, p.443-450, eng) 43-2656
Beaufort Sea cased gloryhole drilling. Gilbert, D., et al, (1989, p.451-458, eng) 43-2657
Model study of a cable-moored platform in sheet ice. Nixon, W.A., et al, (1989, p.459-468, eng) 43-2658
Studies on ice conditions in rivers, lakes and seas in China. Chen, Z.T., (1988, p.279-283, chi) 43-2869
Characteristics of ice conditions based on aerial photography. Starosolszky, Ö., et al, (1988, p 611-622, eng) 43-2959
Hydraulic conditions in open channels with ice cover. Majewski, W., et al, (1988, p.112-121, eng) 43-2985

Ice conditions *(cont.)*

Forecasts of ice condition on the Yellow River. Chen, Z.T., et al, (1988, p.239-248, eng) 43-2997

Numerical model of ice regime analysis in a canal. Jin, G.H., et al, (1988, p.261-270, eng) 43-2999

Forecast of Yimin River in Eerguna water system. Xu, J.F., et al, (1988, p.271-281, eng) 43-3000

Dynamic model of sea ice forecast in the Bohai Sea. Liu, X.S., et al, (1988, p.282-292, eng) 43-3001

Modeling the thermal regime of estuaries Omstedt, A., (1988, p.346-355, eng) 43-3007

Mathematical model for river ice processes. Shen, H.T., et al, (1988, p.356-366, eng) 43-3008

Ship trials for the Soviet antarctic research ship *Akademik Fedorov*. Haapanen, M.E., (1989, p.975-982, eng) 43-3794

Ice management in the Barents Sea Jensen, H., et al, (1989, p.1107-1117, eng) 43-3807

Dynamics and thermal regimes of rivers Rossinskiĭ, K.I., ed, (1987, 406p, eng) 43-3885

Dynamics and thermal conditions of rivers Rossinskiĭ, K.I., (1987, p.3-16, eng) 43-3886

Ice regimes of reservoirs. Donchenko, R.V., (1987, p.17-22, eng) 43-3887

Thermal regime of water in power plant reservoir. Sokol'nikov, N.M., (1987, p.34-38, eng) 43-3889

Ice and thermal characteristics in an unstable ice regime Zhitskaia, N.V., (1987, p.39-46, eng) 43-3890

Ice regime of rivers in the central Volga region. Korbutiak, M.V., (1987, p.47-55, eng) 43-3891

Beaufort Sea current measurements, Mar.-Aug. 1987. McCullough, D., et al, (1988, 42p, eng) 43-4035

Wind effect on ice compressions in the arctic seas. Voevodin, V.A., et al, (1988, 10p, eng) 43-4439

Probability modeling of Baltic Sea ice conditions Drabkin, V.V., et al, (1988, p.126-130, rus) 43-4554

Using multipurpose optimization algorithms in sea ice prediction Plotnikov, V.V., (1988, p.57-66, rus) 43-4556

Natural ice rubble studies Shinde, S.B., et al, (1983, 2 vols., eng) 43-4587

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Ice (construction material)

Strength of sea-ice freezing to bottom soils on shelves. Sadovskiĭ, A.V., et al, (1988, p.189-193, eng) 43-144

Temporary moorings built of ice Gosman, V., et al, (1987, p.44, rus) 43-700

Technical operation of sea port structures. Kostiukov, V.D., ed, (1987, 128p, rus) 43-756

Structures built of ice for unloading liquid cargo. Ignat'ev, S.V., (1987, p.85-88, rus) 43-757

Ice-composites with dispersed reinforcements. Vasil'ev, N.K., (1988, p.21-22, rus) 43-893

Studies and data processing on spray-cone accretion of ice Sosnovskiĭ, A.V., (1988, p.36-41, rus) 43-934

Techniques for using ice as base material in structures (1987, 15p, eng) 43-1108

Arctic pipeline installation method uses ice sheet for support. Masterson, D.M., et al, (1989, p.29-30, eng) 43-2186

Time dependent settlement of ice and earth offshore structures. Vinogradov, A.M., et al, (1989, p.263-268, eng) 43-2635

IAHR Symposium on Ice, 9th, 1988. (1988, 3 vols, eng) 43-2906

Ice wharf at McMurdo Station. Barthelemy, J.L., et al, (1988, p.601-609, eng) 43-2958

Construction and creep test of a 15-meter-span ice dome. Kokawa, T., (1988, p.390-399, eng) 43-3011

Meteorological factors in construction of ice platforms. Szilder, K., et al, (1988, p.410-424, eng) 43-3013

Ice mechanical properties in relation to Arctic engineering activities. Sackinger, W.M., (1988, p.9-25, eng) 43-3021

Development of ice-compound materials. Vasil'ev, N.K., (1988, p.202-206, rus) 43-3280

Creep behavior of fresh water ice. Palathingal, P., (1989, p.259-268, eng) 43-3731

Bending strength of alluvium-reinforced ice. Nixon, W.A., (1989, p.309-313, eng) 43-4451

Ice control

Dynamic ice breakup on the Connecticut River, VT. Ferrick, M.G., et al, (1988, 16p, eng) 43-5

Resources and ambitions regarding winter knowledge at the University of Luleå Hansson, L., (1985, p.35-40, swe) 43-358

Ice problem related to the regulation of rivers and the operation of hydropower stations. Billfalk, L., et al, (1985, p.41-49, swe) 43-359

Inventory of ice problem sites and remedial ice control structures. Perham, R.E., (1988, 9p, eng) 43-432

Icing damages to the highways in Hulun Buir League, Nei Monggle, and its control. Bai, W., (1987, p.105-110, chi) 43-494

Scientific ocean drilling bordering Antarctica. Hanson, C., et al, (1988, p.353-365, eng) 43-633

Aerial surveillance system for ice management in the marginal ice zone. Rudkin, P., et al, (1988, p.471-483, eng) 43-641

Development of optimum techno-economic decisions for Arctic offshore installations. Nasseri, T., et al, (1988, p.551-565, eng) 43-646

Interaction between ice and drilling rigs. Romagnoli, R., et al, (1988, p.605-613, eng) 43-649

Ice control in river harbors and fleeting areas. Perham, R.E., (1988, 7p., eng) 43-1147

Development of a river ice prow Tatinclaux, J.C., et al, (1988, 26p., eng) 43-1199

Dynamic ice breakup control for the Connecticut River near Windsor, Vermont. Ferrick, M.G., et al, (1988, p.245-258, eng) 43-2018

Ice control with thermal/bubbler plumes: line source configuration. Baddour, R.E., (1988, p.435-445, eng) 43-2184

Snow and ice control in North America. Thornes, J., (1986, 18p., eng) 43-2761

River-flow regulation for controlled ice cover formation. Jain, S.C., et al, (1988, p.12-22, eng) 43-2975

Thermal analysis of heated lockwalls for ice control. Nakato T., et al, (1988, p.23-33, eng) 43-2976

High-flow air-screen bubbler systems to control ice in locks. Rand, J.H., (1988, p.34-43, eng) 43-2977

Development of a river ice-prow. Part 2. Tatinclaux, J.C., (1988, p.44-52, eng) 43-2978

Model studies on ice control structure. Decsi, E., et al, (1988, p.53-58, eng) 43-2979

Ice control thermal/bubbler plumes: point source configuration. Baddour, R.E., (1988, p.59-71, eng) 43-2980

Ice problems in intakes to power plants. Roen, S., et al, (1988, p.81-91, eng) 43-2982

Damming structures at headworks of rivers. Xu, S.B., (1988, p.92-102, eng) 43-2983

Icing of petroleum industry offshore structures and ships Romagnoli, R., (1988, p.486-497, eng) 43-3019

Cold room studies for snow and ice control on buildings. Lepage, M.F., et al, (1989, p.232-242, eng) 43-3568

Spray ice barrier at concrete island drilling structure. St. Lawrence, W., (1988, p.135-136, eng) 43-3648

Solutions to improve ice and snow control management on road, bridge, and runway surfaces. Kelley, J.R., (1988, p.152-161, eng) 43-4125

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Ice core analysis

New results in oxygen isotope studies of the Vostok Station ice core. Kotliakov, V.M., et al, (1987, p.83-85, rus) 43-232

Ice cores

Isotopic modeling of climate oscillations. Le Treut, H., et al, (1988, p.9365-9383, eng) 43-284

Chromatographic behavior of anions and the first row transition metal ions. Arbogast, J.K., (1988, 150p., eng) 43-413

Stable isotope studies on the Greenland ice-sheet margin. Reeh, N., et al, (1987, p.108-114, eng) 43-743

Air pollution trends in the Canadian High Arctic. Barrie, L.A., et al, (1985, p.2055-2063, eng) 43-989

North Atlantic deep water formation, information from ice cores. Oeschger, H., (1985, p.27-31, eng) 43-1153

Changes in the high-latitude ocean as possible causes of atmospheric CO2 variations. Siegenthaler, U., (1985, p.37-38, eng) 43-1154

Gravitational separation of gases and isotopes in polar ice caps. Craig, H., et al, (1988, p.1675-1678, eng) 43-1202

Mineralogy of insoluble particles in ice over the last climatic cycle. Gaudichet, A., et al, (1988, p.1471-1474, eng) 43-1483

Isotopic composition of methane in polar ice cores. Craig, H., et al, (1988, p.1535-1539, eng) 43-1563

Search for microfossils beneath the Greenland and west antarctic ice sheets. Harwood, D.M., (1988, p.105-106, eng) 43-1621

Further firn studies on the Siple Coast of West Antarctica. Alley, R.B., et al, (1988, p.111-112, eng) 43-1623

Paleoclimatic ice core program at Siple Station. Mosley-Thompson, E., et al, (1988, p.115-117, eng) 43-1626

PICO drilling activities at Siple Station and on the Siple Coast 1985-86. Koci, B.R., et al, (1988, p.117, eng) 43-1627

Dominion Range ice core. Mayewski, P.A., (1988, p.120-121, eng) 43-1629

Oxygen-isotope studies and isotopic dates from Antarctica. Grootes, P.M., et al, (1988, p.122, eng) 43-1630

Occurrence of toxic metals in antarctic ice, last 40 millennia. Batifol, F., et al, (1989, p.544-546, eng) 43-1775

Frozen assets of the ice cores. Fifield, R., (1988, p.28-29, eng) 43-1805

Symposium on Antarctic Glaciology, Bremerhaven, Sep. 7-11, 1987. (1988, 229p, eng) 43-1934

Ice-core analysis of the Siple Coast of West Antarctica. Alley, R.B., et al, (1988, p.1-7, eng) 43-1935

Accumulation and ice-core studies on Filchner-Ronne Ice Shelf, Antarctica. Graf, W., et al, (1988, p.23-31, eng) 43-1939

Dielectric variability of a 130 m antarctic ice core: implications for radar sounding. Moore, J.C., (1988, p.95-99, eng) 43-1951

Analysis of trace elements in the BHQ ice core, Law Dome, Antarctica. Liu, Y.G., et al, (1988, p.297-300, eng) 43-1985

Method for computing shallow ice-core depths. Whillans, I.M., et al, (1988, p.355-357, eng) 43-1993

Chemical composition of ice containing tephra layers. Palais, J.M., et al, (1988, p.315-330, eng) 43-2006

Particulate material in sea ice in the Fram Strait. Larssen, B.B., et al, (1987, p.313-315, eng) 43-2011

Stratigraphy of the central part of Vavilov Glacier (Severnaya Zemlya). Korotkevich, E.S., et al, (1989, p.1-20, eng) 43-2042

Firn core data from eastern Wilkes Land. Goodwin, I.D., (1988, 74p., eng) 43-2145

Arctic ice cores: putting present climate into perspective. Koerner, R.M., (1987, p.10-12, eng) 43-2379

Ice core drilling during the JAGE, 1987. Kawamura, T., (1988, p.151-154, jpn) 43-2402

Actinomycetes from inside the central antarctic ice sheet. Abyzov, S.S., et al, (1987, p.15-20, eng) 43-2409

Elemental and isotopic composition of occluded O2 and N2 in polar ice. Sowers, T., et al, (1989, p.5137-5150, eng) 43-2722

Our frail planet in cold, clear view: the South Pole as global laboratory. Lopez, B., (1989, p.43-49, eng) 43-2729

Analysis of Siple Coast firn cores. Alley, R.B., et al, (1987, p.70-71, eng) 43-2738

Transantarctic Mountains ice core study. Mayewski, P.A., (1987, p.78, eng) 43-2742

Ice-core drilling for paleoclimatic information at plateau remote. Mosley-Thompson, E., et al, (1987, p.78-79, eng) 43-2743

Isotopic alteration of firn cores. Grootes, P.M., et al, (1987, p.79-80, eng) 43-2744

Nitrate variability in South Pole ice sequences and fossil surface effects. Laird, C.M., et al, (1987, p.80-83, eng) 43-2745

Polar Ice Coring Office activties in East and West Antarctica. Kuivinen, K.C., et al, (1987, p.84-85, eng) 43-2747

Sea-ice investigations during the Winter Weddell Sea Project. Ackley, S.F., et al, (1987, p.88-89, eng) 43-2749

Antarctic glacial history uncovered by ODP Leg 119. Hambrey, M.J., et al, (1989, p.99-106, eng) 43-2804

Ice core evidence of ice sheet melting on Greenland. Koerner, R.M., (1989, p.964-968, eng) 43-2859

Properties of ice from Hobson's ice island. Frederking, R., et al, (1988, p.188-198, eng) 43-2921

Expedition Arctic V/1a, 1b, and 2 with RV *Polarstern* 1988. Spindler, M., ed, (1989, 197p., ger) 43-3077

Ice cores and climate 65-15 thousand y.a. Jouzel, J., et al, (1989, p.135-150, eng) 43-3163

Dating of Late-Pleistocene-Holocene sediments of east antarctic continental shelf. Domack, E.W., et al, (1989, p.277-287, eng) 43-3169

Firn ice cores from Central Caucasus. Golubev, V.N., et al, (1988, p.25-33, rus) 43-3251

Isotope studies of ice cores from Komsomolskaya Station, Antarctica. Kotliakov, V.M., et al, (1988, p.97-102, rus) 43-3309

Interpretation of the temperature profile, Vostok ice core. Ritz, C., (1989, p.138-144, eng) 43-3349

Ice coring in Kunlun Mountains. Nakawo, M., et al, (1989, p.15-19, eng) 43-3436

Ice cores from Kunlun Mountains. Han, J.K., et al, (1989, p.21-28, eng) 43-3437

Air bubbles in ice core from Spitsbergen. Kameda, T., et al, (1989, p.221-226, eng) 43-3464

Isotopic composition in Queen Maud Land deposits. Satake, H., et al, (1986, p.57-69, jpn) 43-3641

Environmental record in glaciers and ice sheets. Oeschger, H., ed, (1989, 403p., eng) 43-3677

How can an ice core chronology be established. Budd, W.F., et al, (1989, p.177-192, eng) 43-3587

Temporal variations of trace gases in ice cores. Khalil, M.A.K., et al, (1989, p.193-205, eng) 43-3688

Trace metals and organic compounds in ice cores. Peel, D.A., (1989, p.207-223, eng) 43-3689

Ionic deposits in polar ice cores. Clausen, H.B., et al, (1989, p.225-247, eng) 43-3690

Past environmental long-term records from the Arctic. Dansgaard, W., et al, (1989, p.287-317, eng) 43-3693

Long-term changes in deep ice core chemistry Delmas, R.J., et al, (1989, p.319-341, eng) 43-3694

Long-term environmental records from antarctic ice cores. Lorius, C., et al, (1989, p.343-361, eng) 43-3695

Studies of polar ice: insights for atmospheric chemistry. McElroy, M.B., (1989, p.363-377, eng) 43-3696

Long-term ice core records and global environmental changes. Hecht, A.D., et al, (1989, p.379-388, eng) 43-3697

N2O measurements of air extracted from antarctic ice cores: implication on atmospheric N2O back to the last glacial-interglacial transition. Zardini, D., et al, (1989, p.189-201, eng) 43-3974

Camp Century hole reopened. Hansen, B.L., et al, (1989, p.315-317, eng) 43-4452

Past climate and environment, antarctic records. Lorius, C., (1984, p.21-24, fre) 43-4536

Lead determination in ice by laser atomic fluorescence spectrometry Bolshov, M.A., et al, (1989, p.1758-1762, eng) 43-4537
Microbiological studies of ice cores from deep holes of Central Antarctica. Abyzov, S.S., et al, (1989, p.86-91, rus) 43-4546
Wisconsin/Würm glacial stage ice in the subtropical Dunde Ice Cap, China Thompson, L.G., et al, (1988, p 517-523, eng) 43-4566
Chemical and structural properties of sea ice in the southern Beaufort Sea. Meese, D.A., (1989, 294p., eng) 43-4573

Ice coring drills
PICO drilling activities at Siple Station and on the Siple Coast 1985-86 Koci, B.R., et al, (1988, p 117, eng) 43-1627
Method for computing shallow ice-core depths. Whillans, I.M., et al, (1988, p.355-357, eng) 43-1993
Temperature distribution over the bit of a thermal drill Fomin, S.A., et al, (1989, p.150-153, eng) 43-2061
Laboratory investigation of ice cutting with a lightweight electromechanical drill Fujii, Y., et al, (1988, p.286-301, jpn) 43-2329
Ice core drilling during the JAGE, 1987. Kawamura, T., (1988, p.151-154, jpn) 43-2402

Ice cover
Microcomputer-based image-processing system Perovich, D.K., et al, (1988, p.249-252, eng) 43-172
Greenland ice sheet mass balance. Reeh, N., (1985, p 53-59, eng) 43-1158
Aerogeophysical survey yields new data in the Weddell Sea. LaBrecque, J., et al, (1988, p 69-70, eng) 43-1615
Preliminary results of marine geologic investigations, Marguerite Bay. Kennedy, D.S., et al, (1988, p.149-151, eng) 43-1632
Planning surface transportation in northern Canada. Hume, V., (1988, p.17-21, eng) 43-1749
Variations in infrared radiation from snow and ice cover. Bordonskii, G.S., et al, (1988, p 83-87, rus) 43-2196
Evidence of central morphostructures in the formation of cloud cover and ice cover over bodies of water. Ezhov, B.V., (1988, p.124-128, rus) 43-2201
Impacts of CO2 doubling on snow and ice in the Canadian Arctic. Barry, R.G., (1986, p.54-66, eng) 43-2583
Global climatic change Houghton, R.A., et al, (1989, p.36-44, eng) 43-2698
Radiothermal detection studies of ice cover properties. Gordeichik, D.E., et al, (1988, p.126-131, rus) 43-2728
Lead records in antarctic ice. changes in global atmospheric concentrations. Patterson, C., et al, (1987, p.85-87, eng) 43-2748
Review and prospect of snow and ice remote sensing in China. Zeng, Q.Z., (1988, p.352-355, chi) 43-2881
Thermal ice thrust by expanding ice cover. Yamaoka, I., et al, (1988, p 473-482, eng) 43-2946
Study on ice static pressure on ice cover in reservoir. Sui, X.Z., (1988, p.483-492, eng) 43-2947
Effects of tidal jacking on ice displacement and strain in the nearshore environment. Stander, E., et al, (1988, p.526-536, eng) 43-2951
Conceptual design of multipurpose structure in ice covered sea. Inoue, K., et al, (1988, p.580-590, eng) 43-2956
Open water in lake ice due to submerged power plant outlet. Tesaker, E., et al, (1988, p.72-80, eng) 43-2981
Hydraulic conditions in open channels with ice cover. Majewski, W., et al, (1988, p.112-121, eng) 43-2985
Determination of roughness coefficient of the underside of ice cover. Majewski, W., et al, (1988, p.122-130, eng) 43-2986
Growth of ice covers in reservoirs. Sado, K., et al, (1988, p.199-208, eng) 43-2993
Variability of ice growth characteristics in Lake Haruna, Japan Ono, N., et al, (1988, p.209-218, eng) 43-2994
Ice cover breakup on the Susquehanna River. Ruggles, R.W., et al, (1988, p.229-238, eng) 43-2996
Numerical model of ice regime analysis in a canal. Jin, G.H., et al, (1988, p.261-270, eng) 43-2999
Forecast of Yimin River in Eerguna water system. Xu, J.F., et al, (1988, p.271-281, eng) 43-3000
Dynamic model of sea ice forecast in the Bohai Sea. Liu, X.S., et al, (1988, p.282-292, eng) 43-3001
Englacial temperature distribution in summer polar ice cap. Greuell, W., et al, (1989, p 289-303, eng) 43-3190
Model of the mechanical motion of ice cover. Ivanov, A.I., (1988, p.57-62, rus) 43-3303
Current state of island ice caps in the Soviet Arctic. Govorukha, L.S., (1988, p.114-117, rus) 43-3313
Modeling Laurentian Great Lakes evaporation, heat storage, and energy fluxes. Croley, T.E., II, (1989, 48p., eng) 43-3473
Characteristics of the spring ice cover melting process in the Zeya reservoir. Semenenko, G.V., (1988, p.33-35, rus) 43-3636
Polar microwave brightness temperatures from Nimbus-7 SMMR. Comiso, J.C., et al, (1989, 82p., eng) 43-4155
Portable ten-meter instrument mast. Jairell, R.L., et al, (1984, p.168-171, eng) 43-4328
Climatic atlas of Alaskan coastal regions and shelf waters Brower, W.A., Jr., et al, (1988, 3 vols., eng) 43-4476

Ice cover distribution
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Ice cover effect
Proceedings. (1987, var.p., eng) 43-218
Ice problems at hydropower installations and hydraulic structures. Majewski, W., (1986, p.3-24, eng) 43-259
Effect of sea ice on Beaufort Sea coastal processes (1987, 104p. + appends, eng) 43-281
Fan-delta sedimentation in a Spitsbergen fjord. (Volumes I and II). Evans, R., (1988, 738p., eng) 43-344
Ice problem related to the regulation of rivers and the operation of hydropower stations. Billfalk, L., et al, (1985, p.41-49, swe) 43-359
Need of winter knowledge in the construction industry. Sjökvist, K., (1985, p.54-71, swe) 43-361
Tracks for increased mobility under winter conditions. Granlund, D., (1985, p.249-255, swe) 43-377
Depth-discharge relationships for ice-covered rivers Santeford, H.S., et al, (1987, p.144-153, eng) 43-397
Flow resistance due to floating partial ice covers Arisz, H., et al, (1987, p.178-191, eng) 43-400
Ice cover and stream flow in the Yukon River, 1983-84. Alford, M.E., et al, (1987, 63p., eng) 43-423
U.S. Marine Corps cold weather combat operations study. (1980, var.p., eng) 43-439
Disaster of snow and ice in the region of Dahinggan Mountains. Pang, G., (1987, p.53-54, chi) 43-484
On the calculation of static pressure due to expansion of ice on a reservoir. Zhang, D., (1987, p.83-91, chi) 43-490
Predicting flowrates in an ice covered stream Santeford, H.S., et al, (1984, p.1031-1043, eng) 43-668
Design of river intakes in cold climates. Hodgson, J.E., et al, (1984, p.1113-1127, eng) 43-674
Impulse wave propagation in ice covered tank: a mathematical analysis. Arunachalam, V.M., (1988, 31p. + append., eng) 43-764
DOD floating ice problems. Cox, G.F.N., (1987, p 151-154, eng) 43-853
Seismic and acoustic wave propagation: working group report. Albert, D.G., et al, (1987, p 253-255, eng) 43-858
Atmospheric remote sensing in arctic regions. Felde, G.W., et al, (1987, p.319-326, eng) 43-867
Space remote sensing workshop: working group report. Breslau, L.R., et al, (1987, p.333-339, eng) 43-869
Two-power law for analysis of velocity profiles in ice covered rivers. Papadakis, J.E., (1988, 13p. + append., eng) 43-932
Failure of spring turnover in Onondaga Lake, N.Y., U.S.A. Effler, S.W., et al, (1987, p 285-291, eng) 43-1075
Clouds and ice in relation to climate, 1977-1983 Herman, G.F., et al, (1984, 117p., eng) 43-1076
Seasonal sedimentation off the Great Whale River, Hudson Bay. D'Anglejan, B., et al, (1988, p.930-933, eng) 43-1131
Seasonal pH depressions in Wisconsin lakes caused by pCO2 increases. Kratz, T.K., et al, (1987, p.1082-1088, eng) 43-1198
Calcium carbonate supersaturation of Lake Sevan water. Alekin, O.A., et al, (1986, p.78-83, eng) 43-1370
Environmental protection of the BAM zone. Vorob'ev, V.V., ed, (1987, 167p., rus) 43-1435
Ice cover and stream flow in the Yukon River, 1985/86. Alford, M.E., et al, (1988, 36p., eng) 43-1440
Floods in cold climates. Church, M., (1988, p.205-229, eng) 43-1549
Carbon fixed by nitrifying bacteria during ice cover in McMurdo Sound. Priscu, J.C., et al, (1988, p.171-172, eng) 43-1638
Antarctic benthic and sea-ice microalgal interactions. Smith, G.A., et al, (1988, p.174-175, eng) 43-1640
Changes in photosynthetic metabolism of sea-ice microalgae. Palmisano, A.C., et al, (1988, p.176-177, eng) 43-1641
Photosynthesis by antarctic microalgae. Rivkin, R.B., et al, (1988, p.176-177, eng) 43-1642
Performance of riprap in northern climates. (1988, 124p. + 4 appends., eng) 43-1667
Design and test results of air cushion vehicles built by the A.M. Gorki Polytechnic Institute. Kirkin, S.F., (1988, p.249-265, eng) 43-1760
Outfall mixing design in shallow coastal water under Arctic ice cover. Jirka, G.H., et al, (1986, p.44-53, eng) 43-1827
Effect of thermal polynyas on runoff and wind flow in a reservoir. Pavlov, V.K., et al, (1986, p.49-55, rus) 43-1884
Antitank obstacles for winter use. Richmond, P.W., (1988, 11p., eng) 43-1997
Estimating Cn square over snow and sea ice from meteorological quantities Andreas, E.L., (1988, p 258-267, eng) 43-2025
DYE-2 and DYE-3—a 30 year engineering history. Osgood, S., et al, (1989, p.11-26, eng) 43-2085
Cold weather roofing failures. Dregger, P.D., et al, (1989, p.50-58, eng) 43-2088
Effects of ice on water levels in the upper Niagara River. Crissman, R.D., et al, (1989, p.141-150, eng) 43-2097
Using the Ground Emplaced Mine Scattering System in winter. Richmond, P.W., et al, (1988, 13p., eng) 43-2120
Computing stream discharge for ice-affected periods. Melcher, N.B., (1988, p.241-253, eng) 43-2175
Stream flow under ice conditions. Pelletier, P.M., (1988, p.255-282, eng) 43-2176
2-D modelling of river ice thermal melting. Sarraf, S., et al, (1988, p.417-433, eng) 43-2183
Generation of internal waves by sea ice. McPhee, M.G., et al, (1989, p.3287-3302, eng) 43-2396
Measuring the complex shear modulus of ice using the Fitzgerald apparatus. Clark, J.H., et al, (1989, p.31-35, eng) 43-2606
Radiometric analysis of the level of tropospheric refraction of radio waves in polar regions. Mikhailov, N.F., et al, (1988, p.90-95, rus) 43-2726
Antarctic winter; simulations with climatological and reduced sea-ice extents. Mitchell, J.F.B., et al, (1989, p.225-246, eng) 43-2836
Weddell Sea ice edge zone nutrient distribution and hydrography. Nelson, D.M., et al, (1989, p 191-209, eng) 43-2886
Variation in the stage of the ice period of the Yellow River. Wang, Y.G., et al, (1988, p.142-151, eng) 43-2988
Stream discharge during ice-affected periods Melcher, N.B., (1988, p.293-303, eng) 43-3002
River bed variation in sections susceptible to ice jamming. Ren, Z.W., (1988, p 326-335, eng) 43-3005
Effects of an ice cover on flow in a movable bed channel. Wuebben, J.L., (1988, p.137-146, eng) 43-3027
Ice-dominated shores of Canadian Arctic islands. Taylor, R.B., et al, (1987, p.33-48, eng) 43-3200
Pack ice drift off East Antarctica. Allison, I., (1989, p.1-8, eng) 43-3327
Ice cover effect on the variability of the constant of tides. Dvorkin, E.N., et al, (1989, p.76-85, rus) 43-3600
Reservoirs and water-containing structures. Dotsenko, T.P., ed, (1989, 190p. (pertinent, p.140-149), rus) 43-3628
Bioecology and sedimentation of Lake Hoare. Wharton, R.A., Jr., et al, (1989, p.305-320, eng) 43-3701
Ice resistance and its components. Ionov, B.P., (1988, 79p., rus) 43-3707
Cracking of roof felt caused by an ice-cover. Cederwall, K., et al, (1989, p.796-807, eng) 43-3778
Effect of polar ice on the North Pacific subtropical high Fang, Z.F., et al, (1987, p.190-195, eng) 43-3830
Sea ice and surface albedo in models of climate change. Ingram, W.J., et al, (1989, p 8609-8622, eng) 43-3848
Velocity and temperature distributions in fresh-water basins. Speranskaia, A.A., et al, (1987, p.23-33, eng) 43-3888
Ice and thermal characteristics in an unstable ice regime. Zhitskaia, N.V., (1987, p.39-46, eng) 43-3890
Thermal regime of reservoirs in the Georgian SSR. Metreveli, G.S., (1987, p.56-62, eng) 43-3892
Temperature influence on nitrogen physiology in sea-ice microalgae. Priscu, J.C., et al, (1989, p 443-446, eng) 43-4189
Continuous-distribution expression for velocity in ice-covered channels. Tsai, W.F., (1989, p.99-106, eng) 43-4395
Seasonal variation of photosynthetically active radiation in a lake. Rowe, T.G., (1987, p.95-103, eng) 43-4428
Comparative study of polar planktonic and sea ice microbial communities. Rivkin, R.B., et al, (1989, p.273-283, eng) 43-4483
Spectral evolution of wind-generated surface gravity waves in a dispersed ice field Masson, D., et al, (1989, p.43-81, eng) 43-4535
Early Martian environments: the antarctic and other terrestrial analogs. Wharton, R.A., et al, (1989, p.147-153, eng) 43-4580
Effects of water and ice on the scattering of diffuse reflectors. Jezek, K.C., et al, (1986, p 259-269, eng) 43-4640
Bidirectional reflectance of snow surfaces in the thermal infrared Gimmestad, G.G., et al, (1986, p.329-342, eng) 43-4647

Ice cover strength
Strength of ice in an artificially upbuilt ice crossing. Tiulina, T.IU., (1987, p.154-157, rus) 43-249
Numerical simulation of first-year sea ice. Cox, G.F.N., et al, (1988, p.12,449-12,460, eng) 43-721
Icebreakers and river ice strength IAkovlev, M.S., (1988, 2p., eng) 43-2140
Effects of icebreakers' forms on ice breaking capability Ionov, B.P., (1988, 12p., eng) 43-2142
Thermal ice thrust by expanding ice cover. Yamaoka, I., et al, (1988, p.473-482, eng) 43-2946
Strength profiles of Dakshin Gangotri Ice Shelf Sharma, S.S., (1989, p.289-299, eng) 43-3734
Experimental study on breaking ice cover Zuev, V.A., et al, (1984, 14p., eng) 43-3855
Flexural properties of freshwater ice sheets. Gow, A.J., et al, (1989, p.249-270, eng) 43-4446
See also: Ice strength

Ice cover thickness
Ice experiment. Zheleznov, S., et al, (1988, p.20-21, rus) 43-699

Ice cover thickness *(cont.)*
Numerical simulation of first-year sea ice. Cox, G.F.N., et al, (1988, p.12,449-12,460, eng) 43-721
Impact of external factors on marine hydraulic structures. Smirnov, G.N., ed, (1986, 178p., rus) 43-728
Pressure ridge effect on structures erected on the shelf. Vardanian, S S , et al, (1986, p.148-158, rus) 43-731
Geophysical investigations at the inland ice margin of the Pâkitsoq basin, central West Greenland. Thorning, L., et al, (1987, p.114-121, eng) 43-744
Electromagnetic reflection survey 1986 at the Inland Ice margin of the Pâkitsoq basin, central West Greenland Thorning, L., et al, (1987, p.87-95, eng) 43-750
Role of sea ice in the dynamics of the Arctic climatic system. Subbotin, V.V., (1988, p.82-97, rus) 43-762
Studying and forecasting the development of anomalous ice phenomena. Kovalev, E.G., (1988, p 28-32, rus) 43-800
Experience in real-time forecasting of the relief, level and drift of ice in Arctic seas with a 6-8 day lead. Vanda, IU.A., et al, (1988, p.41-45, rus) 43-802
Morphometric characteristics of ice pressure ridges in the Arctic Basin. Grishchenko, V.D., (1988, p.46-55, rus) 43-803
Statistical models of sea ice cover as navigation medium. Buzuev, A.IA., et al, (1988, p.120-130, rus) 43-810
Results of radar sounding of drifting sea ice from its surface. Bogatyrev, E.F., et al, (1988, p.148-151, rus) 43-813
Radar measurements of sea ice thickness from an icebreaker. Kralniukov, A.V., et al, (1988, p.152-156, rus) 43-814
Formulas for calculating volume of sea ice. Smirnov, V.I., (1987, p.24-28, rus) 43-888
Ice feature maps of the Arctic Ocean. LeSchack, L.A., (1987, p.373-383, eng) 43-915
Imjin River ice boom. Perham, R.E , (1988, 10p., eng) 43-1398
Spectral analysis of Canada Basin under-ice thickness data. Key, J.R., et al, (1988, p.1117-1120, eng) 43-1459
Periodicities and keel spacings of the ice bottom surface. Key, J.R., et al, (1989, p.1-10, eng) 43-1574
Dominion Range ice core. Mayewski, P.A., (1988, p.120-121, eng) 43-1629
Sand/ice interactions and sediment deposition in ice-covered lakes. Simmons, G.M., Jr., et al, (1988, p.217-220, eng) 43-1643
Ice thickness data, winter 1984-85. (1988, 71p., eng) 43-1731
Evaluation of sea ice thickness sensors. Rossiter, J.R., et al, (1988, 58p , eng) 43-1732
Commercial ice-breaking with a 7-tonne hovercraft. Jones, D., (1988, p.103-113, eng) 43-1753
Accuracy of information for ice load estimation. Mytarev, M.N., (1988, p.150-158, rus) 43-1779
Ice loads on hydraulic structures in the Volga River. Semenov, IU.A., (1988, p.165-171, rus) 43-1780
Radio echo-sounding as a glaciological technique—a bibliography. Macqueen, A.D., (1988, 37p., eng) 43-1806
Ice information during severe ice event, from SAR imagery. Carsey, F., et al, (1988, p.1431-1433, eng) 43-1893
Step frequency radar experiments on the antarctic sea ice. Uratsuka, S., et al, (1988, p.1703-1706, eng) 43-1900
Ice thickness and sea depth from seismic reflection measurements. Determann, J., et al, (1988, p.14-18, eng) 43-1937
Ice-thickness map of the west antarctic ice streams by radar sounding. Shabtaie, S., et al, (1988, p.126-136, eng) 43-1956
Special aspects of the central part of Filchner-Ronne Ice Shelf, Antarctica. Thyssen, F , (1988, p.173-179, eng) 43-1962
Ekström Ice Shelf, Antarctica Thyssen, F., et al, (1988, p.180-183, eng) 43-1963
Method for computing shallow ice-core depths. Whillans, I.M., et al, (1988, p.355-357, eng) 43-1993
Echo sounding data on ice thickness and motion at Mirnyy Station. Sheremet'ev, A.N., et al, (1989, p.47-54, eng) 43-2046
Using the Ground Emplaced Mine Scattering System in winter. Richmond, P W., et al, (1988, 13p , eng) 43-2120
Icebreakers and river ice strength. IAkovlev, M.S., (1988, 2p , eng) 43-2140
Increasing the ice propulsion capability of the icebreaker "Mudyug". Zakharov, B.N , et al, (1988, 8p , eng) 43-2141
Preliminary results of an experiment using a 16 ft x 50 ft long frazil collector line array. Perham, R.E., (1988, p.139-156, eng) 43-2169
Field investigation of frazil ice jam in Yellow River Sun, Z.C., et al, (1988, p.157-175, eng) 43-2170
Bedrock topography beneath Greenland ice sheet. Fisher, E., et al, (1989, p.2874-2882, eng) 43-2394
Measurement of characteristic length of floating ice sheets. Sodhi, D.S., (1987, n.p. (Ch.7), eng) 43-2431
Summary of India s geophysical programme in Antarctica. Gupta, H.K., (1989, p.153-170, eng) 43-2662
Glaciology of the east antarctic ice sheet at the Allan Hills. Faure, G., et al, (1987, p.74-75, eng) 43-2740
Sea-ice investigations during the Winter Weddell Sea Project. Ackley, S.F., et al, (1987, p.88-89, eng) 43-2749
Enigmatic basal sea-ice layer of the Filchner-Ronne Ice Shelf. MacAyeal, D.R., et al, (1987, p.89-91, eng) 43-2750
Ice thickness in McMurdo Sound. Leventer, A., et al, (1987, p.94-96, eng) 43-2752
Automation of radar measurements of the thickness of sea ice. Bogorodskiĭ, V.V., et al, (1987, p.982-985, eng) 43-2844
Ice conditions of Lake Ogawara. Hirayama, K., et al, (1988, p.415-426, eng) 43-2941
Step frequency radar experiments for the measurement of sea ice thickness Uratsuka, S., et al, (1988, p 643-650, eng) 43-2962
JARE glaciological research, Queen Maud Land, 1986-1987. Nishio, F., et al, (1989, 59p., eng) 43-3071
Steady-state coupled ice-ocean model Willmott, A J , et al, (1989, p.501-518, eng) 43-3293
Calculation of ice sheet thickness from mathematical models. Bitiukov, IU.N , et al, (1988, p.111-113, rus) 43-3312
Numerical models of ice-shelf flow: ideal/real. Lange, M.A., et al, (1989, p.97-103, eng) 43-3342
Ice velocity related to ice thickness in Wilkes Land Young, N W , et al, (1989, p.192-197, eng) 43-3357
Hydrological yearbook 1981-1983. Leppäjärvi, R., ed, (1987, 238p , eng) 43-3492
Bioecology and sedimentation of Lake Hoare. Wharton, R.A., Jr., et al, (1989, p.305-320, eng) 43-3701
Multi-year ice thickness in the Beaufort Sea. Dickins, D., (1989, p.54-64, eng) 43-3712
Relations between top and bottom ice topography. Johnsen, Å.S , (1989, p.77-86, eng) 43-3714
Structure of first year pressure ridges in the Baltic Sea. Kankaanpää, P., (1989, p 87-102, eng) 43-3715
Upward looking sonar ice draft series. Vinje, T., (1989, p.178-187, eng) 43-3723
Ice navigation conditions during summer 1976/77. Grigor'ev, IU.A., et al, (1988, p 83-93, rus) 43-3840
Free drift model for river ice cover formation. Ho, C.F., et al, (1988, p.140-151, eng) 43-4124
Penetrating radar sensing of oceanic and freshwater ice. Bogorodskiĭ, V.V , et al, (1987, 314p., eng) 43-4183
Morphology of a Baltic Sea ice pressure ridge. Kankaanpää, P., (1988, p.15-33, eng) 43-4380
Sea ice thickness data. the many vs. the few. Eicken, H., et al, (1989, p.495-498, eng) 43-4431
Drifter/modeling program of the Winter Weddell Sea Project 1986. Martinson, D.G., (1989, p.100-102, eng) 43-4436
Effects of icebreakers' forms on ice breaking capability. Ionov, B.P., (1988, 7p , eng) 43-4441
Variability in thickness of ice and snow in arctic seas. Appel', I.L., (1989, p.80-87, rus) 43-4551
See also: Glacier thickness
Ice cracks
Plotting a probability model of angular distribution of fractures in glacier ice. Ivanov, A.I., (1987, p.99-103, rus) 43-237
Numerical estimation of fracturing and banding in glaciers. Ivanov, A.I., et al, (1987, p.175-179, rus) 43-254
Analysis of strength reduction caused by systems of microcracks in ice. Cormeau, A., et al, (1986, p.179-195, eng) 43-268
Deformation and cracking of ice cover due to the icebreaker's motion. Koshkin, S.V., (1988, 5p., eng) 43-409
Role of fracture in limiting ice forces. Hallam, S.D., (1987, p.1-33, eng) 43-441
Numerical and finite element techniques in calculation of ice-structure interaction. Jordaan, I.J., (1987, p.119-155, eng) 43-446
Ice crushing by impact and indentation: a literature review. Jordaan, I.J., et al, (1988, 126p , eng) 43-679
Mechanics of destruction and some problems of ice destruction. Gol'dshteĭn, R.V., et al, (1987, 41p. + appends., eng) 43-719
Statistical analysis of fracture toughness and flexural strength of ice. Lal, M., (1988, 75p., eng) 43-774
Calculation of ice-structure loads Jordaan, I.J., (1987, p.193-232, eng) 43-907
Constitutive model for ice as a damaging visco-elastic material. Sjölind, S.-G., (1987, 3p., eng) 43-1107
Higher frequency ambient noise in the Arctic Ocean. Lewis, J K., et al, (1988, p 1444-1455, eng) 43-1209
Tensile strength of ice containing cracks; final report. Schulson, E.M., (1988, 7p., eng) 43-1701
Dynamics of the ice-crushing process Jordaan, I.J., et al, (1988, p.318-326, eng) 43-1988
Tensile strength of cracked ice. Schulson, E.M., et al, (1989, p.303-311, eng) 43-2242
Acoustic emission from the Arctic ice sheet. Langley, A.J., (1989, p.692-701, eng) 43-2401
Growth of radial cracks in ice sheets. Cocks, A C.F., (1989, p.7-12, eng) 43-2603
Crack nucleation in polycrystalline ice under compressive stress states. Kalifa, P., et al, (1989, p.13-21, eng) 43-2604
Mechanics of the fracture of equiaxed freshwater ice. Nixon, W.A., et al, (1989, p.23-29, eng) 43-2605
Rate-sensitive damage and cracking model for ice. Pulkkinen, E., (1989, p.47-53, eng) 43-2609
Mechanics of the multidirectional microcracking of ice. Santaoja, K., (1989, p.55-65, eng) 43-2610
Peak pressures from a damage model for ice in compression. McKenna, R.F., et al, (1989, p.67-73, eng) 43-2611
Damage mechanics model for uniaxial creep and cyclic loading of polycrystalline ice. Choi, K , et al, (1989, p.75-82, eng) 43-2612
Fracture toughness of S2 columnar freshwater ice. Dempsey, J.P., et al, (1989, p.83-89, eng) 43-2613
Failure analysis of impacting ice floes. Bhat, S.U., et al, (1989, p.275-285, eng) 43-2637
Estimate of the size of the damage zone beneath an indenter on ice. Parsons, B.L., (1989, p.411-417, eng) 43-2652
Failure mechanisms for laboratory, first-year and multi-year ice. Blanchet, D., et al, (1989, p.77-124, eng) 43-2815
Modelling of progressive damage in ice. Jordaan, I.J., et al, (1989, p.125-165, eng) 43-2816
Experimental results on the failure of polycrystalline ice under triaxial stress conditions. Rist, M.A., et al, (1988, p.118-127, eng) 43-2915
Continuum damage mechanics approach to describe the uniaxial microcracking of ice. Santaoja, K., (1988, p.138-151, eng) 43-2917
Fracture of S2 columnar freshwater ice: floating double cantilever beam tests. Bentley, D.L., et al, (1988, p.152-161, eng) 43-2918
Indentation and arrest stress intensity factors of first year columnar sea ice. Parsons, B.L., et al, (1988, p.502-511, eng) 43-2949
Analysis of observed failure mechanisms for laboratory, first-year and multi-year ice. Blanchet, D., et al, (1988, p.89-136, eng) 43-3026
New results in ice load predictions using the fracture mechanics approach. Wierzbicki, T., (1988, p.23-27, eng) 43-3498
Fracture of freshwater and urea model ice. Bentley, D.L., (1989, 142p , eng) 43-3610
Large fractures in multi-year Arctic pack ice. Miles, M.W., et al, (1989, p.103-112, eng) 43-3716
Fracture toughness of S2 columnar freshwater ice. Dempsey, J.P., et al, (1989, p.199-207, eng) 43-3725
Failure modes of an ice sheet on an inclined plane. Michel, B., et al, (1989, p.235-248, eng) 43-3729
Fracture of multi-year sea ice under triaxial stress. Sammonds, P R., et al, (1989, p.279-288, eng) 43-3733
Field instrument for fracture toughness testing of ice. Stehn, L., et al, (1989, p.300-310, eng) 43-3735
Plane strain fracture toughness K(IC) of sea ice. Zhang, M.Y., et al, (1989, p.332-341, eng) 43-3738
Cracking of roof felt caused by an ice-cover. Cederwall, K., et al, (1989, p.796-807, eng) 43-3778
Role of ice fracture in ice structure interactions. Duval, P., et al, (1989, 11p., fre) 43-4019
Crack formation in ice during compression. Epifanov, V.P., (1988, p.181-188, rus) 43-4156
Ice creep
Observed velocity fluctuations on a major antarctic ice stream. Stephenson, S.N., et al, (1988, p.695-697, eng) 43-339
Experimental investigations of the flow of ice. Jacka, T.H., (1987, 236p., eng) 43-501
Water ice phases II, III, and IV: plastic deformation and phase relationships. Durham, W.B., et al, (1988, p.10,191-10,208, eng) 43-506
Measuring the creep of ice in place. Shields, D., et al, (1988, p 703-713, eng) 43-656
Surface waveforms on the Ellesmere Island ice shelves and ice islands. Holdsworth, G., (1987, p.385-403, eng) 43-916
Mechanical properties of ice—laboratory testing and *in situ* testing. Fransson, L., et al, (1987, 9p. + append., eng) 43-1101
Constitutive modelling of brittle and ductile ice. Pulkkinen, E., (1987, ca20p., eng) 43-1105
Differential flow model for polycrystalline ice. Sunder, S.S., et al, (1989, p 45-62, eng) 43-1578
Crack-enhanced creep in polycrystalline material. Sinha, N.K., (1988, p.4415-4428, eng) 43-1792
Stresses and deformations in a first-year ice cover. Sayed, M., et al, (1988, p.726-734, eng) 43-1803
Closure rate of a 700 m deep bore hole at Mizuho Station, East Antarctica. Naruse, R., et al, (1988, p.100-103, eng) 43-1952
Fish antifreeze proteins and the creep of polycrystalline ice. Glen, J.W., et al, (1988, p.291-292, eng) 43-1983
Ice sheet temperature distribution and surface paleotemperature changes. Putikov, O.F., (1989, p.28-36, eng) 43-2044
Sharp cone testing of creep properties of frozen soils and ice. Ladanyi, B., et al, (1989, p.282-296, eng) 43-2110
Review of ice rheology for ice sheet modelling. Budd, W.F., et al, (1989, p.107-144, eng) 43-2362
Primary creep of polycrystalline ice under constant stress. Azizi, F., (1989, p.159-165, eng) 43-2364

Geometry, flow, and age of firn and ice in the Swiss Alps. Haeberli, W., et al, (1988, p.1-19, eng) 43-2594
Rate-sensitive damage and cracking model for ice Pulkkinen, E., (1989, p.47-53, eng) 43-2609
Damage mechanics model for uniaxial creep and cyclic loading of polycrystalline ice Choi, K., et al, (1989, p.75-82, eng) 43-2612
Comparing the creep behaviour of spray ice and polycrystalline freshwater ice Shields, D.H., et al, (1989, p.235-245, eng) 43-2632
Time dependent settlement of ice and earth offshore structures. Vinogradov, A.M., et al, (1989, p 263-268, eng) 43-2635
Constitutive relations for creep of ice. Jordaan, I.J., et al, (1988, p.47-58, eng) 43-3023
Analysis of observed failure mechanisms for laboratory, first-year and multi-year ice Blanchet, D., et al, (1988, p 89-136, eng) 43-3026
Extension of the Allan Hills triangulation network system Annexstad, J.O., et al, (1989, p.17-22, eng) 43-3078
Model of the mechanical motion of ice cover Ivanov, A.I., (1988, p.57-62, rus) 43-3303
Isotropic and anisotropic flow relations for ice dynamics Jacka, T.H., et al, (1989, p.81-84, eng) 43-3338
Numerical models of ice-shelf flow: ideal/real Lange, M.A., et al, (1989, p.97-103, eng) 43-3342
Cold room studies for snow and ice control on buildings. Lepage, M.F., et al, , 89, p.232-242, eng) 43-3568
Creep behavior of damaged ice under uniaxial compression Meyssonnier, J., et al, (1989, p.225-234, eng) 43-3728
Creep behavior of fresh water ice Palathingal, P., (1989, p.259-268, eng) 43-3731
Visco-plastic creep model for static ice loads analysis Xu, J.Z., et al, (1989, p.443-451, eng) 43-3747
Creep of ice measured with a pressuremeter. Discussion and authors' reply. Ladanyi, B., et al, (1989, p.328-330, eng) 43-3827
Primary creep parameters for ice as measured *in-situ*. Shields, D.H., et al, (1989, p.281-290, eng) 43-4448

Ice crossings

Strength of ice in an artificially upbuilt ice crossing. Tiulina, T.IU., (1987, p.154-157, rus) 43-249
Finite element analysis of floating ice sheets. Horrigmoe, G., et al, (1988, p.715-725, eng) 43-657
Improving transportation in the Yakut ASSR. Belinskii, B.V., (1987, p.31-54, rus) 43-1384
Effects of water speed and temperature on icing in thermal siphons. Vislobitskii, P.A., et al, (1988, p 629-634, eng) 43-2001
Construction of ice roads and crossings by means of dusting. Krasnookii, S.I., et al, (1988, p.38-39, rus) 43-2233
Hypothesis of dynamic ice bridge formation. Matoušek, V., (1988, p.249-260, eng) 43-2998

Ice crystal growth

Solid-liquid interface layer of growing ice crystals. Halter, P.U., et al, (1988, p.2622-2629, eng) 43-419
Experimental study of ice crystal growth below water saturation in the University of Utah supercooled cloud tunnel. Matsuo, T., et al, (1987, p.247-264, eng) 43-826
Parametrization of the precipitation processes in mixed and in ice clouds in numerical models. Sergeev, B.N., (1988, p.32-35, rus) 43-1078
Rheological properties of ice with the addition of surfactants. Dediulia, I.V., et al, (1987, p.485-489, eng) 43-1138
Ice crystal growth from vapor phase. Kuroda, T., (1984, p.552-572, eng) 43-1166
Metamorphism and classification of seasonal snow crystals. Colbeck, S.C., (1987, p 3-34, eng) 43-1215
Bibliography of needle ice. Lawler, D.M., (1988, p.295-310, eng) 43-1350
Dislocations in artificially grown single crystals of ice. Oguro, M., (1988, p.27-47, eng) 43-1415
Generation, multiplication and motion of dislocations in ice crystals. Fukuda, A., et al, (1988, p.69-96, eng) 43-1417
Ice crystal formation by aerosols in a convective cloud Klingo, V.V., et al, (1988, p.18-27, rus) 43-1429
Changes of microstructure of convective clouds by ice-forming aerosols. Klingo, V.V., (1988, p.28-33, rus) 43-1430
Ice crystal formation on AgI particles. Klingo, V.V., (1988, p 24-42, rus) 43-1431
Water adsorption on thin films of ice nucleating agents. Vlasov, S.A., et al, (1988, p.124-132, rus) 43-1432
Crystal structure of an antifreeze polypeptide. Yang, D.S.C., et al, (1988, p.232-237, eng) 43-1498
Ice nucleation and crystallization in water-glycerol mixtures. Vigier, G., et al, (1987, p.345-354, eng) 43-1566
Modeling of precipitation from a mixed cloud. Bakhanov, V.P., et al, (1988, p.12-24, rus) 43-1768
Characteristic growth processes of ice crystals on the antarctic ice sheet Nishimura, H., et al, (1988, p.104-108, eng) 43-1953
Growth rate of crystals within the surface-snow/firn layer in Wilkes Land, East Antarctica. Dahe, Q., et al, (1988, p.121-125, eng) 43-1955
Snow crystals. Kobayashi, T., et al, (1987, p 649-743, eng) 43-2014
Displacement of the crystallization front in the ice-water system. Potapenko, V.IU., et al, (1989, p.109-113, eng) 43-2054
Droplet accretion, rime growth, and secondary ice crystal formation Dong, Y.Y., et al, (1989, p.127-142, eng) 43-2159
Observation of ice pellets. Kimura, T., et al, (1984, p.802-808, eng) 43-2189
1982 diving program, Davis Perrin, R., (1983, p.18-20, eng) 43-2803
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Distribution of brine drainage channels in sea ice. Kawamura, T., (1988, p.219-228, eng) 43-2995
Simulation of experimental freshwater icicle growth with a simple 740 SNumerical model of freshwater icicle growth Johnson, K., et al, (1988, p.425-435, eng) 43-3014
Arabinoxylans from rye and wheat seed that interact with ice. Kindel, P.K., et al, (1989, p.173-185, eng) 43-3541
Evaporation and melting of ice crystals. Oraltay, R.G., (1989, 101p., eng) 43-3606
Dendritic crystal growth with convection in the melt. Ananth, R., (1989, 162p., eng) 43-3609
Convective diffusion and ice crystal habit. Pitter, R.L., (1980, p.281-288, eng) 43-3949
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Ice phase evolution in supercooled clouds. Hallett, J., et al, (1980, p.317-324, eng) 43-3951
Study of the initial stage of the accretion of ice. Nasello, O.B., et al, (1980, p.365-372, eng) 43-3954
Hyperfine bubble structures in ice grown by droplet accretion. Prodi, F., et al, (1980, p.373-384, eng) 43-3955
Effects of low temperatures on biological systems. Grout, B.W.W., ed, (1987, 560p., eng) 43-3979
Physico-chemical principles in low temperature biology. Taylor, M.J., (1987, p.3-71, eng) 43-3980
Atmospheric changes producing polar mesospheric clouds. Memmesheimer, M., et al, (1988, p.178-184, eng) 43-4376
Freezing of supercooled water drops in ionized air. Dubrovich, N.A., (1988, p.851-855, eng) 43-4548

Ice crystal nuclei

Frazil ice nucleation by ejecta from supercooled water. Gosink, J.P., et al, (1986, p 249-263, eng) 43-272
Nucleation of frost on cold surfaces. Sahin, A.Z., (1989, 225p., eng) 43-2887
Temperature dependence of ice nucleation. Katz, U., et al, (1980, p.267-273, eng) 43-3947
Ice phase evolution in supercooled clouds. Hallett, J., et al, (1980, p.317-324, eng) 43-3951
Supercooled warm rain process and the specification of freezing precipitation. Huffman, G.H., et al, (1988, p.2172-2182, eng) 43-4578

Ice crystal optics

Effect of the microstructure of supercooled clouds on albedo and radiation. Kondrat'ev, K.IA., et al, (1988, p.583-587, rus) 43-1905
Light scattering by oriented ice crystals. Petrushin, A.G., (1987, p 410-412, eng) 43-3090
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Ice crystal structure

Model for orientational defects in quasi-one-dimensional ice crystals. IAnovitskii, O.E., et al, (1988, p 69-81, eng) 43-9
New high-pressure phases of ice. Demontis, P., et al, (1988, p.2284-2287, eng) 43-21
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Structure of upper zones of the Severnaya Zemlya glaciers. Govorukha, L.S., et al, (1987, p.86-88, rus) 43-233
Some observations on the character of snow. Townsend, R.A., et al, (1987, p.48-53, eng) 43-388
Pressure dependence of the elastic constants of ice Ih. Gagnon, R.E., et al, (1988, p.4522-5428, eng) 43-1030
Influence of the ice crystal form transformation on the spectrum of precipitation particles. Dorman, B.A., (1988, p.62-69, rus) 43-1079
Ice molecular reorientation by proton and deuterium magnetic resonance. Wittebort, R.J., et al, (1988, p.5668-5671, eng) 43-1133
Study of the ice cover in Igloolik Bay. Murat, J.R., et al, (1988, p.239-249, eng) 43-1345
Lattice defects in ice crystals—X-ray topographic observations. Higashi, A., ed, (1988, 156p., eng) 43-1413
Dislocations in natural ice crystals. Fukuda, A., et al, (1988, p.13-25, eng) 43-1414
Stacking faults in ice crystals. Oguro, M., et al, (1988, p.49-67, eng) 43-1416
Observations of large-angle grain boundaries in ice crystals. Hondoh, T., (1988, p.129-146, eng) 43-1419
Theory and methods of producing artificial ice. Smorygin, G.I., (1988, 280p., rus) 43-1439
MNDO study of linear-chain ice crystal Choe, M.S., et al, (1988, p.7379-7384, eng) 43-2026
Sharp cone testing of creep properties of frozen soils and ice. Ladanyi, B., et al, (1989, p.282-296, eng) 43-2110
Some replica possibilities for electron-microscope investigations of ice crystal morphology Stoianova, V., et al, (1988, p.1431-1436, eng) 43-2309
Science of ice Maeno, N., (1988, 229p., rus) 43-2327
Review of ice rheology for ice sheet modelling. Budd, W.F., et al, (1989, p.107-144, eng) 43-2362
Tensile strength test for multi-year sea ice. Sinha, N.K., (1989, p.1-6, eng) 43-2602
Crack nucleation in polycrystalline ice under compressive stress states. Kalifa, P., et al, (1989, p.13-21, eng) 43-2604
Mechanics of the fracture of equiaxed freshwater ice. Nixon, W.A., et al, (1989, p.23-29, eng) 43-2605
Experimental study on properties of multi-layer sea ice of Bohai Sea. Li, H.S., et al, (1989, p.43-46, eng) 43-2608
Damage mechanics model for uniaxial creep and cyclic loading of polycrystalline ice. Choi, K., et al, (1989, p.75-82, eng) 43-2612
Fracture toughness of S2 columnar freshwater ice. Dempsey, J.P., et al, (1989, p.83-89, eng) 43-2613
Comparing the creep behaviour of spray ice and polycrystalline freshwater ice. Shields, D.H., et al, (1989, p.235-245, eng) 43-2632
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Emerging meteorite: crystalline structure of the enclosing ice Gow, A.J., et al, (1989, p 87-91, eng) 43-3079
High pressure ice Klein, M.L., et al, (1989, p 441-454, eng) 43-3248
New relaxation process in KOH-doped ice single crystal. Kawada, S., et al, (1989, p.54-57, eng) 43-3828
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Aerosol particle collection by falling ice crystals. Miller, N.L., et al, (1989, p.1656-1663, eng) 43-4419
Implications of hydrochloric acid in ice for ozone depletion. Wolff, E.W., et al, (1989, p.487-490, eng) 43-4430
Differential flow in orthotropic polycrystalline ice. Shyam Sunder, S., et al, (1989, p.223-235, eng) 43-4444
On spatial arrangement of crystalline structure of ice in antarctic seas. Strakhov, M.V., (1989, p.67-70, rus) 43-4542
Efficiencies of the ASCME and PMS aspirator hydrometeor instruments. Norment, H.G., (1986, p.57-75, eng) 43-4627
Observations of the backscatter from snow at millimeter wavelengths. Berger, R.H., et al, (1986, p.311-316, eng) 43-4644

Ice crystals

Theoretical investigation of the collection of aerosol particles by falling ice crystals. Miller, N.L., (1988, 235p., eng) 43-340
Airborne lidar studies of Arctic polar stratospheric clouds. Poole, L.R., (1988, 237p., eng) 43-341

Ice crystals *(cont.)*

Influence of the ice crystal form transformation on the spectrum of precipitation particles. Dolman, B.A., (1988, p 62-69, rus) 43-1079

Red emission from pulse irradiated H2O ice. Quickenden, T.I., et al, (1988, p.403-412, eng) 43-1135

Interactions between dislocations and point defects in ice crystals Oguro, M , et al, (1988, p 97-128, eng) 43-1418

Light scattering at the surface of growing crystals. Mazur, P., et al, (1988, p.5267-5274, eng) 43-1423

Dynamic light scattering at a growing crystal interface. ice-water system. Vesenka, J.P., et al, (1988, p.5310-5315, eng) 43-1424

Experimental investigation of Arctic haze at Alert, N.W.T., March 1985. Trivett, N.B.A., et al, (1988, p.341-376, eng) 43-1427

Differential flow model for polycrystalline ice. Sunder, S S , et al, (1989, p.45-62, eng) 43-1578

Unusual ice crystals in central Antarctica. Ostroumov, M.N., et al, (1988, p.97-101, rus) 43-1766

Effect of crystal fragmentation on the luminescence from pulse-irradiated H2O ice. Bakker, M.G., et al, (1988, p.767-772, eng) 43-1799

Estimation of rainfall rates from passive microwave remote sensing Sharma, A K , (1988, 220p , eng) 43-1916

Fish antifreeze proteins and the creep of polycrystalline ice Glen, J.W , et al, (1988, p 291-292, eng) 43-1983

Photochemistry of solid ozone Sedlacek, A J , et al, (1989, p.509-511, eng) 43-2202

Depolarization of radio waves due to ice particles. Maekawa, Y., et al, (1988, p.1272-1275, eng) 43-2279

Primary creep of polycrystalline ice under constant stress Azizi, F., (1989, p.159-165, eng) 43-2364

Impact of ice-supersaturated layers on atmospheric radiance. Cutten, D.R., (1989, p.179-193, eng) 43-2407

New transformations between crystalline and amorphous ice. Hemley, R.J., et al, (1989, p.638-640, eng) 43-2585

Concentration and size distribution of large crystals (l>200 micrometer) in upper air clouds Kosarev, A.L , (1988, p.3-14, rus) 43-2710

Terminal velocity adjustments for plate-like crystals and graupel. Beard, K.V., et al, (1988, p.3515-3518, eng) 43-2773

Phase transition of ice precipitated in an aqueous ionic glassy matrix Carmona, P , et al, (1989, p 11-20, eng) 43-2775

Scanning electron microscopy of ice in cement paste. Monteiro, P.J M , et al, (1989, p.306-314, eng) 43-2894

Ice crystal and water drop velocities. Nisbet, J.S., (1989, p.11-29, eng) 43-2902

Growth and precipitation of ice crystals in supercooled fog. Pashchenko, A.E , et al, (1988, p.75-77, eng) 43-2905

Theory for frazil distribution in turbulent flow. Tsang, G., (1988, p.152-169, eng) 43-2989

Icing technology bibliography (1987, 149p , eng) 43-3411

Airborne lidar observation of clouds in the antarctic troposphere. Morley, B.M., et al, (1989, p.491-494, eng) 43-4345

Nonmonotonic kinetics of heterogeneous nucleation of ice crystals in a supercooled fog Gorbunov, B.Z., et al, (1989, p.1017-1022, eng) 43-4379

Ice cutting

Iceberg cutting with a hot wire Gammon, P H , et al, (1988, p.261-278, eng) 43-1347

Increasing the ice propulsion capability of the icebreaker "Mudyug". Zakharov, B.N., et al, (1988, 8p , eng) 43-2141

Laboratory investigation of ice cutting with a lightweight electromechanical drill. Fujii, Y., et al, (1988, p.286-301, jpn) 43-2329

Penetration of floating ice sheets with cylindrical indentors Sodhi, D.S , (1989, p 377-382, eng) 43-2648

Experiments on the cutting process in ice Ueda, H T , et al, (1989, 36p , eng) 43-3895

Ice dams

Ice jams and damming of flow-controlled rivers. Karnovich, V.N., et al, (1988, p 598-604, eng) 43-138

Regime of glacier-dammed lakes in the intermontane basins of southern Siberia Rudoĭ, A.N , (1987, p.36-44, rus) 43-225

Ice cover and stream flow in the Yukon River, 1983-84. Alford, M.E., et al, (1987, 63p., eng) 43-423

Cause analysis of flooded ice in the lower reaches of Huanghe and its preventive measures. Wang, W., (1987, p.111-116, chi) 43-495

Ice jams of the Great Ice Dam, Heilongjiang. Liu, G., et al, (1987, p.117-121, chi) 43-496

Hubbard Glacier flow and closure of Russel Fiord, Alaska. Mayo, L.R., (1988, p.4-17, eng) 43-510

Deglaciation pattern and ice dammed lakes in Finland. Johansson, P., (1988, p.541-552, eng) 43-2077

Breakout of fiord dammed by glacier near Yakutat, Alaska. Mayo, L.R., (1988, p.42-49, eng) 43-2138

Ice jams and floods on the Lower Vistula River. Grześ, M., (1986, p.51-67, eng) 43-2800

Glacial mud flows and outburst floods from icebound lakes in China. Xu, D.M., et al, (1988, p.284-289, chi) 43-2870

Control and prevention of leaking from ice dams. Marne, H., de, (1989, p.473-482, eng) 43-3591

Ice dating

Radiocarbon data on ice-enclosing deposits and age of bedded ice. Karpov, E.G., (1985, p.44-49, eng) 43-663

Glacier dynamics on the Terskey-Alatau Range from lichenometric data Glazovskiĭ, A.F., et al, (1988, p.113-119, rus) 43-946

Prospects of using oxygen isotopes for dating layers of "warm" glaciers. Bazhev, A B , (1987, p 307-310, eng) 43-1086

Study of antarctic meteorites and polar ice using radionuclides. Elmore, D , et al, (1988, p.85-86, eng) 43-1617

Uranium-series dating of antarctic ice Fireman, E.L., (1988, p.118-119, eng) 43-1628

Oxygen-isotope studies and isotopic dates from Antarctica. Grootes, P.M , et al, (1988, p.122, eng) 43-1630

Isotopic analysis of ground ice from arctic Canada Lorrain, R , (1987, p.37-45, fre) 43-2067

Ur-series dated ice, 100,000 to 350,000 yr old at Allan Hills. Fireman, E.L , (1987, p.74-77, eng) 43-2741

Age of the last glaciation in northern East Chukotka. Laukhin, S.A., et al, (1989, p.136-140, rus) 43-3072

Correlation of tephra layers in antarctic ice by trace element abundances and refractive indices of glass shards. Fukuoka, T , et al, (1987, p 103-118, eng) 43-3409

Environmental record in glaciers and ice sheets Oeschger, H., ed, (1989, 403p , eng) 43-3677

Transformation of snow to ice and the occlusion of gases. Schwander, J , (1989, p.53-67, eng) 43-3680

Dating by physical and chemical seasonal variations and reference horizons. Hammer, C.U., (1989, p.99-121, eng) 43-3683

Dating of ice by radioactive isotopes. Stauffer, B , (1989, p.123-139, eng) 43-3684

Dating by ice flow modeling. Reeh, N., (1989, p.141-159, eng) 43-3685

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How can an ice core chronology be established. Budd, W.F., et al, (1989, p.177-192, eng) 43-3687

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Ice deformation

Experience from ice reinforcement tests. Fransson, L., (1985, p.281-290, swe) 43-380

Deformation and cracking of ice cover due to the icebreaker's motion. Koshkin, S.V., (1988, 5p , eng) 43-409

Experimental investigations of the flow of ice. Jacka, T.H., (1987, 236p., eng) 43-501

Water ice phases II, III, and IV: plastic deformation and phase relationships. Durham, W.B., et al, (1988, p.10,191-10,208, eng) 43-506

Compressive strength, deformation and Poisson's ratio of iceberg ice. Sinha, N.K., et al, (1987, p.413-429, eng) 43-918

Tectonic processes in a surge-type glacier. Sharp, M., et al, (1988, p.499-515, eng) 43-1466

Sea-ice pressure ridge microbial communities. Ackley, S.F., (1988, p.172-174, eng) 43-1639

Crack-enhanced creep in polycrystalline material. Sinha, N.K., (1988, p.4415-4428, eng) 43-1792

Stresses and deformations in a first-year ice cover. Sayed, M., et al, (1988, p.726-734, eng) 43-1803

Structure and deformation in a propagating surge front. Pfeffer, W.T., (1988, 159p., eng) 43-1911

Relative importance of lateral and vertical shear on Rutford Ice Stream, Antarctica. Frolich, R.M., et al, (1988, p.19-22, eng) 43-1938

Two-dimensional deformation patterns in sea ice. Erlingsson, B., (1988, p.301-308, eng) 43-1986

Snow control on floating ice sheets. Nelson, W.G., et al, (1989, p.161-169, eng) 43-2099

Strength and stability of framing for ice strengthening. Daley, C., et al, (1988, 37p., eng) 43-2147

Use of foil strain gauges in ice over a wide loading rate. Sinha, N.K , (1989, p.145-158, eng) 43-2363

Mechanics of the multidirectional microcracking of ice. Santaoja, K , (1989, p 55-65, eng) 43-2610

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Failure mechanisms for laboratory, first-year and multi-year ice. Blanchet, D., et al, (1989, p.77-124, eng) 43-2815

Modelling of progressive damage in ice. Jordaan, I.J., et al, (1989, p.125-165, eng) 43-2816

Continuum damage mechanics approach to describe the uniaxial microcracking of ice. Santaoja, K., (1988, p.138-151, eng) 43-2917

Analysis of observed failure mechanisms for laboratory, first-year and multi-year ice. Blanchet, D., et al, (1988, p.89-136, eng) 43-3026

Internal friction characteristics of sea ice. Bogorodskiĭ, V.V., et al, (1983, 8p., eng) 43-3171

Tidal jacking of nearshore ice. Stander, E., et al, (1987, p.381-392, eng) 43-3202

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Ice motion and deformation in the Weddell Sea. Wadhams, P., et al, (1989, p.178-186, eng) 43-3355

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Failure modes of an ice sheet on an inclined plane. Michel, B., et al, (1989, p.235-248, eng) 43-3729

Creep behavior of fresh water ice. Palathingal, P., (1989, p.259-268, eng) 43-3731

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Fracture of multi-year sea ice under triaxial stress. Sammonds, P.R., et al, (1989, p.279-288, eng) 43-3733

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Damage to polycrystalline ice under moderate pressure Stone, B.M., et al, (1989, p.408-419, eng) 43-3744

Ice failure model incorporating size effects. Sayed, M., et al, (1989, p.596-605, eng) 43-3761

Strength and deformation of spray ice. Chen, A.C.T., et al, (1989, p 681-693, eng) 43-3768

Force budget. 1. Theory and numerical methods. Van der Veen, C.J., et al, (1989, p.53-60, eng) 43-4141

Force budget. 2. Two-dimensional flow. Van der Veen, C.J., et al, (1989, p.61-67, eng) 43-4142

Force budget. 3. Three-dimensional flow. Whillans, I.M., et al, (1989, p.68-80, eng) 43-4143

Ice flow over a bump. experiment and numerical simulations. Meyssonnier, J., (1989, p.85-97, eng) 43-4145

Shear-creep system for studying grain-boundary behaviour in ice. Ignat, M., et al, (1989, p.140-142, eng) 43-4150

Crack formation in ice during compression. Epifanov, V.P., (1988, p.181-188, rus) 43-4156

Steady thermomechanical flow along two-dimensional flow lines in large grounded ice sheets. Dahl-Jensen, D , (1989, p.10,355-10,362, eng) 43-4344

Urey Prize lecture. water on Mars. Squyres, S.W , (1989, p.229-288, eng) 43-4390

Differential flow in orthotropic polycrystalline ice. Shyam Sunder, S , et al, (1989, p.223-235, eng) 43-4444

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Ice density

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Ice budget of the Greenland Sea. Moritz, R E., (1988, 117p., eng) 43-780

Thermophysics of stratified fresh-saline antarctic lakes. Krass, M.S., (1988, p.76-89, rus) 43-796

Effect of stratigraphy on radar-altimetry data collected over ice sheets. Jezek, K.C., et al, (1988, p.60-63, eng) 43-1945

Transformation of ice VIII to amorphous ice Klug, D D , et al, (1989, p.2390-2392, eng) 43-2903

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Field determination of ice jam porosity Prowse, T D , (1988, p.316-325, eng) 43-3004

Temperature, salinity and density of fast ice in Liaodong Bay. Li, Z.J., et al, (1989, p.218-224, eng) 43-3727

Ice detection

Remote sensing of extreme ice hazards Leavitt, E , et al, (1987, p.335-347, eng) 43-911

New England mountain icing climatology. Ryerson, C.C., (1988, 35p , eng) 43-1339

Atmospheric icing and broadcast antenna reflections. Ryerson, C.C., (1988, 13p., eng) 43-1400

City, two states adopt pavement precip system. Leicht, N., (1988, p.133-135, eng) 43-1854

Radar detection of ice masses. Klein, K., et al, (1988, 240p + append., eng) 43-2257

Icebergs in the Barents Sea Vinje, T.E., (1989, p.139-145, eng) 43-2620

Remote sensing of road surface condition. Haavasoja, T , (1986, 8p., eng) 43-2758

Ice detection system in Wales. Symons, L., et al, (1986, 11p., eng) 43-2763

Weather monitoring equipment and highway maintenance Chorlton, E., et al, (1986, 6p., eng) 43-2764

Observations of ice particles in clear air. Barnes, A.A., Jr , (1980, p.311-315, eng) 43-3950

Algorithm for snow and ice detection using AVHRR data. Gesell, G , (1989, p.897-905, eng) 43-4104

Ice deterioration

Evidence from Fram Strait (78N) for early glaciation. Jones, G.A., et al, (1988, p.56-59, eng) 43-783

Disintegration of the Larsen Ice Shelf in Antarctica. Zakharov, V.G., et al, (1988, p.105-108, rus) 43-943

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Ice drills
Monitoring of environmental background pollution. Vol.4. Izrael', IU.A., ed, (1987, 384p., rus) 43-26
Distribution of macro- and microelements in ice of the Vavilov Glacier. Korzun, A.V., et al, (1987, p.239-245, rus) 43-27
Mechanical core drilling on antarctic ice shelves. Kudriashov, B.B., et al, (1988, p 57-61, rus) 43-794
Structure of the Davydov glacier from data of radar echo sounding and thermal drilling. Vasilenko, E.V., et al, (1988, p.208-215, rus) 43-964
Stratigraphy of the central part of Vavilov Glacier (Severnaya Zemlya) Korotkevich, E.S., et al, (1989, p.1-20, eng) 43-2042
Update on portable hot-water sea ice drilling. Govoni, J.W., et al, (1989, p 175-178, eng) 43-2366
Ice-penetrating sonobuoy system breaks the High Arctic barrier. Barrette, J.R., et al, (1988, p.63-67, eng) 43-2572
Drill-anchor for iceberg towing. Kolle, J.J., (1989, p.469-476, eng) 43-2659
Ice management in the Barents Sea Jensen, H., et al, (1989, p.1107-1117, eng) 43-3807

Ice edge
Nutrient regimes in the marginal ice zone of the Greenland Sea in summer. Spies, A., et al, (1988, p.195-204, eng) 43-455
Physical oceanography of the northern Baffin Bay-Nares region. Addison, V.G., Jr., (1987, 108p., eng) 43-517
Transversal jets detected on satellite images in marginal ice zones. Ginzburg, A.I., (1988, p.3-10, rus) 43-588
Aerial surveillance system for ice management in the marginal ice zone. Rudkin, P., et al, (1988, p.471-483, eng) 43-641
KRMS GEOSAT-LIMEX '87 quick look report Farmer, L.D., et al, (1988, 47p., eng) 43-707
Mesoscale ocean eddy interactions with a marginal ice zone. Smith, D.C., IV, et al, (1988, p.12,461-12,473, eng) 43-722
Phytoplankton within an antarctic ice edge Sullivan, C.W., et al, (1988, p.12,487-12,498, eng) 43-723
Geophysical investigations at the inland ice margin of the Pâkitsoq basin, central West Greenland. Thorning, L., et al, (1987, p.114-121, eng) 43-744
Electromagnetic reflection survey 1986 at the Inland Ice margin of the Pâkitsoq basin, central West Greenland Thorning, L., et al, (1987, p.87-95, eng) 43-750
Long range forecasting of ice conditions in the Barents and Kara seas. Gudkovich, Z.M., et al, (1988, p.32-40, rus) 43-801
Analyzing the probability and statistical characteristics of sea ice compaction. Borodachev, V.E., (1988, p.103-120, rus) 43-809
Multi-year ice statistics Spedding, L.G., et al, (1987, p 81-120, eng) 43-904
Sea ice, climate and Fram Strait. Hunkins, K., (1985, p.50-52, eng) 43-1157
Roll vortices during Arctic cold air outbreaks over open water Hein, P.F., et al, (1988, p 177-199, eng) 43-1378
Estimating turbulent surface heat fluxes over polar, marine surfaces. Andreas, E.L., (1988, p 65-68, eng) 43-1495
Chlorophyll *a* distribution near an advancing ice edge: AMERIEZ, 1986. Smith, W.O., et al, (1988, p.163-164, eng) 43-1635
Microalgae at the ice edge in the northern Weddell Sea. Fryxell, G.A., (1988, p.166-168, eng) 43-1636
Microheterotrophs in the ice edge zone: an AMERIEZ study Garrison, D.L., et al, (1988, p.169-171, eng) 43-1637
Interactions between air, water, and sea ice in polar regions. Augstein, E., (1988, p.535-543, ger) 43-1668
Water temperature in the polar zone of the Greenland Sea. Blinov, N.I., et al, (1986, p 68-81, rus) 43-1885
Mapping of seasonal sea ice off Labrador with C-band SAR imagery. Holt, B., et al, (1988, p.1423-1424, eng) 43-1891
SAR imagery of the Grand Banks pack ice pack and its relationship to surface features. Argus, S.D., et al, (1988, p.1425-1428, eng) 43-1892
SAR imaging of ocean waves in the Marginal Ice Zone Lyden, J., et al, (1988, p.1435-1437, eng) 43-1894
Method to forecast open pack ice speed of motion using remotely-sensed data Feldman, U., (1988, p.1695-1702, eng) 43-1899
Toward the automated use of remote sensing data in operational ice forecasting. McNutt, L., et al, (1988, p.1713-1715, eng) 43-1902
SPRI participation in the winter Marginal Ice Zone Experiment, MIZEX-87 Rottier, P., (1989, p 33-36, eng) 43-2218
Anomalous development of the Pacific and Balleny ice massifs during the 1986 cruise Lutsenko, E.I., (1988, p.58-62, rus) 43-2223
Life at the ice edge. Sakshaug, E., et al, (1989, p.60-67, eng) 43-2446
Measurements of ridge sails in the Beaufort Sea. Sayed, M., et al, (1989, p.16-21, eng) 43-2706
Numerical model of the atmospheric boundary layer over a marginal ice zone. Kantha, L.H., et al, (1989, p 4959-4970, eng) 43-2723
Weddell Sea ice edge zone nutrient distribution and hydrography. Nelson, D.M., et al, (1989, p.191-209, eng) 43-2886
Ocean heat flux in northern seas. Häkkinen, S., et al, (1989, p.6145-6157, eng) 43-3199
Steady-state coupled ice-ocean model. Willmott, A.J., et al, (1989, p.501-518, eng) 43-3293
Reflection of ocean waves related to ice edge dynamics. Squire, V.A., (1989, p.157-161, eng) 43-3352
Recent biogenic sedimentation on the antarctic continental margin. Leventer, A.R., (1988, 238p., eng) 43-3521
NOAA satellite observations of marginal ice zone in Fram Strait. (1988, 132p, eng) 43-3959
Ice-ocean mixed layer model of the marginal ice zone. Ikeda, M., (1989, p.9699-9709, eng) 43-3961
Winter Weddell Sea Project 1986—Physical oceanography during leg V/2. Huber, B.A., et al, (1989, p.97-98, eng) 43-4435
Sediment fluxes beneath fast ice: October 1986 through February 1987. Dunbar, R.B., et al, (1989, p.112-115, eng) 43-4437
Two-dimensional coupled ice-ocean model of the Bering Sea Marginal Ice Zone. Kantha, L.H., et al, (1989, p.10,921-10,935, eng) 43-4528

Ice elasticity
Elasticity of ice sheets subjected to loads. Newbury, G.S., et al, (1988, p 691-701, eng) 43-655
On the elasticity of ice plates. Gold, L.W., (1988, p.1080-1084, eng) 43-2699
Flexural properties of eastern Bohai one-year sea ice. Shen, W., et al, (1988, p.199-205, eng) 43-2922
Elasto-plastic analysis of ice force on a circular pile. Tanaka, S., et al, (1988, p.351-360, eng) 43-2935
Constitutive relations for creep of ice. Jordaan, I.J., et al, (1988, p.47-58, eng) 43-3023
Internal friction characteristics of sea ice. Bogorodskiĭ, V.V., et al, (1983, 8p., eng) 43-3171
Elastic properties of frazil ice from the Weddell Sea, Antarctica. Lange, M.A., et al, (1989, p.208-217, eng) 43-3726
Elastic coefficients of Bohai Sea ice. Shen, W., et al, (1989, p.321-331, eng) 43-3737

Ice electrical properties
Light emission from colliding ice particles. Keith, W.D., et al, (1988, p.362-364, eng) 43-1145
Bridge measurements of conductive dielectrics by layered capacitor. Gross, G.W., et al, (1988, p 387-396, eng) 43-1314
Thickness-dependent electrical conduction of polycrystalline ice films. Chrzanowski, J., (1988, p.1058-1060, eng) 43-1475
Microwave dielectric properties of low-salinity sea ice Hallikainen, M.T., et al, (1988, p.419-420, eng) 43-1518
Protonic conductivity of heavily KOH-doped ice. Zaretskiĭ, A.V., et al, (1988, p.373-381, eng) 43-1711
Dielectric and scattering properties of young snow-covered sea ice. Drinkwater, M.R., et al, (1988, p 274-282, eng) 43-1981
Portable digital data-acquisition system for surface-based ice-radar studies. Jacobel, R.W., et al, (1988, p.349-354, eng) 43-1992
Electrical properties of model ice. Inkpen, S., et al, (1989, p.201-209, eng) 43-2369

Ice erosion
New construction material for offshore application. Thompson, E.J., et al, (1988, p.35-46, eng) 43-153
Fossil glacial cirques at low altitudes in Sweden. Rudberg, S., (1985, p.19-25, swe) 43-1011
Shore ice action in a tidal marsh. Dionne, J.C., (1989, p.281-293, eng) 43-2405
Periglacial shore erosion of Saint Lawrence Estuary. Brodeur, D., (1987, p.411-425, fre) 43-3203

Ice evaporation
See also: Ice sublimation

Ice floes
MIZEX: Ice floe trajectories through the Greenland Sea. Symonds, G., et al, (1985, 68p., eng) 43-286
Impact of ice floes against hydrotechnical structures. Andreev, R.L., et al, (1987, 3p., eng) 43-608
Loads due to the impact of a ship against an ice floe edge Kurdiumov, V.A., et al, (1987, 8p., eng) 43-609
Probabilistic design for drifting Arctic ice features. Mizikos, J.P., et al, (1988, p.179-190, eng) 43-620
Ice loads and the requirements for hulls of icebreakers. Segal, Z., (1987, p.31-32, rus) 43-697
Sea ice effect on oscillations of cylindrical drilling-platform supports. Khrapatyĭ, N.G., et al, (1986, p.34-41, rus) 43-729
Ice effect on reinforced concrete supports of offshore drilling structures. Shmaevich, L.I., (1986, p.134-148, rus) 43-730
Pressure ridge effect on structures erected on the shelf. Vardanian, S.S., et al, (1986, p.148-158, rus) 43-731
Method to forecast open pack ice speed of motion using remotely-sensed data. Feldman, U., (1988, p.1695-1702, eng) 43-1899
Constrained cluster analysis and image understanding. Banfield, J.D., (1988, 105p., eng) 43-1912
Ice-ocean circulation and floe movement model. Bruno, M.S., et al, (1989, p.2065-2077, eng) 43-2004
Shore ice action in a tidal marsh. Dionne, J.C., (1989, p.281-293, eng) 43-2405
Eulerian-Lagrangian model for the prediction of ice hazards in shallow waters. Bruno, M.S., (1989, p.229-233, eng) 43-2631
Failure analysis of impacting ice floes. Bhat, S.U., et al, (1989, p.275-285, eng) 43-2637
Dynamic ride up and crushing of short ice ridges on conical structures. Nordgren, R.P., et al, (1989, p.287-291, eng) 43-2638
Measurements of ice impact forces on a vertically-faced bridge pier Frederking, R., et al, (1989, p.319-323, eng) 43-2642
Analytical investigation of ship resistance in broken or pack ice. Aboulazm, A.F., et al, (1989, p.359-363, eng) 43-2646
Design of the Great Belt western bridge for ice forces. Christensen, F.T., et al, (1989, p.365-376, eng) 43-2647
Earthquake response characteristics of offshore structures in the presence of ice floes. Adachi, H., et al, (1988, p.314-323, eng) 43-2932
Characteristics of ice conditions based on aerial photography. Starosolszky, O., et al, (1988, p.611-622, eng) 43-2959
Dynamic model of sea ice forecast in the Bohai Sea. Liu, X.S., et al, (1988, p.282-292, eng) 43-3001
Laboratory study of transverse velocities and ice jamming in a river bend. Zufelt, J.E., et al, (1988, p.189-197, eng) 43-3032
Bibliography of remote sensing, mapping and characterization of sea ice. (1989, 114p., eng) 43-3467
Limit force loads and measurements of pack ice driving forces in the Beaufort Sea. Croasdale, K.R., et al, (1988, p 5-11, eng) 43-3496
Evaluation of a water jet barrier in ice conditions. Laperriere, F., (1988, p.157-159, eng) 43-3650
Development of ice drift models for the Barents Sea. Carstens, T., et al, (1989, p.31-43, eng) 43-3710
Observations of ice floe stress in the Eastern Arctic. Coon, M.D., et al, (1989, p.44-53, eng) 43-3711
Multi-year ice thickness in the Beaufort Sea. Dickins, D., (1989, p.54-64, eng) 43-3712
Ice drift and under ice currents in the Barents Sea. Johansen, Ö., et al, (1989, p.65-76, eng) 43-3713
Relations between top and bottom ice topography. Johnsen, Å.S., (1989, p.77-86, eng) 43-3714
Ice floe distributions. Lensu, M., (1989, p.354-366, eng) 43-3740
Deformation of ice floes under compressive loading. Takeuchi, T., et al, (1989, p.385-407, eng) 43-3743
Analysis of factors influencing ship response in collision with multi-year ice floes. Riska, K., (1989, p.750-763, eng) 43-3774
Interaction of ice floes with cylindrical piles. Matskevich, D.G., et al, (1988, p.180-184, rus) 43-4157
Review of field observations of ice failure modes. Metge, M., (1988, p.37-39, eng) 43-4168
Controlling wear on hydraulic installations. Bezinge, A., (1988, p.303-328, fre) 43-4443
Spectral evolution of wind-generated surface gravity waves in a dispersed ice field. Masson, D., et al, (1989, p.43-81, eng) 43-4535

Ice fog
Obscuration and background dynamics in and over snow. Hogan, A.W., (1987, p.181-185, eng) 43-856

Ice forecasting
Environmental impact of hydroelectric power plants in the Far North. Vozin, V.F., ed, (1987, 103p., rus) 43-42
Consequences of ice jamming in the lower pool of the Vilyuy hydroelectric power plant, the possibility of their forecasting and control. Kil'mianinov, V.V., et al, (1987, p.22-28, rus) 43-44
Icy epic of the *Mossovet*. Matiiasevich, A., (1988, p.42-46, rus) 43-572
Ice reconnaissance and forecasts in Storfjorden, Svalbard. Håkansson, B., (1988, p.447-454, eng) 43-639
Integrated remote sensing for Barents Sea ice. Olaussen, T., et al, (1988, p 495-506, eng) 43-643
Characteristics of pack-ice distribution in the East Siberian Sea during the summer period. Kovalev, E.G., (1988, p.23-27, rus) 43-799
Studying and forecasting the development of anomalous ice phenomena. Kovalev, E.G., (1988, p.28-32, rus) 43-800
Long range forecasting of ice conditions in the Barents and Kara seas. Gudkovich, Z.M., et al, (1988, p.32-40, rus) 43-801
Experience in real-time forecasting of the relief, level and drift of ice in Arctic seas with a 6-8 day lead. Vanda, IU.A., et al, (1988, p.41-45, rus) 43-802
Scientifically based method of rapid information for ice navigation. Buzuev, A.IA., et al, (1988, p.130-141, rus) 43-811

Ice forecasting *(cont.)*

Prediction of road icing on national highway Routes 8 and 17. Suda, T., et al, (1988, p.155-163, jpn) 43-1324

Ice prediction enters new phase. Thornes, J., (1988, p.37-39, eng) 43-1426

Regional Ice Model (RIM) for operational applications. Neralla, V.R., et al, (1988, p.135-153, eng) 43-1565

Ship icing in the northern seas. Golubev, V.A., et al, (1987, p 26-37, rus) 43-1880

Real-time analysis of digital sea ice image data. Ramsay, B., et al, (1988, p.1707-1711, eng) 43-1901

Toward the automated use of remote sensing data in operational ice forecasting. McNutt, L., et al, (1988, p.1713-1715, eng) 43-1902

Mapping icing rates on sea-going ships. Zakrzewski, W.P., et al, (1988, p.661-675, eng) 43-2122

Mathematical thermal model of lake freezing and its testing. Shishkaev, S.M., (1988, p.18-24, eng) 43-2126

Extended forecasting of ice breakup on Ket' River (Maksimkin Yar settlement). Bogdanova, V F., (1988, p.53-55, rus) 43-2349

Eulerian-Lagrangian model for the prediction of ice hazards in shallow waters. Bruno, M.S., (1989, p.229-233, eng) 43-2631

Atmospheric processes at the edge of the antarctic continent. Kottmeier, C., et al, (1986, p.62-63, ger) 43-2663

Navy applications of Geosat altimetry. Cummings, T.K., (1988, p.39-43, eng) 43-2664

Proceedings. (1986, var. p., eng) 43-2753

Road weather: state of the art in Austria. Cehak, K., (1986, 3p., eng) 43-2754

Road maintenance in Switzerland. Schlup, U., (1986, 6p, eng) 43-2755

Master plan for highway meteorology. Le Quentrec, M., (1986, 12p., eng) 43-2757

Some recent road weather developments in the UK. Hunt, R., (1986, 8p., eng) 43-2759

Snow and freeze forecasting for highways in winter Miyata, K., et al, (1986, 16p, eng) 43-2760

Ice detection system in Wales. Symons, L., et al, (1986, 11p., eng) 43-2763

Ice load question: some answers. Sanderson, T.J.O., (1989, p.377-385, eng) 43-2825

Ice conditions and research for economical development and exploitation of natural resource in the cold regions of China. Shen, W., (1988, p.1-17, eng) 43-2907

Iceberg-structure interaction: force, energy and probability. Duthinh, D., et al, (1988, p.324-340, eng) 43-2933

Global design load selection for arctic mobile drilling platform. Kamesaki, K., et al, (1988, p.371-384, eng) 43-2937

Forecasts of ice condition on the Yellow River. Chen, Z.T., et al, (1988, p.239-248, eng) 43-2997

Numerical model of ice regime analysis in a canal. Jin, G.H., et al, (1988, p.261-270, eng) 43-2999

Forecast of Yimin River in Eerguna water system. Xu, J.F., et al, (1988, p.271-281, eng) 43-3000

Dynamic model of sea ice forecast in the Bohai Sea. Liu, X.S., et al, (1988, p.282-292, eng) 43-3001

Computer modeling of ship icing. Zakrzewski, W.P., et al, (1988, p.446-457, eng) 43-3016

Recent approaches in the modeling of ship icing. Zakrzewski, W.P., et al, (1988, p.458-476, eng) 43-3017

Dynamic transport of river ice. Shen, H.T., et al, (1988, p.147-156, eng) 43-3028

Ice surveys and forecasts for the North Atlantic. Kogan, B.A., et al, (1989, p.17-25, eng) 43-3227

Development of ice drift models for the Barents Sea. Carstens, T., et al, (1989, p.31-43, eng) 43-3710

Prediction of vessel icing: a 1989 update. Overland, J.E., et al, (1989, p.712-721, eng) 43-3771

Numerical simulation of ice formation in frequently transited navigation channels. Ettema, R., (1989, p.1096-1106, eng) 43-3806

Analytical ice shape predictions for flight in natural icing conditions. Berkowitz, B.M., et al, (1988, 39p., eng) 43-3969

Results of scientific and operational service to navigation and other fields of national economy in the Arctic. Borodachev, V E., et al, (1989, p.31-36, eng) 43-4368

Probability modeling of Baltic Sea ice conditions. Drabkin, V.V., et al, (1988, p.126-130, rus) 43-4554

Using multipurpose optimization algorithms in sea ice prediction. Plotnikov, V.V., (1988, p.57-66, rus) 43-4556

Ice formation

Influence of the Vilyuy hydroelectric power plant on winter regime of the Vilyuy and Lena rivers. Kusatov, K.I., (1987, p.60-64, rus) 43-47

Problems of mapping naled phenomena. Alekseev, V.R., (1987, p.140-142, rus) 43-246

Frazil ice nucleation by ejecta from supercooled water. Gosink, J.P., et al, (1986, p.249-263, eng) 43-272

Field techniques for obtaining engineering characteristics of frazil ice accumulations. Dean, A.M., Jr., (1986, p.265-278, eng) 43-273

River ice jams: a state-of-the-art report. (1986, p.561-594, eng) 43-279

Studying and forecasting the development of anomalous ice phenomena. Kovalev, E.G., (1988, p.28-32, rus) 43-800

Formation of frazil ice. Monakhov, E.I., (1988, p.64-71, rus) 43-805

Relations of ice microstructures to microconvection in the surface sea layers. Monakhov, E.I., (1988, p.72-77, rus) 43-806

Analyzing the probability and statistical characteristics of sea ice compaction. Borodachev, V.E., (1988, p.103-120, rus) 43-809

Regularities governing water crystallization in disperse rocks. Golubev, V.N., (1988, p.31-36, rus) 43-933

Occurrence of ice fields and glaciers in a landscape with low relief. Holmgren, B., (1985, p 8-18, swe) 43-1010

Ice dynamics in mountain caves, Yukon, Canada. Lauriol, B., et al, (1988, p.215-220, eng) 43-1031

Possible mechanisms of crystal nucleation in clouds and their parametrization in numerical models. Mazin, I P., (1988, p.7-13, rus) 43-1077

Parametrization of the precipitation processes in mixed and in ice clouds in numerical models. Sergeev, B.N., (1988, p.32-35, rus) 43-1078

Frazil ice formation on water intake. Andersson, A., et al, (1987, 11p., eng) 43-1116

Scanning calorimetry of freezing and nonfreezing water in hydrated proteins. Liu, Y., et al, (1988, p.1093-1096, eng) 43-1196

Conditions of hail formation. Kaviladze, M.Sh., et al, (1988, p.208-212, eng) 43-1371

Snowfall in high southern latitudes. Bromwich, D.H., (1988, p.149-168, eng) 43-1406

Results and goals of studying naleds in the BAM zone. Sokolov, B.L., et al, (1987, p.120-131, rus) 43-1437

Theory and methods of producing artificial ice. Smorygin, G.I., (1988, 280p, rus) 43-1439

Exploration of the iceformation method applied to a diffuser. LaFleur, R.S., (1988, p.244-250, eng) 43-1464

Dissolved noble gas anomaly due to ice formation. Top, Z., et al, (1988, p.796-799, eng) 43-1552

Freezing of aqueous solutions containing gases. Wojciechowski, B., et al, (1988, p.843-848, eng) 43-1570

Foam-initiated ice covers on small rivers and streams. Ettema, R., et al, (1989, p.95-99, eng) 43-1583

Ice formation in channels with year-round service. Batalova, N.N., (1988, p.89-93, rus) 43-1785

Phases of the ice season in the Baltic Sea (North of latitude 57N). Leppäranta, M., et al, (1988, 83p., eng) 43-1975

Isotopic analysis of ground ice from arctic Canada. Lorrain, R., (1987, p.37-45, fre) 43-2067

Preliminary results of an experiment using a 16 ft x 50 ft long frazil collector line array. Perham, R.E., (1988, p.139-156, eng) 43-2169

River cooling and frazil and anchor ice formation. Tsang, G., (1988, p.393-416, eng) 43-2182

Mathematical model of border-ice formation in rivers. Svensson, U., et al, (1989, p.179-189, eng) 43-2367

Ice formation over cooled cylinder in natural convection. Cheng, K.C., et al, (1989, p.191-194, eng) 43-2425

Solar radiation induced melt layers in dry snow. Beck, N., et al, (1988, p.31-40, eng) 43-2596

Spray ice construction and simulation. Allyn, N., et al, (1989, p.253-262, eng) 43-2634

Phase transition of ice precipitated in an aqueous ionic glassy matrix. Carmona, P., et al, (1989, p.11-20, eng) 43-2775

Ice rubble consolidation. Timco, G.W., et al, (1988, p.427-438, eng) 43-2942

Laboratory study on ice formation in navigation channels. Ettema, R., et al, (1988, p.1-11, eng) 43-2974

River-flow regulation for controlled ice cover formation. Jain, S.C., et al, (1988, p.12-22, eng) 43-2975

Ice cover formation downstream of a reservoir. Ashton, G.D., (1988, p.189-198, eng) 43-2992

Hypothesis of dynamic ice bridge formation. Matoušek, V., (1988, p.249-260, eng) 43-2998

Studies on the formation and evolution of frazil ice jams in rivers. Yang, S.R., et al, (1988, p.336-345, eng) 43-3006

Effects of natural convection on ice formation around a cylinder. Cheng, K.C., et al, (1988, p.931-937, eng) 43-3088

Simulation of freezing-thawing of soil materials. Bondarev, E.A., (1989, p.167-183, eng) 43-3097

Unfrozen water content of Finnish soils measured by NMR. Kujala, K., (1989, p.301-310, eng) 43-3107

Modeling of thermal soil behaviour. Duquennoi, C., et al, (1989, p.895-915, eng) 43-3156

Field studies of earth dams in the northern construction-climatic zone. Belan, V.I., (1989, p 82-87, rus) 43-3174

Ice formation during the development of ravine thermal erosion. Poznanin, V.L., (1988, p.53-58, rus) 43-3256

Naleds in the Yamal and Gydan peninsulas. Kritsuk, L.N., (1988, p.89-96, rus) 43-3308

Development of sea ice in the Weddell Sea. Lange, M.A., et al, (1989, p.92-96, eng) 43-3341

Characteristics of ice formation in the West Kunlun Mountains. Xie, Z.C., et al, (1989, p.29-35, eng) 43-3438

Numerical simulation of ice formation in frequently transited navigation channels. Ettema, R., (1989, p.1096-1106, eng) 43-3806

Properties of sea ice coastal regime in southeastern Weddell Sea. Eicken, H., et al, (1989, p 8193-8206, eng) 43-3821

Ice layer formation in underground cryolithozone mining. Mikhailov, IU.V., et al, (1988, p.89-93, rus) 43-3866

Predictions of airfoil aerodynamic performance degradation due to icing. Shaw, R.J., et al, (1988, 16p, eng) 43-3967

Analytical ice shape predictions for flight in natural icing conditions. Berkowitz, B.M., et al, (1988, 39p., eng) 43-3969

Higher plants at freezing temperatures. Grout, B.W.W., (1987, p.293-314, eng) 43-3983

Flow fingers and ice columns in a cold snowcover Marsh, P., (1988, p.105-112, eng) 43-4002

Free drift model for river ice cover formation. Ho, C.F., et al, (1988, p.140-151, eng) 43-4124

International Symposium on Cold Regions Heat Transfer, 1989. (1989, 314p., eng) 43-4193

Cold regions heat transfer. Cheng, K.C., et al, (1989, p.1-25, eng) 43-4194

Ice formation phenomena. Hirata, T., et al, (1989, p.33-38, eng) 43-4196

Ground ice development during the Holocene in Canada. Burn, C.R., (1988, p.31-38, eng) 43-4424

Fracture by freezing in curved water pipes. Inaba, H., et al, (1988, p.984-992, jpn) 43-4485

Pressure drop in ice-water slurries for thermal storage applications. Knodel, B.D., et al, (1988, p.265-275, eng) 43-4499

Freezing of salt solutions on a vertical wall. Chellaiah, S., et al, (1987, p.181-195, eng) 43-4532

Ice formation in frequently transited navigation channels. Huang, H.P., (1989, 227p., eng) 43-4574

See also: Freezing; Icing; Sea water freezing; Spray freezing

Ice free reaches

See also: Polynyas

Ice friction

Friction and sliding resistance of snow and ice. Hensvold, E., (1985, p.291-300, swe) 43-381

Ice/hull friction coefficient study—summary report. Baker, D.N., (1987, 29p., eng) 43-681

Ice/hull friction coefficient study—main report. Baker, D.N., (1987, 85p. + appends., eng) 43-682

Ice loads and the requirements for hulls of icebreakers. Segal, Z., (1987, p.31-32, rus) 43-697

Friction characteristics of an icebreaker's model Pozniak, I.I., (1981, 11p., eng) 43-2694

Transmission of loads through grounded ice rubble. Sayed, M., (1989, p.259-275, eng) 43-2821

Tribology of snow and ice. Tsushima, K., (1988, p.274-279, jpn) 43-3089

Internal friction characteristics of sea ice. Bogorodskiĭ, V.V., et al, (1983, 8p, eng) 43-3171

M.V. *Arctic* ice transiting performance, continuous mode. Final report. Albery, A.C.R., et al, (1984, var. p., eng) 43-4154

On internal friction and cohesion in unconsolidated ice rubble. Ettema, R., et al, (1989, p.237-247, eng) 43-4445

Sliding of sled runner over ice. Balakin, V.A., et al, (1988, p.57-62, eng) 43-4466

See also: Metal ice friction; Plastics ice friction; Rubber ice friction; Wood ice friction

Ice gouging

See also: Ice scoring

Ice growth

Aerial and spaceborne monitoring of natural naled geosystems Topchiev, A.G., (1988, p.50-57, rus) 43-589

Numerical simulation of first-year sea ice. Cox, G.F.N., et al, (1988, p.12,449-12,460, eng) 43-721

Structure and growth of Arctic ice shelves and ice islands. Jeffries, M.O., (1987, p.39-51, eng) 43-901

Oxygen isotope evidence of freshwater pools and ice accretion below multiyear landfast sea ice, northern Ellesmere Island. Jeffries, M.O., (1987, p.405-412, eng) 43-917

Soil heat flux and ice growth in snow cover Marsh, P., et al, (1987, p.497-524, eng) 43-1310

Growth thermodynamics of artificial floating ice platforms. Szilder, K., et al, (1989, p.99-115, eng) 43-1441

Ship icing in the northern seas. Golubev, V.A., et al, (1987, p.26-37, rus) 43-1880

Multifrequency passive microwave observation of saline ice grown in a tank. Grenfell, T.C., et al, (1988, p.1687-1690, eng) 43-1896

Deuterium concentration and growth rate of antarctic first-year ice. Souchez, R., et al, (1988, p.1385-1388, eng) 43-2032

River ice and salmonids. Walsh, M., et al, (1986, p.D-4.1-D-4.26, eng) 43-2280

Mathematical model of border-ice formation in rivers. Svensson, U., et al, (1989, p.179-189, eng) 43-2367

Level, ice and thermal regime of Voronezh I eservoir Bolotov, G.I., (1987, p.94-113, rus) 43-2436
Ice conditions of Lake Ogawara. Hirayama, K., et al, (1988, p 415-426, eng) 43-2941
Ice rubble consolidation Timco, G.W., et al. (1988, p.427-438, eng) 43-2942
Thermal analysis of heated lockwalls for ice control Nakato, T., et al, (1988, p.23-33, eng) 43-2976
Frazil slush accumulation in a reservoi Kajiyama, Y , et al, (1988, p.170-178, eng) 43-2990
Growth of ice covers in reservoirs. Sado, K., et al, (1988, p.199-208, eng) 43-2993
Variability of ice growth characteristics in Lake Haruna, Japan. Ono, N., et al, (1988, p.209-218, eng) 43-2994
Studies on the formation and evolution of frazil ice jams in rivers. Yang, S.R., et al, (1988, p.336-345, eng) 43-3006
Meteorological factors in construction of ice platforms Szilder, K., et al, (1988, p.410-424, eng) 43-3013
Simulation of experimental freshwater icicle growth with a simple 740 $Numerical model of freshwater icicle growth. Johnson, K., et al, (1988, p.425-435, eng) 43-3014
Computer modeling of ship icing. Zakrzewski, W.P., et al, (1988, p.446-457, eng) 43-3016
Recent approaches in the modeling of ship icing. Zakrzewski, W.P., et al, (1988, p.458-476, eng) 43-3017
Development of sea ice in the Weddell Sea. Lange, M.A., et al, (1989, p 92-96, eng) 43-3341
Numerical simulation of ice formation in frequently transited navigation channels. Ettema, R., (1989, p.1096-1106, eng) 43-3806
Modelling antarctic fast-ice growth. Crocker, G.B., et al, (1989, p.3-8, eng) 43-4133
Observations on the formation of spongy ice from fresh water Lock, G S H , et al, (1989, p 129-133, eng) 43-4210
Nucleation process and solidification rate of supercooled water. Bertolini, D., et al, (1988, p.404-407, eng) 43-4378
Blending radiometer and buoy data into a sea ice model. Thomas, D.R., et al, (1989, p.10,907-10,920, eng) 43-4527

See also: Ice accretion; Icing rate

Ice hardness

Fracture of S2 columnar freshwater ice floating double cantilever beam tests Bentley, D L , et al, (1988, p.152-161, eng) 43-2918
Model ice of the NKK Ice Model Basin. Narita, S., et al, (1988, p.782-792, eng) 43-2973

Ice heat flux

Energies of the phases of ice at low temperature and pressure relative to ice Ih Handa, Y P , et al, (1988, p.919-924, eng) 43-437
Research results from antarctic automatic weather stations. Stearns, C.R., et al, (1988, p.45-61, eng) 43-1404
Thermal budget of river ice covers during breakup Prowse, T.D., et al, (1989, p 62-71, eng) 43-2707
Englacial temperature distribution in summer polar ice cap. Greuell, W., et al, (1989, p.289-303, eng) 43-3190
Modeling Laurentian Great Lakes evaporation, heat storage, and energy fluxes. Croley, T.E., II, (1989, 48p., eng) 43-3473
Using ice beacons to study ice drift tracks off Labrador. Prinsenberg, S.J., et al, (1988, p.61-70, eng) 43-4170
International Symposium on Cold Regions Heat Transfer, 1989. (1989, 314p., eng) 43-4193
Ice formation phenomena. Hirata, T., et al, (1989, p.33-38, eng) 43-4196

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See also: High pressure ice

Ice impurities

Aerosol transport from sources to ice sheets. Shaw, G.E , (1989, p.13-27, eng) 43-3678
Transformation of snow to ice and the occlusion of gases. Schwander, J., (1989, p.53-67, eng) 43-3680
Environmental records in alpine glaciers Wagenbach, D , (1989, p.69-83, eng) 43-3681

Ice islands

Gravity survey on ice offshore South-East Greenland. Jakobsdóttir, S S , et al, (1987, p 69-72, eng) 43-747
Arctic and offshore research. (1988, 44p , eng) 43-763
Structure and growth of Arctic ice shelves and ice islands. Jeffries, M.O., (1987, p.39-51, eng) 43-901
Loss, decay, and recent drift of ice islands. Sackinger, W.M., et al, (1987, p.53-66, eng) 43-902
Mechanical properties of shelf ice. Frederking, R., et al, (1987, p 67-78, eng) 43-903
Surface waveforms on the Ellesmere Island ice shelves and ice islands. Holdsworth, G., (1987, p.385-403, eng) 43-916
Ice island, an ideal platform. Jackson, L , (1989, p.38-49, eng) 43-1564
Problems of the Arctic and Antarctic, Vol.59, 1989 Krutskikh, B.A., ed, (1989, 153p , eng) 43-2041
Morphological and structural peculiarities of the SP-22 drifting ice island. Grishchenko, V.D., et al, (1989, p.77-86, eng) 43-2050
Atmospheric transport of organochlorines to the Arctic Ocean. Hargrave, B.T., et al, (1988, p.480-493, eng) 43-2246
State of the art in snowmaking and its application to arctic construction Collins, J , et al, (1989, p 247-251, eng) 43-2633
Spray ice construction and simulation Allyn, N , et al, (1989, p.253-262, eng) 43-2634
Time dependent settlement of ice and earth offshore structures. Vinogradov, A.M., et al, (1989, p.263-268, eng) 43-2635
Properties of ice from Hobson's ice island. Frederking, R., et al, (1988, p.188-198, eng) 43-2921
Probabilistic study of ice island trajectories Li, F.C , et al, (1988, p.405-414, eng) 43-2940
Dynamics of ice island motion near Axel Heiberg Island. Sackinger, W.M., et al, (1989, p.152-156, eng) 43-3351
Total ice force measurements on an instrumented structure, an overview of ice islands, and spray ice bonding to offshore structure coatings. Sackinger, W.M., (1988, p.61-64, eng) 43-3505
Analysis and interpretation of an airborne SAR image of "Hobson's Choice". Jeffries, M.O., et al, (1989, p 1032-1041, eng) 43-3800
Computer simulations of the probability of ice island movements in the Arctic Ocean Li, F C , et al, (1989, p.1063-1072, eng) 43-3803
Chevron Beaufort test to use spray ice island. (1989, p.23, eng) 43-4084
Drift islands in the Arctic. IAkovlev, A., (1989, p.75-77, rus) 43-4097
North Greenland ice islands Higgins, A.K., (1989, p.207-212, eng) 43-4549

Ice jacking

Design approach for piles subject to ice jacking Edil, T.B , et al, (1988, p.65-85, eng) 43-148

Ice jams

Problems of using tie-rods in overlapping metallic bridge spans. Vladimirskii, S.R., et al, (1988, p.14-15, rus) 43-25
Environmental impact of hydroelectric power plants in the Far North. Vozin, V F , ed, (1987, 103p , rus) 43-42
Consequences of ice jamming in the lower pool of the Vilyuy hydroelectric power plant, the possibility of their forecasting and control. Kil'mianinov, V.V., et al, (1987, p.22-28, rus) 43-44
Ice jams and damming of flow-controlled rivers. Karnovich, V N , et al, (1988, p 598-604, eng) 43-138
Controlled river ice cover breakup, part 1. Hudson River field experiments. Ferrick, M.G., et al, (1986, p.281-291, eng) 43-274
River ice jams: a state-of-the-art report. (1986, p.561-594, eng) 43-279
Ice jam characteristics, Liard-Mackenzie rivers confluence, discussion and reply Flato, G., et al, (1988, p.275-278, eng) 43-300
Ice jams and the winter climate near White River, SD. Bilello, M.A., (1987, p.154-162, eng) 43-398
Ice jams of the Great Ice Dam, Heilongjiang Liu, G , et al, (1987, p.117-121, chi) 43-496
Cause of ice jams, Nenjiang. Li, Y., (1987, p.122-128, chi) 43-497
Dissipative structure theory applied in prediction of ice jamming. Wang, Y., et al, (1987, p.129-132, chi) 43-498
Frost mounds and Pleistocene ice-dammed lakes in Altai. Rudoĭ, A N., (1988, p.344-348, rus) 43-569
Methods of preparing laboratory ice with specified physical properties. Petrov, I.G., et al, (1988, p.77-94, rus) 43-807
Ice engineering for civil work: baseline study. Carey, K.L., et al, (1983, 91p , eng) 43-1312
Damage resulting from a sudden river ice breakup. Doyle, P.F., (1988, p.609-615, eng) 43-1360
Configuration and properties of a breakup jam. Beltaos, S., (1988, p.685-697, eng) 43-1361
Dynamic ice breakup control for the Connecticut River near Windsor, Vermont. Ferrick, M.G., et al, (1988, p.245-258, eng) 43-2018
Causative factors leading to the formation of ice jams. Mattke, T.W., et al, (1989, p.170-178, eng) 43-2100
Workshop on Hydraulics of River Ice/Ice Jams, 5th, 1988 (1988, 445p., eng) 43-2162
Ice jam flooding and antecedent conditions, St John River Humes, T.M., et al, (1988, p.43-61, eng) 43-2164
Ice jam flood frequency and annual damages at Dawson City on the Yukon River. McCreath, P.S., et al, (1988, p 63-83, eng) 43-2165
Using historical data to determine flood risk from ice jams Knwoken, L.A., et al, (1988, p.97-113, eng) 43-2167
Historical ice jam flood data. Stanley, S , et al, (1988, p.115-137, eng) 43-2168
Field investigation of frazil ice jam in Yellow River. Sun, Z.C., et al, (1988, p.157-175, eng) 43-2170
Preliminary study of scour under an ice jam Wuebben, J.L., (1988, p.177-192, eng) 43-2171
Transverse velocities and ice jamming potential in a river bend. Zufelt, J.E., (1988, p.193-207, eng) 43-2172
Ice jams, release and surge wave propagation, Mackenzie River. Parkinson, F.E., et al, (1988, p.209-223, eng) 43-2173
Some thoughts on break-up and ice jams. Gerard, R , et al, (1988, p.225-239, eng) 43-2174
Breakup prediction on a non-regulated river. Andres, D.D., (1988, p 305-325, eng) 43-2178
Statistical assessment of ice jam formation in Canadian rivers. Sarraf, S., (1988, p.327-344, eng) 43-2179
Development of a comprehensive numerical river ice model. Petryk, S., (1988, p.345-367, eng) 43-2180
Ice related flooding on Harry's River Anderson, J.E., et al, (1988, p.369-391, eng) 43-2181
Ice control with thermal/bubbler plumes: line source configuration. Baddour, R.E., (1988, p.435-445, eng) 43-2184
Forecasting of the water level during ice breakup. Kil'mianinov, V.V., et al, (1988, p.44-48, rus) 43-2347
Forecasting of maximal water level on Lena River due to ice jams. Kil'mianinov, V.V., (1988, p.55-67, rus) 43-2350
Thermal budget of river ice covers during breakup. Prowse, T.D , et al, (1989, p 62-71, eng) 43-2707
Ice jams and floods on the Lower Vistula River. Grześ, M., (1986, p.51-67, eng) 43-2800
Studies on ice jams in river bends Urroz Aguirre, G.E., (1989, 268p., eng) 43-2888
IAHR Symposium on Ice, 9th, 1988. (1988, 3 vols , eng) 43-2906
Variation in the stage of the ice period of the Yellow River. Wang, Y.G., et al, (1988, p.142-151, eng) 43-2988
Hydraulics of ice jam development. Mayer, I., et al, (1988, p.304-315, eng) 43-3003
Field determination of ice jam porosity. Prowse, T.D., (1988, p.316-325, eng) 43-3004
River bed variation in sections susceptible to ice jamming. Ren, Z.W., (1988, p.326-335, eng) 43-3005
Studies on the formation and evolution of frazil ice jams in rivers. Yang, S R , et al, (1988, p.336-345, eng) 43-3006
Ice jams and breakup, problems, progress and prospects. Gerard, R , (1988, p.26-46, eng) 43-3022
Dynamic transport of river ice. Shen, H.T., et al, (1988, p.147-156, eng) 43-3028
Ice jams at a lake, the situation at Hay River, Northwest Territories, Canada. Gerard, R., et al, (1988, p.157-167, eng) 43-3029
Laboratory investigation of ice jam topography in a sinuous channel. Yoon, S.E., et al, (1988, p.168-179, eng) 43-3030
Laboratory study of transverse velocities and ice jamming in a river bend. Zufelt, J.E., et al, (1988, p.189-197, eng) 43-3032
Influence of northern pipelines on river crossing design. Yaremko, E.K , et al, (1983, p.49-63, eng) 43-3413
Airborne radar survey of a brash ice jam in the St. Clair River. Daly, S.F., et al, (1989, 17p , eng) 43-3475
Ice jam on Mackenzie River at Norman Wells. Rivard, G., (1985, 188p., eng) 43-3622
Effect of Toston dam on upstream ice conditions. Ashton, G.D., (1989, 9p , eng) 43-3957
Ice jamming characteristics of the Mackenzie Delta, N.W.T. Bigras, S.C., (1988, p.129-139, eng) 43-4123
Framework for control of dynamic ice breakup by river regulation. Ferrick, M.G., et al, (1989, 14p , eng) 43-4385
Calculating the highest ice-jam stage. Buzin, V.A., (1989, p.95-101, rus) 43-4573
Ice interaction with the U.S. Army ribbon bridge. Coutermarsh, B A., (1986, 18p , eng) 43-4592

Ice lenses

On a model for quasi-steady freezing processes of saturated porous media. Comparini, E , (1988, p.41-49, eng) 43-59
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Pore water pressure at an ice lens, its measurement and interpretation Konrad, J.M., (1989, p.63-74, eng) 43-1579
Studies of injected ice of naled fields (e.g. in Transbaikal). Sannikov, S.A., (1988, p.134-145, rus) 43-1612

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IAHR Symposium on Ice, 8th, 1986. (1986, 599p., eng) 43-258
Winter ice interactions with an Arctic offshore structure. Wright, B , et al, (1986, p.49-73, eng) 43-261
Model study of ice forces on a single pile Zabilansky, L J., (1986, p.77-87, eng) 43-262
Ice forces on a pier due to water level changes Kerr, A.D., et al, (1986, p.105-113, eng) 43-264
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Iceberg impact forces Nevel, D.E., (1986, p.345-369, eng) 43-278

Offshore research in the Barents Sea (1988, p.35-39, eng) 43-416

Role of fracture in limiting ice forces. Hallam, S.D., (1987, p.1-33, eng) 43-441

Ice forces on multi-legged structures. Timco, G W, (1987, p.35-51, eng) 43-442

Flexural and buckling failure of floating ice sheets against structures. Sodhi, D.S., (1987, p.53-73, eng) 43-443

Field techniques for ice force measurements Croasdale, K.R., et al, (1987, p.157-196, eng) 43-447

Calculation of dynamical load of single drifting ice on pier and other hydraulic structures. Shu, J., (1987, p 65-72, chi) 43-487

Experience in and problems of marine pipeline construction. Grudnitskiĭ, G.V., et al, (1988, p.33-36, rus) 43-567

Impact of ice floes against hydrotechnical structures Andreev, R.L., et al, (1987, 3p., eng) 43-608

Loads due to the impact of a ship against an ice floe edge. Kurdiumov, V.A., et al, (1987, 8p., eng) 43-609

International Conference on Technology for Polar Areas, Trondheim, 1988. (1988, 782p. (2 Vols.). eng) 43-610

Technology development for future polar petroleum activity. Sackinger, W.M., (1988, p.43-53, eng) 43-611

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Ice force estimation during local impact of a ship's plate. Omar, A.F., et al, (1988, p.101-112, eng) 43-615

Segmented model technology for ice resistance determination. Godon, A.M., et al, (1988, p.113-124, eng) 43-616

Ice loads and impacts on the semi-submersible Aker D-6. Kulsvehagen, T., (1988, p.159-177, eng) 43-619

Probabilistic design for drifting Arctic ice features. Mizikos, J.P., et al, (1988, p.179-190, eng) 43-620

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Design loads for detachable platforms subjected to iceberg impact loads. Waegter, J., et al, (1988, p.221-234, eng) 43-623

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Winterdrilling in the Barents Sea. Friedberg, R, et al, (1988, p.367-391, eng) 43-634

Ice accretion on drilling platforms off the east coast of Canada. Brown, R.D., et al, (1988, p.409-421, eng) 43-636

Solutions to instrumentation problems experienced in offshore programmes Reith, J, et al, (1988, p 435-446, eng) 43-638

Integrated remote sensing for Barents Sea ice Olaussen, T., et al, (1988, p 495-506, eng) 43-643

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Composite ice-resisting walls: a state-of-the-art review. Adams, P.F., et al, (1988, p 579-592, eng) 43-647

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Norwegian ice testing laboratory Senneset, K, et al, (1988, p.629-645, eng) 43-650

Ice loads on Adams Island, Canada. Wessels, E, et al, (1988, p.679-690, eng) 43-654

International Specialty Conference on Cold Regions Engineering, 1984. (1984, p.1021-1201, eng) 43-667

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Ice resistance to ship motion. Ionov, B.P., (1987, 13p. + appends., eng) 43-718

Sea ice effect on oscillations of cylindrical drilling-platform supports. Khrapatyĭ, N.G., et al, (1986, p.34-41, rus) 43-729

Ice effect on reinforced concrete supports of offshore drilling structures. Shmaevich, L.I., (1986, p.134-148, rus) 43-730

Experimental determination of total pressure-ridge load on cylindrical structures. Belov, A.B., (1986, p.158-161, rus) 43-732

Technical operation of sea port structures. Kostiukov, V.D., ed, (1987, 128p., rus) 43-756

Analyzing the process of icing of marine hydraulic structures Demin, IU.A., et al, (1987, p.88-94, rus) 43-758

Research in ice engineering. Christensen, F.T., et al, (1988, p.3-10, eng) 43-787

Interaction between floating ice and structures due to water level fluctuations. Thunbo Christensen, F., (1986, 252p., eng) 43-879

Workshop on Extreme Ice Features, Banff, Alta., Nov. 3-5, 1986. (1987, 463p, eng) 43-899

Multi-year ice statistics Spedding, L.G., et al, (1987, p.81-120, eng) 43-904

Mechanical properties of multi-year sea ice. Richter-Menge, J.A., et al, (1987, p.121-153, eng) 43-905

Survey of physical and mechanical properties of icebergs. Nadreau, J.P., (1987, p.155-192, eng) 43-906

Calculation of ice-structure loads. Jordaan, I.J., (1987, p.193-232, eng) 43-907

Extreme ice feature-structure interaction. Croasdale, K.R., (1987, p.233-277, eng) 43-908

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Methods of risk analysis Bercha, F.G., (1987, p.305-333, eng) 43-910

Operational response to hazardous ice features Pilkington, G.R., (1987, p.349-358, eng) 43-912

Local ice pressures measured in thick level ice in Antarctica. Final report. St. John, J., et al, (1986, 174p., eng) 43-976

Mechanical properties of ice—laboratory testing and *in situ* testing. Fransson, L., et al, (1987, 9p + append., eng) 43-1101

Ice loads on structures. Määttänen, M., (1987, 15p, eng) 43-1103

Material modelling of ice—failure surfaces and plasticity theories. Horrigmoe, G, (1987, 18p. + graphs, eng) 43-1104

Mathematical modeling of floating ice sheets. Nyström, M., (1987, 11p, eng) 43-1106

Reinforced ice. Elfgren, L., et al, (1987, 9p, eng) 43-1109

Field investigation of load-curvature characteristics of reinforced ice. Fransson, L., et al, (1987, 22p, eng) 43-1110

Ice engineering for civil work. baseline study Carey, K.L., et al, (1983, 91p., eng) 43-1312

Numerical modeling of pack ice interaction with ships Hamza, H., (1988, 44p. + appends., eng) 43-1362

Measurement of ice forces on small vessels, Vol.1 technical report; Vol.2: appendices. Daley, C., et al, (1988, 51p. + appends., eng) 43-1697

Accuracy of information for ice load estimation. Mytarev, M.N, (1988, p.150-158, rus) 43-1779

Ice loads on hydraulic structures in the Volga River. Semenov, IU.A, (1988, p 165-171, rus) 43-1780

Strengthenings of ships for navigation in ice. (1986, c52p., eng) 43-1838

Tests of propeller ice loads in laboratory and full scale. Jussila, M., (1988, p.105-122, eng) 43-2008

Ice load measuring system for long term measurements Koskinen, P., (1988, p.123-132, eng) 43-2009

Effects of icebreakers' forms on ice breaking capability. Ionov, B.P., (1988, 12p., eng) 43-2142

Strength and stability of framing for ice strengthening. Daley, C., et al, (1988, 37p., eng) 43-2147

Conference on offshore mechanics and Arctic engineering, 8th, 1989. (1989, 476p., eng) 43-2601

Experimental study on properties of multi-layer sea ice of Bohai Sea. Li, H.S, et al, (1989, p.43-46, eng) 43-2608

Damage mechanics model for uniaxial creep and cyclic loading of polycrystalline ice. Choi, K., et al, (1989, p.75-82, eng) 43-2612

Fracture toughness of S2 columnar freshwater ice. Dempsey, J.P., et al, (1989, p.83-89, eng) 43-2613

Uncertainties and difficulties in codified design for ice loading. Maes, M.A., (1989, p.97-103, eng) 43-2615

Probability of winter environmental forces on arctic offshore structures. Tunik, A.L., et al, (1989, p.105-112, eng) 43-2616

Performance assessment in geotechnical design of arctic offshore structures. Been, K., et al, (1989, p.113-123, eng) 43-2617

Environmental loads on structures NPD—guidelines for loads and load effects Kvitrud, A, et al, (1989, p.133-138, eng) 43-2619

Gamma Tower for Northern Norway Des Déserts, L, et al, (1989, p.147-154, eng) 43-2621

Application of decision analysis to arctic exploration structures. Nessim, M.A., et al, (1989, p.161-168, eng) 43-2623

Structure and strength of first-year ice ridges in the Baltic Sea. Leppäranta, M., et al, (1989, p.169-174, eng) 43-2624

On modeling the energetics of the ridging process. Hopkins, M.A., et al, (1989, p.175-178, eng) 43-2625

Model tests of load transmission through grounded ice rubble. Timco, G.W., et al, (1989, p.269-274, eng) 43-2636

Failure analysis of impacting ice floes. Bhat, S.U., et al, (1989, p.275-285, eng) 43-2637

Dynamic ride up and crushing of short ice ridges on conical structures. Nordgren, R.P., et al, (1989, p.287-291, eng) 43-2638

Iceberg collision reliability model. Isaacson, M., et al, (1989, p.293-299, eng) 43-2639

Simple model for collision of floating bodies. Nawwar, A.M., et al, (1989, p.309-314, eng) 43-2640

Calculation of ice sheet stress-strain state by numerical method. Kozin, V.M., et al, (1989, p 315-318, eng) 43-2641

Measurements of ice impact forces on a vertically-faced bridge pier. Frederking, R., et al, (1989, p.319-323, eng) 43-2642

Experimental study of the icebreaking cycle in 2-D. Valanto, P., (1989, p.343-349, eng) 43-2644

Ice loads on propellers of small ferry. Jussila, M, et al, (1989, p.351-358, eng) 43-2645

Design of the Great Belt western bridge for ice forces. Christensen, F.T., et al, (1989, p.365-376, eng) 43-2647

Penetration of floating ice sheets with cylindrical indentors. Sodhi, D.S., (1989, p.377-382, eng) 43-2648

Feasibility study of full scale iceberg impact experiments. Duthinh, D., et al, (1989, p.383-392, eng) 43-2649

Impact of icebergs with a semi-submersible platform. Lever, J.H., et al, (1989, p.393-403, eng) 43-2650

Estimate of the size of the damage zone beneath an indenter on ice. Parsons, B.L., (1989, p.411-417, eng) 43-2652

Floating and bottom founded unit for arctic drilling operations. Jolles, W.H., et al, (1989, p 443-450, eng) 43-2656

Drill-anchor for iceberg towing. Kolle, J.J., (1989, p.469-476, eng) 43-2659

Model study of uplifting ice forces: the instrumentation Zabilansky, L.J., (1988, p.745-748, eng) 43-2668

Working group on ice forces 4th state-of-the-art report. Timco, G.W., ed, (1989, 385p., eng) 43-2812

Local ice loads and design of offshore structures. Iyer, S.H., (1989, p.1-57, eng) 43-2813

Large scale ice-structure interaction data base. Metge, M., et al, (1989, p.59-76, eng) 43-2814

Failure mechanisms for laboratory, first-year and multi-year ice. Blanchet, D., et al, (1989, p.77-124, eng) 43-2815

Modelling of progressive damage in ice. Jordaan, I J, et al, (1989, p.125-165, eng) 43-2816

Dynamic ice loads on compliant structures Frederking, R., (1989, p.167-187, eng) 43-2817

Ice-induced vibrations of structures. Sodhi, D.S., (1989, p.189-221, eng) 43-2818

Ice-induced vibrations of structures-self-excitation. Määttänen, M., (1989, p.223-230, eng) 43-2819

Ice forces on fixed and floating conical structures. Wessels, E., et al, (1989, p.231-257, eng) 43-2820

Transmission of loads through grounded ice rubble. Sayed, M., (1989, p.259-275, eng) 43-2821

Formation of spray ice on offshore structures. Makkonen, L., (1989, p.277-309, eng) 43-2822

Ships in ice. Kitagawa, H., et al, (1989, p.311-337, eng) 43-2823

Ice impact on ship hulls. Müller, L., et al, (1989, p.339-375, eng) 43-2824

Ice load question: some answers. Sanderson, T.J.O., (1989, p 377-385, eng) 43-2825

On confined compressive strength of urea-doped ice. Taguchi, Y., et al, (1988, p.92-98, eng) 43-2912

Flexural properties of eastern Bohai one-year sea ice. Shen, W., et al, (1988, p.199-205, eng) 43-2922

Iceberg-structure interaction: force, energy and probability. Duthinh, D., et al, (1988, p.324-340, eng) 43-2933

Global design load selection for arctic mobile drilling platform Kamesaki, K., et al, (1988, p.371-384, eng) 43-2937

Ice forces on framed structure. Tatsuta, M., et al, (1988, p.385-394, eng) 43-2938

Probabilistic treatment of ice loads on columnar structures. Izumiyama, K., et al, (1988, p.395-404, eng) 43-2939

Ice forces on the Nanisivik wharf. Frederking, R., et al, (1988, p.463-472, eng) 43-2945

Dual rigidity of an anti-ice structure. Wang, Q.J., (1988, p.561-569, eng) 43-2954

Conceptual design of multipurpose structure in ice covered sea. Inoue, K., et al, (1988, p.580-590, eng) 43-2956

Air-sea observation system of Hokkaido University. Aota, M., et al, (1988, p 651-660, eng) 43-2963

Model studies on ice control structure Decsi, E., et al, (1988, p.53-58, eng) 43-2979

Power line icing in mountains. Druez, J., et al, (1988, p.477-485, eng) 43-3018

Tidal jacking of nearshore ice. Stander, E., et al, (1987, p.381-392, eng) 43-3202

Ice-induced dynamic loads on offshore structures. Daoud, N., et al, (1986, p.35-41, eng) 43-3217

Finite element analysis of porous soil under asymmetric loading. Prasad, K.S.R., et al, (1989, p.699-706, eng) 43-3221

Problems of the Arctic and the Antarctic Collection of articles, Vol.61. Krutskikh, B.A., ed, (1989, 103p, eng) 43-3226
Design values of wind speeds for construction in Arctic regions Zykova, G G, et al, (1989, p 70-79, eng) 43-3231
MV *Arctic* structural performance Final report Glen, I.F., et al, (1985, var. p., eng) 43-3365
Analysis of overhead transmission structures by probabilistic methods. Krishnasamy, S.G., (1987, p.417-425, eng) 43-3482
Global and local ice loads for structure design. Allyn, N., (1988, p.13-22, eng) 43-3497
New results in ice load predictions using the fracture mechanics approach Wierzbicki, T, (1988, p 23-27, eng) 43-3498
Full-thickness ice strength measurements. Ralston, T.D., (1988, p.29-31, eng) 43-3499
Ice loads and failure mechanisms. Churcher, A., (1988, p.33-35, eng) 43-3500
Sea ice characteristics, motion and interactions Coon, M., (1988, p.41-44, eng) 43-3502
Stress and strain instruments developed for field measurements of ice. Duckworth, R., et al, (1989, p.159-165, eng) 43-3511
Microstructurally based constitutive law for snow Brown, R.L., et al, (1989, p.335-345, eng) 43-3578
Mukluk ice stress measurement program. Cox, G.F.N., (1988, p.11-15, eng) 43-3643
Ice-structure interaction Sunder, S.S, et al, (1988, p.38-44, eng) 43-3644
Punching shear resistance of concrete offshore structures. Lew, H.S., (1988, p.62-63, eng) 43-3647
Proceedings. POAC 89 Vols.1 and 2 (1989, 1187p. (2 vols.), eng) 43-3708
Multiyear ridge force variability. Schreiber, R.W., et al, (1989, p.146-155, eng) 43-3720
Study of the behaviour of ice masses in marine environments. Romagnoli, R., et al, (1989, p.156-167, eng) 43-3721
Fracture toughness of S2 columnar freshwater ice Dempsey, J.P., et al, (1989, p.199-207, eng) 43-3725
Failure modes of an ice sheet on an inclined plane Michel, B, et al, (1989, p 235-248, eng) 43-3729
Constitutive laws for sea ice at Adam's I. Montemurro, M.P., et al, (1989, p.367-376, eng) 43-3741
Deformation of ice floes under compressive loading. Takeuchi, T., et al, (1989, p.385-407, eng) 43-3743
Structure subjected to ice crushing Timco, G W, et al, (1989, p 420-430, eng) 43-3745
Constitutive modeling of polycrystalline ice Wu, M S., et al, (1989, p 431-442, eng) 43-3746
Visco-plastic creep model for static ice loads analysis. Xu, J.Z., et al, (1989, p.443-451, eng) 43-3747
Dynamic ice loads on the Great Belt Western Bridge. Christensen, F T, et al, (1989, p.453-466, eng) 43-3748
Global crushing forces on wide structures Dorris, J F, (1989, p.467-480, eng) 43-3749
On the Relationship between global and local ice crushing loads. Dorris, J.F., et al, (1989, p.481-491, eng) 43-3750
Parametric study of iceberg impact loads. Duthinh, D., (1989, p.492-503, eng) 43-3751
Ice-structure interaction model based on observations in the Gulf of Bothnia. Engelbrektson, A., (1989, p.504-517, eng) 43-3752
Ice load on piles of fixed offshore structures. Gladkov, M.G., (1989, p.518-526, eng) 43-3753
Response of concrete platforms to iceberg impact Holthe, K., (1989, p.527-536, eng) 43-3754
Primary study of ice forces on the structures in Bohai Sea. Ji, X.H., et al, (1989, p 537-545, eng) 43-3755
Calculation of iceberg impact forces. Johnson, R.C., et al, (1989, p.545-556, eng) 43-3756
Ice loads on offshore structures of various waterline geometry. Kaldjian, M.J., (1989, p.557-567, eng) 43-3757
Transverse static ice pressure on bridge piers. Löfquist, B., (1989, p.568-574, eng) 43-3758
Measurements of load transmission through grounded ice rubble. Marshall, A R, et al, (1989, p.575-585, eng) 43-3759
Iceberg structure collision model Pintur, D.A, et al, (1989, p.586-595, eng) 43-3760
Characteristics of Bohai ice load analysing method. Wang, Q.J., et al, (1989, p.606-612, eng) 43-3762
Atmospheric icing of masts. Häggström, M., et al, (1989, p.705-711, eng) 43-3770
Ice loads on propeller blade of small car ferry. Jussila, M., et al, (1989, p.862-872, eng) 43-3784
Long-term ice load measurements onboard M/S *Kemira*, 1985-1988. Kujala, P., (1989, p.1118-1129, eng) 43-3808
Experimental study on breaking ice cover Zuev, V A., et al, (1984, 14p., eng) 43-3855
Late Pleistocene and Holocene sea-level: implications for mantle rheology and the melting history of the antarctic ice sheet. Nakada, M., et al, (1988, p.443-455, jpn) 43-3975
Composite icewall design and analysis. Bangs, A.S, et al, (1989, p.1-22, eng) 43-4015
Efficiency of detachable platforms in the Arctic. Christensen, F.T., (1989, p.37-53, eng) 43-4016
Role of ice fracture in ice structure interactions. Duval, P., et al, (1989, 11p., fre) 43-4019
Soviet marine icing data. Zakrzevski, W.P., et al, (1989, 125p., eng) 43-4034
In situ testing of river-ice strength using a hydraulic borehole jack. Demuth, M.N., et al, (1988, p.181-185, eng) 43-4128
Proceedings. (1988, 216p., eng) 43-4166
Review of field observations of ice failure modes Metge, M., (1988, p 37-39, eng) 43-4168
Brief overview of the fracture of ice Parsons, B.L., (1988, p.103-112, eng) 43-4173
Specific energy of impact crushing of ice. Tunik, A.L., (1988, p.113-120, eng) 43-4174
Scale effects in ice-structure interaction: analytical aspects. Jordaan, I.J., (1988, p.161-181, eng) 43-4181
Scale effects in ice. Timco, G.W., (1988, p.183-199, eng) 43-4182
Random vibration of floating ice tongues. Gui, E.H., et al, (1989, p.157-165, eng) 43-4186

Ice makers

Water discharge apparatus for an ice making system. Matsuda, J., et al, (1989, p 285-289, eng) 43-4224
Pressure drop in ice-water slurries for thermal storage applications. Knodel, B.D., et al, (1988, p.265-275, eng) 43-4499

Ice mechanics

On two special Rivlin-Ericksen fluid models generalizing Glen's flow law for polycrystalline ice. Sun, Q.X, (1988, 7p, eng) 43-119
Application of fracture mechanics to ice/structure interactions. Nixon, W.A., (1988, p.1-12, eng) 43-150
Resurvey of bore hole at Dye 3, South Greenland. Hansen, B.L., et al, (1988, p.178-182, eng) 43-161
Formulation of stationary problems in glacier mechanics. Larina, T.B., (1987, p.17-23, rus) 43-222
Ice movement characteristics of the Bezengi glacier during its advancement stage. Barykov, A.A., et al, (1987, p.95-99, rus) 43-236
Ice cover dynamics of northeastern Mid-Siberian Highlands in Late Pleistocene. Andreeva, S.M., et al, (1987, p.112-118, rus) 43-240
Numerical estimation of fracturing and banding in glaciers. Ivanov, A.I., et al, (1987, p.175-179, rus) 43-254
New methods of determining spacial shifts of glacier surfaces. Vinnikov, L.P., et al, (1987, p.179-183, rus) 43-255
Ice problems on the Yellow River. Chen, Z., (1986, p.25-47, eng) 43-260
Sea ice and meteorology of the Bering Sea, 1985. Pease, C.H., et al, (1985, 120p., eng) 43-424
Numerical and finite element techniques in calculation of ice-structure interaction. Jordaan, I.J., (1987, p.119-155, eng) 43-446
Hindcast study of iceberg drift on the Labrador Coast Banke, E.G., et al, (1984, 161p, eng) 43-448
Numerical design of the ice expansive pressure. Xu, B., (1987, p.73-78, chi) 43-488
Determination of compressive strength of sea ice on Bohai aimed at designing. Li, F., (1987, p.97-102, chi) 43-492
Experimental investigations of the flow of ice Jacka, T.H., (1987, 236p, eng) 43-501
Modelling of dynamic ice loading of offshore Arctic structures. Hallam, S.D., et al, (1988, p.235-248, eng) 43-624
Numerical simulation of ice behaviour and ice structure interaction. Nygård, M.K., et al, (1988, p.261-274, eng) 43-626
Solutions to instrumentation problems experienced in offshore programmes. Reith, J., et al, (1988, p 435-446, eng) 43-638
Argos and the 1990's system efficiency in polar regions. Vassal, C., (1988, p.455-470, eng) 43-640
Norwegian ice testing laboratory. Senneset, K., et al, (1988, p.629-645, eng) 43-650
Some ocean drift ice scaling ideas. Korsnes, R., (1988, p.647-659, eng) 43-651
Pendulum indentation tests on manufactured ice. Fransson, L., et al, (1988, p 669-678, eng) 43-653
Ice crushing by impact and indentation a literature review Jordaan, I.J., et al, (1988, 126p., eng) 43-679
Ice strength indexer. Baker, D.N., et al, (1987, 35p. + appends., eng) 43-683
Ice-sampling programme in the Thule area, North Greenland. Reeh, N., et al, (1987, p.81-84, eng) 43-748
Program for the analysis of iceberg rolling. Peters, G.R., (1988, p.33-50, eng) 43-788
Coupled air-ice-ocean models. Hibler, W.D., III, (1987, p.131-137, eng) 43-850
DOD floating ice problems Cox, G F N, (1987, p 151-154, eng) 43-853
Ice-composites with dispersed reinforcements. Vasil'ev, N.K., (1988, p.21-22, rus) 43-893
Workshop on Extreme Ice Features, Banff, Alta., Nov. 3-5, 1986. (1987, 463p., eng) 43-899
Beaufort Gyre ice trajectories. Cornett, S., (1987, p.11-37, eng) 43-900
Loss, decay, and recent drift of ice islands. Sackinger, W.M., et al, (1987, p.53-66, eng) 43-902
Mechanical properties of shelf ice. Frederking, R., et al, (1987, p 67-78, eng) 43-903
Mechanical properties of multi-year sea ice. Richter-Menge, J.A., et al, (1987, p.121-153, eng) 43-905
Survey of physical and mechanical properties of icebergs. Nadreau, J.P., (1987, p.155-192, eng) 43-906
Extreme ice feature-structure interaction. Croasdale, K.R., (1987, p.233-277, eng) 43-908
Ice/structure interaction research needs. Zimmerman, T., (1987, p 279-303, eng) 43-909
Ice pressures during the impact of an ice mass. Kivisild, H.R., (1987, p.359-368, eng) 43-913
Observations of wind-generated waves in antarctic sea ice. Crocker, G.B., et al, (1988, p.1292-1299, eng) 43-1069
Seminar on Applied Ice Mechanics, Narvik, Sep. 8-9, 1987. (1987, var.p., eng) 43-1099
Exploration status and future perspectives in the Barents Sea. Johansen, B., (1987, 7p. + maps + charts, eng) 43-1100
Mechanical properties of ice—laboratory testing and *in situ* testing. Fransson, L., et al, (1987, 9p. + append., eng) 43-1101
Horizontal compressive strength of low salinity ice from the Gulf of Bothnia. Fransson, L., et al, (1987, 9p., eng) 43-1102
Material modelling of ice—failure surfaces and plasticity theories. Horrigmoe, G., (1987, 18p. + graphs, eng) 43-1104
Adhesiveness of ice on polymer materials. Andersson, A., (1987, 16p, eng) 43-1113
Beaufort Sea Mesoscale Circulation Study—preliminary results. Aagaard, K., et al, (1988, 171p., eng) 43-1284
On mesoscale modelling of the dynamics and thermodynamics of sea ice. Lu, Q., (1987, 154p., eng) 43-1411
Generation, multiplication and motion of dislocations in ice crystals. Fukuda, A., et al, (1988, p 69-96, eng) 43-1417
Fracturing of an ice sheet by ship-induced, ice-coupled waves. Yuen, C., et al, (1989, p.75-82, eng) 43-1580
Modeling ice dynamics of coastal seas. Overland, J.E., et al, (1988, p.15,619-15,637, eng) 43-1737
Stresses and deformations in a first-year ice cover. Sayed, M., et al, (1988, p.726-734, eng) 43-1803
Tide dependent dynamics of the Ekström Ice Shelf. Kobarg, W., (1988, 164p., ger) 43-1870
Method to forecast open pack ice speed of motion using remotely-sensed data. Feldman, U., (1988, p.1695-1702, eng) 43-1899
Evolution of East Antarctica's ice sheet. Huybrechts, P., et al, (1988, p.52-59, eng) 43-1944
Particulate material in sea ice in the Fram Strait. Larssen, B.B., et al, (1987, p 313-315, eng) 43-2011
Ice-sheet dynamics of Baffin Island and Hudson Strait. Miller, G.H., et al, (1988, p.116-136, eng) 43-2012
Causative factors leading to the formation of ice jams. Mattke, T.W., et al, (1989, p.170-178, eng) 43-2100
Sharp cone testing of creep properties of frozen soils and ice. Ladanyi, B., et al, (1989, p.282-296, eng) 43-2110
Ice jams, release and surge wave propagation, Mackenzie River. Parkinson, F.E., et al, (1988, p.209-223, eng) 43-2173
Some thoughts on break-up and ice jams. Gerard, R., et al, (1988, p 225-239, eng) 43-2174
Using the borehole jack to determine changes in river ice strength. Prowse, T.D., et al, (1988, p.283-303, eng) 43-2177
Conference on offshore mechanics and Arctic engineering, 8th, 1989. (1989, 476p, eng) 43-2601
Growth of radial cracks in ice sheets. Cocks, A.C.F., (1989, p.7-12, eng) 43-2603
Experimental study on properties of multi-layer sea ice of Bohai Sea. Li, H.S., et al, (1989, p.43-46, eng) 43-2608
Rate-sensitive damage and cracking model for ice. Pulkkinen, E., (1989, p 47-53, eng) 43-2609
Mechanics of the multidirectional microcracking of ice. Santaoja, K., (1989, p.55-65, eng) 43-2610
Damage mechanics model for uniaxial creep and cyclic loading of polycrystalline ice. Choi, K., et al, (1989, p.75-82, eng) 43-2612
Effect of voltage polarity on ice accretions on short string insulators. Farzaneh, M., et al, (1989, p 419-426, eng) 43-2653
Working group on ice forces. 4th state-of-the-art report. Timco, G.W., ed, (1989, 385p., eng) 43-2812
Effects of tidal jacking on ice displacement and strain in the nearshore environment. Stander, E., et al, (1988, p 526-536, eng) 43-2951
Measurements of ice-induced vibrations of channel markers. Nordlund, O.P., et al, (1988, p.537-548, eng) 43-2952
General view of ice mechanics in China. Shen, W., et al, (1988, p.378-389, eng) 43-3010
Ice mechanical properties in relation to Arctic engineering activities. Sackinger, W.M., (1988, p.9-25, eng) 43-3021

Ice mechanics *(cont.)*

Ice jams and breakup: problems, progress and prospects Gerard, R., (1988, p.26-46, eng) 43-3022

Tidal jacking of nearshore ice. Stander, E., et al, (1987, p.381-392, eng) 43-3202

Proceedings of the Symposium on Ice Dynamics, 1988. (1989, 226p., eng) 43-3326

Modelling flow and depth-age profiles in Greenland ice. Dahl-Jensen, D., (1989, p 31-36, eng) 43-3331

Dynamics of the Law Dome Ice Cap. Etheridge, D.M., (1989, p.46-50, eng) 43-3333

Flow of Rutford Ice Stream and Carlson Inlet. Frolich, R.M., et al, (1989, p.51-56, eng) 43-3334

Thermo-mechanically coupled ice sheets. Hindmarsh, R.C.A., et al, (1989, p.57-69, eng) 43-3335

Isotropic and anisotropic flow relations for ice dynamics. Jacka, T.H., et al, (1989, p.81-84, eng) 43-3338

Model studies on ice-stream surging. Radok, U , et al, (1989, p.132-137, eng) 43-3348

Icing technology bibliography (1987, 149p , eng) 43-3411

Proceedings. (1988, 64p., eng) 43-3495

Ice loads and failure mechanisms. Churcher, A., (1988, p.33-35, eng) 43-3500

Sea ice characteristics, motion and interactions. Coon, M., (1988, p.41-44, eng) 43-3502

Ice stress measurements around offshore structures. Johnson, J.B., (1988, p.55-59, eng) 43-3504

Total ice force measurements on an instrumented structure, an overview of ice islands, and spray ice bonding to offshore structure coatings. Sackinger, W.M., (1988, p 61-64, eng) 43-3505

Impact sound source useful for Arctic remote sensing. De Heering, P., (1989, p 166-172, eng) 43-3512

Simulation to predict snow sliding and lift-off on buildings. Lepage, M.F., et al, (1989, p.128-141, eng) 43-3559

Physico-mechanical properties of ice in fresh water reservoirs. Truskov, P.A., et al, (1988, p.38-49, rus) 43-3634

Mechanical properties of saline ice. Schulson, E.M., (1988, p.45-47, eng) 43-3645

Mechanical properties of multi-year sea ice. Richter-Menge, J.A., (1988, p.54-61, eng) 43-3646

Study of the behaviour of ice masses in marine environments. Romagnoli, R , et al, (1989, p.156-167, eng) 43-3721

Measurement of impact forces on sea ice. Chin, S.N., et al, (1989, p.638-647, eng) 43-3764

Impact crushing strength of ice. Tunik, A.L., (1989, p 658-670, eng) 43-3766

Studies of sea ice forcing during MIZEX'87 Sandven, S., et al, (1989, p.1073-1083, eng) 43-3804

Force budget: I. Theory and numerical methods. Van der Veen, C.J., et al, (1989, p.53-60, eng) 43-4141

Proceedings. (1988, 216p., eng) 43-4166

Selection of mechanical properties for design. Gold, L.W., (1988, p.93-101, eng) 43-4172

Investigation of ice properties by cyclic testing. Vinogradov, O.G., (1988, p.121-122, eng) 43-4175

Introduction to testing methods session. Frederking, R., (1988, p.135-141, eng) 43-4178

Scale effects in ice-structure interaction: analytical aspects. Jordaan, I.J., (1988, p.161-181, eng) 43-4181

Glacial advances and retreats in Transantarctic Mountains. Miller, J.M.G., (1989, p.419-430, eng) 43-4286

Evidence for a mobile ice shell on Europa. Schenk, P.M., et al, (1989, p.75-100, eng) 43-4335

Differential flow in orthotropic polycrystalline ice. Shyam Sunder, S., et al, (1989, p.223-235, eng) 43-4444

Wisconsin/Würm glacial stage ice in the subtropical Dunde Ice Cap, China. Thompson, L.G., et al, (1988, p.517-523, eng) 43-4566

Mechanical properties of multi-year sea ice. Richter-Menge, J.A., et al, (1988, 27p., eng) 43-4593

Profile properties of undeformed first-year sea ice. Cox, G.F.N., et al, (1988, 57p., eng) 43-4595

Ice melting

Fresh water content of Hudson Bay and Foxe Basin due to ice melting. Prinsenberg, S.J., (1988, p.6-11, eng) 43-156

Ocean level and models simulating its oscillations. Klige, R.K., et al, (1988, p.273-278, eng) 43-315

Transversal jets detected on satellite images in marginal ice zones. Ginzburg, A.I., (1988, p.3-10, rus) 43-588

Lithospheric thickness, antarctic deglaciation history, and ocean basin discretization effects in a global model of postglacial sea level. Peltier, W.R., (1988, p.325-346, eng) 43-785

Multiple similarity solutions of buoyancy induced flows for ice melting in cold pure water. Wang, C., et al, (1988, p.1007-1017, eng) 43-972

Molecular dynamics simulation of ice at constant volume. Kerr, J.A., et al, (1988, p.4313-4314, eng) 43-1028

Glacial geology in uranium exploration, Dismal Lakes, NWT, Canada. Steele, K.G., (1988, p.183-194, eng) 43-1033

Parametrization of the precipitation processes in mixed and in ice clouds in numerical models Sergeev, B.N., (1988, p.32-35, rus) 43-1078

Double diffusive convection due to melting. Beckermann, C., et al, (1988, p.2077-2089, eng) 43-1162

Turbulent effects on river ice cover melting. Sarraf, S., (1988, p.178-189, eng) 43-1327

Flood climates. Hayden, B.P., (1988, p.13-26, eng) 43-1547

Floods in cold climates. Church, M., (1988, p.205-229, eng) 43-1549

Study on ice meltponds. Lapp, D., (1982, 62p. + appends., eng) 43-1666

Measurement of outflow from a snowbank with basal ice. Young, K.L., et al, (1988, p.358-362, eng) 43-1994

Thermal action of coastal waters on the boundary of the antarctic ice cover. Dubrovin, L.I., et al, (1989, p.101-108, eng) 43-2053

Flow developers for melting ice—experimental results. Ashton, G.D., (1989, p.151-160, eng) 43-2098

2-D modelling of river ice thermal melting. Sarraf, S., et al, (1988, p.417-433, eng) 43-2183

Comparative study of chemical deicers. McElroy, A.D., et al, (1988, p.1-11, eng) 43-2206

Comparison of calcium magnesium acetate and rock salt as deicers. McElroy, A.D., et al, (1988, p.12-19, eng) 43-2207

Melting of an ice surface in porous medium. Kazmierczak, M., et al, (1988, p.352-358, eng) 43-2316

Melting layer of frozen precipitation. Klaassen, W., (1988, p.3741-3753, eng) 43-2360

Calculating the characteristics of mudflows. Stepanova, T.S., et al, (1988, p.3-10, rus) 43-2418

Late Pleistocene and Holocene sea-level change in the Australian region and mantle rheology. Nakada, M., et al, (1989, p 497-517, eng) 43-2441

Winter accumulation reduces summer ablation on Nordbogletscher, South Greenland. Braithwaite, R.J , et al, (1988, p.21-30, eng) 43-2595

Thermal budget of river ice covers during breakup. Prowse, T.D., et al, (1989, p.62-71, eng) 43-2707

Ice th...kness in McMurdo Sound. Leventer, A., et al, (1987, p.94-96, eng) 43-2752

Ice core evidence of ice sheet melting on Greenland. Koerner, R.M., (1989, p.964-968, eng) 43-2859

Convec... heat transfer in water over melting ice sheet. Lun...ai, V.J., (1986, p.42-51, eng) 43-3218

Snow and ice melting in karst cavities. Mavliudov, B R., (1988, p.123-128, rus) 43-3269

Using maps to calculate glacial runoff. Zverkova, N.M., et al, (1988, p.129-134, rus) 43-3270

Study on ice melting at high pressures. Krymskiĭ, A.V., et al, (1988, p.70-76, rus) 43-3305

Arctic sea ice characteristics related to atmospheric processes. Barry, R.G., et al, (1989, p.9-15, eng) 43-3328

Evaporation and melting of ice crystals. Oraltay, R.G., (1989, 101p , eng) 43-3606

Dendritic crystal growth with convection in the melt. Ananth, R., (1989, 162p., eng) 43-3609

Characteristics of the spring ice cover melting process in the Zeya reservoir. Semenenko, G.V., (1988, p.33-35, rus) 43-3636

Pressure-melting of ice. Nordell, B., (1989, p.249-258, eng) 43-3730

Melting inhibition and superheating of ice by an antifreeze glycopeptide. Knight, C.A., et al, (1989, p.505-507, eng) 43-4107

Experimental study of melting of ice about horizontal cylinders. Torikoshi, K., et al, (1989, p.45-50, eng) 43-4198

Principles of calculating the temperature and melting of polluted snow-covered ice. Izmaĭlov, V.V., (1989, p.44-53, eng) 43-4369

Pressure drop in ice-water slurries for thermal storage applications. Knodel, B.D., et al, (1988, p.265-275, eng) 43-4499

Two-dimensional coupled ice-ocean model of the Bering Sea Marginal Ice Zone. Kantha, L.H., et al, (1989, p.10,921-10,935, eng) 43-4528

Ice metal friction

See also: Metal ice friction

Ice microstructure

Relations of ice microstructures to microconvection in the surface sea layers. Monakhov, E.I., (1988, p.72-77, rus) 43-806

High pressure ice. Klein, M.L., et al, (1989, p.441-454, eng) 43-3248

Shear-creep system for studying grain-boundary behaviour in ice Ignat, M., et al, (1989, p.140-142, eng) 43-4150

Ice models

Strength of icebergs during impact. El-Tahan, H., et al, (1986, p.197-212, eng) 43-269

Ice loads and impacts on the semi-submersible Aker D-6. Kulsvehagen, T., (1988, p.159-177, eng) 43-619

Properties of EG/AD-model ice in VTT ice basin. Lehmus, E., (1988, p 661-668, eng) 43-652

On modelling of ship motion in level ice. Zuev, V.A., et al, (1987, 6p. + appends., eng) 43-720

Methods of preparing laboratory ice with specified physical properties. Petrov, I.G., et al, (1988, p.77-94, rus) 43-807

Prospects for modeling and predicting the large-scale ocean circulation and its mesoscale variability in the Arctic Ocean and Greenland Sea. Semtner, A.J., Jr., (1987, p.119-121, eng) 43-849

Coupled air-ice-ocean models. Hibler, W.D., III, (1987, p.131-137, eng) 43-850

Air/ocean/ice models: working group report. Tipper, R.C., et al, (1987, p.139-142, eng) 43-851

Antarctic ice sheet response to changes. Robin, G. de Q., (1988, p.31-50, eng) 43-1095

Numerical modelling of the southern ocean ice cover. Guretskiĭ, V.V., (1987, 39p., rus) 43-1097

Material modelling of ice—failure surfaces and plasticity theories. Horrigmoe, G., (1987, 18p. + graphs, eng) 43-1104

Constitutive modelling of brittle and ductile ice. Pulkkinen, E., (1987, ca20p., eng) 43-1105

Constitutive model for ice as a damaging visco-elastic material. Sjölind, S.-G., (1987, 3p., eng) 43-1107

Numerical simulation of North Atlantic sea ice variability, 1951-1980. Walsh, J.E., (1985, p 43-46, eng) 43-1155

New modelling ice. Beliakov, V.B., (1986, 8p., eng) 43-1193

Ship model testing in level ice: an overview. Tatinclaux, J.C., (1988, 30p., eng) 43-1402

Mathematical characteristics of sea ice dynamics models. Pritchard, R.S., (1988, p.15,609-15,618, eng) 43-1736

Modeling ice dynamics of coastal seas. Overland, J.E., et al, (1988, p.15,619-15,637, eng) 43-1737

Modelling the resistance of ice to ship motion. Gramusov, E.M., (1984, 8p., eng) 43-1836

Model simulation of ramming tests conducted with the USCGC *Polar Star*. Comfort, G., (1988, 146p. + appends., eng) 43-1879

Toward the automated use of remote sensing data in operational ice forecasting. McNutt, L., et al, (1988, p.1713-1715, eng) 43-1902

Three-dimensional model of the antarctic ice sheet. Herterich, K., (1988, p.32-35, eng) 43-1940

Effect of stratigraphy on radar-altimetry data collected over ice sheets. Jezek, K.C., et al, (1988, p.60-63, eng) 43-1945

Numerical models of steady-state thickness and basal ice configurations of the central Ronne Ice Shelf, Antarctica. Lange, M.A., et al, (1988, p.64-70, eng) 43-1946

Formation of the west antarctic ice sheet. Lindstrom, D.R., (1988, 71-76, eng) 43-1947

Can relict crevasse plumes on antarctic ice shelves reveal a history of ice-stream fluctuation. MacAyeal, D.R., et al, (1988, p.77-82, eng) 43-1948

Dielectric variability of a 130 m antarctic ice core: implications for radar sounding. Moore, J.C., (1988, p.95-99, eng) 43-1951

Glacier variations caused by climatic changes. Oerlemans, J., (1988, p.333-341, eng) 43-1990

Wandering Gondwanaland's impact on summer temperatures. Ledley, T.S., (1988, p.1397-1400, eng) 43-2033

Steady-state distribution of temperature in the central part of Antarctica. Vostretsov, R.N., et al, (1989, p.87-94, eng) 43-2051

Calculation of the strain and stress rates of a dome-shaped glacier. Potapenko, V.IU., (1989, p.124-128, eng) 43-2057

Role of the molecular sublayer in the melting or freezing of sea ice. Steele, M., et al, (1989, p.139-147, eng) 43-2079

Finnish river ice research project. Huokuna, M., (1988, p.15-41, eng) 43-2163

Ice jams, release and surge wave propagation, Mackenzie River. Parkinson, F.E., et al, (1988, p.209-223, eng) 43-2173

Development of a comprehensive numerical river ice model. Petryk, S., (1988, p.345-367, eng) 43-2180

Late Pleistocene and Holocene sea-level change in the Australian region and mantle rheology. Nakada, M., et al, (1989, p.497-517, eng) 43-2441

Rate-sensitive damage and cracking model for ice. Pulkkinen, E., (1989, p.47-53, eng) 43-2609

On modeling the energetics of the ridging process. Hopkins, M.A., et al, (1989, p.175-178, eng) 43-2625

Model study of uplifting ice forces: the instrumentation. Zabilansky, L.J., (1988, p.745-748, eng) 43-2668

Ice model basin test data processing and evaluation. Ionov, B.P , (1985, 7p., eng) 43-2695

IAHR Symposium on Ice, 9th, 1988. (1988, 3 vols., eng) 43-2906

Global design load selection for arctic mobile drilling platform. Kamesaki, K., et al, (1988, p.371-384, eng) 43-2937

Probabilistic study of ice island trajectories. Li, F.C., et al, (1988, p.405-414, eng) 43-2940

Resistance tests in ice on structure and ship models. Takekuma, K , et al, (1988, p.570-579, eng) 43-2955

Model ice of the NKK Ice Model Basin. Narita, S , et al, (1988, p.782-792, eng) 43-2973

Model studies on ice control structure. Decsi, E., et al, (1988, p.53-58, eng) 43-2979

Simulation of experimental freshwater icicle growth with a simple 740 $Numerical model of freshwater icicle growth. Johnson, K., et al, (1988, p.425-435, eng) 43-3014
Modeling of atmospheric icing on small scale. Anno, Y., (1988, p.498-503, eng) 43-3020
Constitutive relatio. s for creep of ice. Jordaan, I.J., et al, (1988, p.47-58, eng) 43-3023
Dynamic transport of river ice. Shen, H.T., et al, (1988, p.147-156, eng) 43-3028
Sea-level control of ice sheet disintegration. Fastook, J.L., (1983, p.391-401, eng) 43-3036
Fracture experiments on freshwater and urea model ice. Bentley, D.L., et al, (1988, 152p., eng) 43-3040
Modeling the growth and decay of the Antarctic Peninsula Ice Sheet. Payne, A.J., et al, (1989, p.119-134, eng) 43-3152
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Fracture of freshwater and urea model ice. Bentley, D.L., (1989, 142p, eng) 43-3610
Dating by ice flow modeling. Reeh, N., (1989, p.141-159, eng) 43-3585
Ice resistance and its components. Ionov, B.P., (1988, 79p., rus) 43-3707
Small scale modelling of iceberg scouring of the seabed. Poorooshasb, F., et al, (1989, p.133-145, eng) 43-3719
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About physical modelling of kinetic friction between ice and ship. Liukkonen, S., (1989, p.736-749, eng) 43-3773
Ice model basin of the Gorky Polytechnic Institute. Beliakov, V.B., et al, (1982, 5p., eng) 43-3856
Late Pleistocene and Holocene sea-level: implications for mantle rheology and the melting history of the antarctic ice sheet. Nakada, M., et al, (1988, p.442-455, jpn) 43-3975
Model and full-scale tests in ice. Schwarz, J., (1989, 6p., eng) 43-4031
Free drift model for river ice cover formation. Ho, C.F., et al, (1988, p.140-151, eng) 43-4124
Step frequency radar for determining the thickness of saline ice. Iizuka, K., (1984, var p., eng) 43-4160
Specific energy of impact crushing of ice. Tunik, A.L., (1988, p.113-120, eng) 43-4174
Investigation of ice properties by cyclic testing. Vinogradov, O.G., (1988, p.121-122, eng) 43-4175
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Drifter/modeling program of the Winter Weddell Sea Project 1986. Martinson, D.G., (1989, p.100-102, eng) 43-4436
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Two-dimensional coupled ice-ocean model of the Bering Sea Marginal Ice Zone. Kantha, L.H., et al, (1989, p.10,921-10,935, eng) 43-4528
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Ice interaction with the U.S. Army ribbon bridge. Coutermarsh, B.A., (1986, 18p., eng, 43-4592
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New types of ships and their seagoing qualities. Peresypkin, V.I., ed, (1987, 136p, rus) 43-30
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Basic characteristics and the elements of adaptive simulation of transportation processes on the Northern Sea Route. Arikainen, A.I., et al, (1987, p.20-33, rus) 43-314
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Ice navigation. (1988, p 22-25, eng) 43-415
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Icy epic of the *Mossovet*. Matiiasevich, A., (1988, p.42-46, rus) 43-572
International Conference on Technology for Polar Areas, Trondheim, 1988. (1988, 782p. (2 Vols.), eng) 43-610
Okhotsk program and related activities. Oshima, M., (1988, p.71-88, eng) 43-613
Dynamics of ship/ice interaction. Jebaraj, C., et al, (1988, p.89-100, eng) 43-614
Ice force estimation during local impact of a ship's plate. Omar, A.F., et al, (1988, p.101-112, eng) 43-615
Evaluation of marine oil transportation systems for Arctic areas. Lawson, W.A., et al, (1988, p.125-146, eng) 43-617
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Ice experiment. Zheleznov, S., et al, (1988, p 20-21, rus) 43-699
Ice resistance to ship motion. Ionov, B.P., (1987, 13p. + appends., eng) 43-718
Mechanics of destruction and some problems of ice destruction. Gol'dshtein, R.V., et al, (1987, 41p. + appends., eng) 43-719
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Analyzing the probability and statistical characteristics of sea ice compaction. Borodachev, V.E., (1988, p.103-120, rus) 43-809
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Remote sensing of extreme ice hazards. Leavitt, E., et al, (1987, p.335-347, eng) 43-911
Developing the structure of the ice-breaking fleet for objectives of the national economy. Arikainen, A.I., (1988, p.99-103, rus) 43-1090
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Ice-rubble accumulation beneath barges in ice-covered waters. Ettema, R., et al, (1988, p.397-412, eng) 43-1674
Measurement of ice forces on small vessels; Vol.1: technical report; Vol.2: appendices. Daley, C., et al, (1988, 51p. + appends., eng) 43-1697
STAR-VUE/MARINE-VUE upgrades. McAvoy, J.G., (1987, 81p., eng) 43-1708
Route selection through a dynamic ice field using the maximum principle. Thomson, N.R., et al, (1988, p.339-356, eng) 43-1800
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Modelling the resistance of ice to ship motion. Gramusov, E.M., (1984, 8p., eng) 43-1836
Strengthenings of ships for navigation in ice. (1986, c52p., eng) 43-1838
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Finnish Ice Service. Grönvall, H., (1988, p.95-110, eng) 43-1972
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Winter vessel performance and trafficability. Wells, D., et al, (1987, 33p., eng) 43-2139
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Design of cargo ships used in ice-infested waters. Popov, IU.N., (1988, 14p, eng) 43-2143
Arctic vessel performance and trafficability data base, 1983-87. Wells, D., et al, (1988, 80p, eng) 43-2148
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Soviet Arctic marine transportation. Brigham, L.W., (1988, p 20-23, eng) 43-2376
Second Icebreaking Technology Expedition with R.V. *Polarstern*. Final report, Vol.1. Schwarz, J., et al, (1987, 354 leaves, ger) 43-2430
Structure and strength of first-year ice ridges in the Baltic Sea. Leppäranta, M., et al, (1989, p.169-174, eng) 43-2624
Review of ship performance in level ice. Jones, S.J., (1989, p.325-342, eng) 43-2643
Ice loads on propellers of small ferry Jussila, M., et al, (1989, p.351-358, eng) 43-2645
Analytical investigation of ship resistance in broken or pack ice. Aboulazm, A.F., et al, (1989, p.359-363, eng) 43-2646
Modeling of ice class shafting and propeller systems. Final report. Cowper, D.N.B., et al, (1988, 38p, eng) 43-2801
IAHR Symposium on Ice, 9th, 1988. (1988, 3 vols., eng) 43-2906
Problem of year-round navigation along the Northern Sea Route. Arikainen, A., (1988, p.18-42, eng) 43-2908
Scientific and operational support of river navigation in ice conditions. Tronin, V.A., et al, (1988, p 697-705, eng) 43-2966
Laboratory study on ice formation in navigation channels. Ettema, R., et al, (1988, p.1-11, eng) 43-2974
Development of a river ice-prow. Part 2. Tatinclaux, J.C., (1988, p.44-52, eng) 43-2978
Problems of the Arctic and the Antarctic Collection of articles, Vol.61. Krutskikh, B.A., ed, (1989, 103p., eng) 43-3226
Ice surveys and forecasts for the North Atlantic. Kogan, B.A., et al, (1989, p.17-25, eng) 43-3227
Some meteorological service problems in the exploitation of the northern seas. Dement'ev, A.A., (1989, p 80-87, eng) 43-3232
Meteorological and aerological conditions of the Novaya Zemlya bora. Dement'ev, A.A., et al, (1989, p 88-96, eng) 43-3233
Ergonomics and Arctic navigation. Ells, J., (1988, p.75-77, eng) 43-3281
Ice navigating ships. Lebedev, S., et al, (1989, p.28-29, rus) 43-3533
The AML icebreaker. (1978, 18p., eng) 43-3626
Proceedings. POAC 89. Vols.1 and 2. (1989, 1187p. (2 vols.), eng) 43-3708
Scientific ocean drilling in the polar regions. O'Connell, S., et al, (1989, p.1001-1011, eng) 43-3797
Report on the 22nd Soviet Antarctic Expedition. Tiabin, N.I., ed, (1988, 147p., rus) 43-3839
Fast ice conditions during unloading operations at Soviet stations. Grigor'ev, IU.A., et al, (1988, p.93-98, rus) 43-3841
Ice conditions and hydrometeorology during the forced drift of the *Mikhail Somov* in Feb.-Mar. 1977. Grigor'ev, IU.A., et al, (1988, p.103-110, rus) 43-3843
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Advances in icebreaker design: W. Ger. conversion of Soviet ship. Varges, G., (1987, 25p., eng) 43-3962
Arctic: safety problems in navigation. Bogorodskiĭ, V., et al, (1989, p.16-19, rus) 43-3966
International Colloquium: Arctic Technology and Economy; Present Situation, Problems, and Future Issues, Paris, Feb. 15-17, 1989. (Proceedings). (1989, Var. p., fre) 43-4017
Sea ice in the Arctic Ocean and industrial development. Wadhams, P., (1989, 23p., eng) 43-4018
Present development of polar ships. Fedorovsky, B., (1989, 23p., fre) 43-4025

Ice navigat . ..t.)
Logistics ... ..tion in the Northern Sea Route. Chilingar. ..N.. [1989, 6p., fre] 43-4032
M.V. *Arctic* manoeuvring performance in ice. Summary report. Kendrick, A.M., et al, [1984, 16p., rus] 43-4152
M.V *Arctic* manoeuvring performance in ice. Final report. Kendrick, A.M., et al, [1984, 100p. + appends., eng] 43-4153
M.V. *Arctic* ice transiting performance, continuous mode. Final report. Albery, A.C.R., et al, [1984, var. p., eng] 43-4154
Analyzing vessel performance in snow-covered fast ice and pack ice. Gill, R.J., [1988, p.21-36, eng] 43-4167
Problems of the Arctic and the Antarctic: collection of articles. Krutskikh, B.A., ed, [1989, 152p., eng] 43-4367
Results of scientific and operational service to navigation and other fields of national economy in the Arctic. Borodachev, V.E., et al, [1989, p.31-36, eng] 43-4368
Ship mass effect on propulsion in continuous ice fields. Popov, IU.N., et al, [1988, 5p., eng] 43-4440
Effects of icebreakers' forms on ice breaking capability. Ionov, B.P., [1988, 7p., eng] 43-4441
Study on hull corrosion and coatings. Levelton, B.H., et al, [1988, Var. p., eng] 43-4474
Ice regime and navigation conditions in 1987 along the Mawson Coast. Vanda, IU.A., [1989, p.74-78, rus] 43-4544
Ice formation in frequently transited navigation channels. Huang, H.P., [1989, 227p., eng] 43-4574
Extending ice navigation. Arikainen, A.I., [1989, 64p., rus] 43-4606

Ice needles
Peculiarities of ice needle formation under high altitude conditions. Ukhnalev, V.A., [1988, p 84-90, rus] 43-530
Bibliography of needle ice. Lawler, D.M., [1988, p.295-310, eng] 43-1350

Ice nuclei
Microwave radiances from horizontally finite, vertically structured precipitating clouds. Kummerow, C.D., [1988, 162p., eng] 43-306
Secondary ice nucleus generation by silver iodide applied to the ground. Bigg, E.K., [1988, p.453-457, eng] 43-607
Possible mechanisms of crystal nucleation in clouds and their parametrization in numerical models. Mazin, I.P., [1988, p.7-13, rus] 43-1077
Artificial nucleation of mixed and stratiform clouds. Bulkov, M.V., et al, [1988, p.24-29, rus] 43-1083
Space-time distribution of atmospheric ice nucleating agents above Ukraine. Silaev, A.V., et al, [1988, p.142-153, rus] 43-1084
Growth and movement of hailstones in convective clouds. Lomidze, N.E., et al, [1988, p.148-152, rus] 43-1412
Expression of ice nuclei in bacteria and the nature of the ice nucleation site. Phelps, P.A., [1988, 253p., eng] 43-1471
Ice nucleation and crystallization in water-glycerol mixtures. Vigier, G., et al, [1987, p.345-354, eng] 43-1566
Determination of the ice-forming activity of amorphous and crystalline silver particles. Bubnov, A.V., et al, [1988, p.295-298, eng] 43-2486
State of the art in snowmaking and its application to arctic construction. Collins, J., et al, [1989, p.247-251, eng] 43-2633
Cloud physics and weather modification. Plaude, N.O., ed, [1988, 136p., rus] 43-2709
Ice nucleus measurements in the Kashka-Dar'ya River basin. Abdukarimov, A.T., et al, [1988, p.14-18, rus] 43-2711
Nature of active particles produced by pyrotechnics. Sosnikova, E.V., [1988, p.25-29, rus] 43-2713
New diffusion chamber for detecting ice-forming nuclei on membrane filters or substrata. Bogdanova, S.L., [1988, p.95-105, rus] 43-2718
Ice nucleation and antifreeze activity due to biological materials. Layton, R.G., et al, [1980, p.275-280, eng] 43-3948
Physico-chemical principles in low temperature biology. Taylor, M.J., [1987, p.3-71, eng] 43-3980
Characterization of a modified hexagonal silver iodide ice nucleus aerosol. Scott, P.T., et al, [1989, p.722-726, eng] 43-4547
Ice-forming activity of AgI and PbI2 pyrotechnic nucleants. Aksenov, M.IA., et al, [1988, p.41-47, rus] 43-4585

Ice openings
Lidar detection of leads in Arctic sea ice. Schnell, R.C., et al, [1989, p.530-532, eng] 43-3339
Thermal regime of surface waters in an ice opening. Kochetov, S.V., et al, [1989, p.110-116, rus] 43-3602
See also: Polynyas

Ice optics
Albedo of break-up ice covers. Prowse, T.D., [1987, p.197-202, eng] 43-402
Reflectances of glaciers as calculated using Landsat-5 thematic mapper data. Hall, D.K., et al, [1988, p.311-321, eng] 43-544
Optical studies of antarctic sea ice. Schlosser, E., [1988, p.289-293, eng] 43-1349
Bhaskara-II satellite capability to monitor soil moisture in India. Rao, K.S., et al, [1984, p.91-96, eng] 43-1928
Light transmission in freshwater ice. Bolsenga, S.J., [1989, p.188-198, eng] 43-3724
Anisotropic light radiance in and under sea ice. Trodahl, H.J., et al, [1989, p.305-308, eng] 43-4450

Ice override
Effect of sea ice on Beaufort Sea coastal processes. [1987, 104p. + appends, eng] 43-281
Evidence for sea-ice impact on Icy Reef, Beaufort Sea coast. Reimnitz, E., et al, [1988, p.190-192, eng] 43-514
Dynamic ride up and crushing of short ice ridges on conical structures. Nordgren, R.P., et al, [1989, p 287-291, eng] 43-2638

Ice physics
Thermophysical properties of snow and ice on the Vavilov Dome, Severnaya Zemlya. Nikolenko, A.V., [1987, p.51-58, rus] 43-227
New methods of determining spacial shifts of glacier surfaces. Vinnikov, L.P., et al, [1987, p.179-183, rus] 43-255
Field techniques for obtaining engineering characteristics of frazil ice accumulations. Dean, A.M., Jr., [1986, p.265-278, eng] 43-273
IAHR—recommendations on testing methods of ice 5th report of Working Group on Testing Methods in Ice. [1986, p.595-599, eng] 43-280
Properties of EG/AD-model ice in VTT ice basin. Lehmus, E., [1988, p.661-668, eng] 43-652
Gas inclusions in lake ice and radioluminescent temperature of the ice sheet. Bordonskiĭ, G.S., et al, [1985, p.60-66, eng] 43-662
Results of radar sounding of drifting sea ice from its surface. Bogatyrev, E.F., et al, [1988, p.148-151, rus] 43-813
DOD floating ice problems. Cox, G.F.N., [1987, p.151-154, eng] 43-853
Mechanical properties of shelf ice. Frederking, R., et al, [1987, p.67-78, eng] 43-903
Survey of physical and mechanical properties of icebergs. Nadreau, J.P., [1987, p.155-192, eng] 43-906
Molecular dynamics simulation of ice at constant volume. Kerr, J.A., et al, [1988, p.4313-4314, eng] 43-1028
Horizontal compressive strength of low salinity ice from the Gulf of Bothnia. Fransson, L., et al, [1987, 9p., eng] 43-1102
Red emission from pulse irradiated H2O ice. Quickenden, T.I., et al, [1988, p.403-412, eng] 43-1135
Theory and methods of producing artificial ice. Smorygin, G.I., [1988, 280p., rus] 43-1439
Radio scattering of antarctic ice sheet. Uratsuka, S., et al, [1988, p.157-160, eng] 43-1506
Synthetic aperture radar data over terrestrial ice. Rees, W.G., [1988, p.165-168, eng] 43-1508
Effect of crystal fragmentation on the luminescence from pulse-irradiated H2O ice. Bekker, M.G., et al, [1988, p.767-772, eng] 43-1799
Numerical analysis of landsat thematic mapper images of Antarctica: surface temperatures and physical properties. Orheim, O., et al, [1988, p.109-120, eng] 43-1954
Location of impurities in antarctic ice. Wolff, E.W., et al, [1988, p.194-197, eng] 43-1966
Early speculations on glacier flow and ice physics. Walker, J.C.F., et al, [1988, p.342-348, eng] 43-1991
Technology of snow and ice removal. Minsk, L.D., [1989, p.104-112, eng] 43-2093
Preliminary results of an experiment using ± 16 ft x 50 ft long frazil collector line array. Perham, R.E., [1988, p.139-156, eng] 43-2169
Shoreline dynamics of the eastern and southern Weddell Sea. Kozlovskiĭ, A.M., [1988, p.62-66, rus] 43-2224
Effect of longwave radiation and ice microphysics on convection. Chen, S., et al, [1988, p.3897-3910, eng] 43-2361
Rate-sensitive damage and cracking model for ice. Pulkkinen, E., [1989, p.47-53, eng] 43-2609
Radioluminescence of ice containing MgCl2 and CaCl2. Wypych, M., et al, [1989, p.139-143, eng] 43-2778
Ice ionization from vibrational excitation. Devlin, J.P., [1988, p.6867-6868, eng] 43-2846
Thermalization distances and times for subexcitation electrons in solid water. Goulet, T., et al, [1988, p.6871-6874, eng] 43-2847
Transformation of ice VIII to amorphous ice. Klug, D.D., et al, [1989, p.2390-2392, eng] 43-2903
On measuring the shear strength of ice. Frederking, R., et al, [1988, p.76-88, eng] 43-3025
Analysis of observed failure mechanisms for laboratory, first-year and multi-year ice. Blanchet, D., et al, [1988, p.89-136, eng] 43-3026
Expedition Antarktis VII/1 and 2 (EPOS) of RV *Polarstern* in 1988/1989. Hempel, I., ed, [1989, 185p., eng] 43-3092
Internal friction characteristics of sea ice. Bogorodskiĭ, V.V., et al, [1983, 8p., eng] 43-3171
High pressure ice. Klein, M.L., et al, [1989, p.441-454, eng] 43-3248
Computational ice-divide analysis of a cold plane ice sheet. Szidarovszky, F., et al, [1989, p.170-177, eng] 43-3354
Bibliography of remote sensing, mapping and characterization of sea ice. [1989, 114p., eng] 43-3467
Sea ice characteristics, motion and interactions. Coon, M., [1988, p.41-44, eng] 43-3502
Review and status of remote sensing of sea ice. Carsey, F., [1989, p.127-138, eng] 43-3508
Physico-mechanical properties of ice in fresh water reservoirs. Truskov, P.A., et al, [1988, p.38-49, rus] 43-3634
Chemical composition of indigenous ice in the lower Amur River region. Ivanov, A.V., et al, [1987, p.28-38, rus] 43-3655
How do glaciers record environmental processes and preserve information. White, J.W.C., et al, [1989, p.85-98, eng] 43-3682
Physical property reference horizons. Shoji, H., et al, [1989, p.161-175, eng] 43-3686
Crack formation in ice during compression. Epifanov, V.P., [1988, p.181-188, rus] 43-4156
Electromagnetic properties of freshwater ice, sea ice, and snow. Lüdecke, C., [1986, 97p., ger] 43-4163
Proceedings. [1988, 216p., eng] 43-4166
Overview of the physical properties of sea ice. Tucker, W.B., [1988, p.71-85, eng] 43-4171
Specific energy of impact crushing of ice. Tunik, A.L., [1988, p.113-120, eng] 43-4174
Observations on the formation of spongy ice from fresh water. Lock, G.S.H., et al, [1989, p.129-133, eng] 43-4210
Passive microwave *in situ* observations of winter Weddell Sea ice. Camiso, J.C., et al, [1989, p.10,891-10,905, eng] 43-4526
Radar backscattering from snow-covered ice. Lin, F.C., et al, [1986, p 321-328, eng] 43-4646

Ice pileup
Construction of an arctic barrier island by alternating sea-ice pileup and overwash. Barnes, P.W., et al, [1988, p.180-182, eng] 43-513
Evidence for sea-ice impact on Icy Reef, Beaufort Sea coast. Reimnitz, E., et al, [1988, p.190-192, eng] 43-514
Interaction between ice and drilling rigs. Romagnoli, R., et al, [1988, p.605-613, eng] 43-649

Ice plasticity
Constitutive modelling of brittle and ductile ice. Pulkkinen, E., [1987, ca20p., eng] 43-1105
Rate-sensitive damage and cracking model for ice. Pulkkinen, E., [1989, p.47-53, eng] 43-2609
C-axis orientation and flow rate of ice. Azuma, N., et al, [1988, p.67-76, eng] 43-2910
Elasto-plastic analysis of ice force on a circular pile. Tanaka, S., et al, [1988, p.351-360, eng] 43-2935
Internal friction characteristics of sea ice. Bogorodskiĭ, V.V., et al, [1983, 8p., eng] 43-3171

Ice pressure
Problems of using tie-rods in overlapping metallic bridge spans. Vladimirskiĭ, S.R., et al, [1988, p.14-15, rus] 43-25
New types of ships and their seagoing qualities. Peresypkin, V.I., ed, [1987, 136p., rus] 43-30
Tensometric testing of transport ships. Likhomanov, V.A., et al, [1987, p.46-54, rus] 43-32
Possibility of increasing the Arctic draught of "Noril'sk"-type ships according to ice-strake strength. Karavanov, S.B., [1987, p.54-63, rus] 43-33
Ice loads on the outer hull-plating of ice navigation ships. Karavanov, S.B., et al, [1987, p.81-86, rus] 43-35
Composite ice-resisting walls. O'Flynn, B., [1988, 7p., eng] 43-118
Behaviour of transversely loaded continuous steel-concrete composite plates. Kennedy, S.J., [1988, 7p, eng] 43-120
Application of fracture mechanics to ice/structure interactions. Nixon, W.A., [1988, p.1-12, eng] 43-150
IAHR Symposium on Ice, 8th, 1986. [1986, 599p., eng] 43-258
Model study of ice forces on a single pile. Zabilansky, L.J., [1986, p.77-87, eng] 43-262
Evaluation of ice pressure and strain sensors in a large test basin. Croasdale, K.R., et al, [1986, p.213-225, eng] 43-270
Pressure-area curve for ice. Sanderson, T.J.O., [1987, p.75-98, eng] 43-444
Numerical design of the ice expansive pressure. Xu, B., [1987, p.73-78, chi] 43-488
On the calculation of static pressure due to expansion of ice on a reservoir. Zhang, D., [1987, p.83-91, chi] 43-490
Experience in and problems of marine pipeline construction. Grudnitskiĭ, G.V., et al, [1988, p.33-36, rus] 43-567
Numerical simulation of ice behaviour and ice structure interaction. Nygård, M.K., et al, [1988, p.261-274, eng] 43-626
Measuring the creep of ice in place. Shields, D., et al, [1988, p.703-713, eng] 43-656

Ice forces on inclined model bridge piers. Haynes, F.D., et al, (1984, p.1167-1173, eng) 43-677
Impact of external factors on marine hydraulic structures. Smirnov, G.N., ed, (1986, 178p., rus) 43-728
Sea ice effect on oscillations of cylindrical drilling-platform supports. Khrapatyĭ, N.G., et al, (1986, p.34-41, rus) 43-729
Pressure ridge effect on structures erected on the shelf Vardanian, S.S., et al, (1986, p.148-158, rus) 43-731
Experimental determination of total pressure-ridge load on cylindrical structures. Belov, A.B., (1986, p.158-161, rus) 43-732
Thermal compression of sea ice and protection for ships and structures. Borodachev, V.E., et al, (1987, p.99-102, rus) 43-892
Ice pressures during the impact of an ice mass. Kivisild, H.R., (1987, p 359-368, eng) 43-913
Local ice pressures measured in thick level ice in Antarctica. Final report. St. John, J., et al, (1986, 174p, eng) 43-976
Pressure dependence of the elastic constants of ice Ih Gagnon, R.E., et al, (1988, p.4522-5428, eng) 43-1030
Class A prediction of Arctic caisson performance. Hicks, M.A., et al, (1988, p.589-612, eng) 43-1469
Impressed current cathodic protection of a caisson structure for arctic conditions. Willis, A.D., et al, (1988, p.25-29, eng) 43-1671
Remarks on the Arctic Ocean and ice-drifting in Beaufort Sea. Jarlan, G., (1987, p.25-35, fre) 43-2066
Calculation of the ice resistance of ships. Zuev, V., (1988, 5p + figs., eng) 43-2161
Science of ice. Maeno, N., (1988, 229p., rus) 43-2327
Peak pressures from a damage model for ice in compression. McKenna, R.F., et al, (1989, p.67-73, eng) 43-2611
Working group on ice forces. 4th state-of-the-art report. Timco, G.W., ed, (1989, 385p., eng) 43-2812
Local ice loads and design of offshore structures. Iyer, S.H., (1989. p.1-57, eng) 43-2813
Modelling of progressive damage in ice Jordaan, I.J., et al, (1989, p.125-165, eng) 43-2816
Ships in ice. Kitagawa, H., et al, (1989, p.311-337, eng) 43-2823
Ice impact on ship hulls Müller, L., et al, (1989, p 339-375, eng) 43-2824
Results from indentation tests on freshwater ice Sodhi, D.S., et al, (1988, p.341-350, eng) 43-2934
Elasto-plastic analysis of ice force on a circular pile. Tanaka, S., et al, (1988, p.351-360, eng) 43-2935
Design ice force estimating system for a structure-level ice interaction. Kato, K., (1988, p.361-370, eng) 43-2936
Ice forces on framed structure. Tatsuta, M., et al, (1988, p 385-394, eng) 43-2938
Ice conditions of Lake Ogawara. Hirayama, K., et al, (1988, p 415-426, eng) 43-2941
Ice forces on the Nanisivik wharf Frederking, R., et al, (1988, p.463-472, eng) 43-2945
Thermal ice thrust by expanding ice cover. Yamaoka, I., et al, (1988, p.473-482, eng) 43-2946
Study on ice static pressure on ice cover in reservoir. Sui, X.Z., (1988, p 483-492, eng) 43-2947
Frost destruction and its prevention of reservoir revetment in plain area. Sui, X.Z., (1988, p.493-501, eng) 43-2948
Indentation and arrest stress intensity factors of first year columnar sea ice. Parsons, B.L., et al, (1988, p.502-511, eng) 43-2949
Laboratory study of vertical ice forces on piles. Christensen, F.T., (1988, p.512-525, eng) 43-2950
Structural design of new type three legged ice barrier. Nishizawa, S., et al, (1988, p.591-600, eng) 43-2957
Air-sea observation system of Hokkaido University. Aota, M., et al, (1988, p.651-660, eng) 43-2963
Ice mechanical properties in relation to Arctic engineering activities. Sackinger, W.M., (1988, p.9-25, eng) 43-3021
Assessment of the effect of length and orientation of a multi-year ridge on the force acting on conical structures Abdelnour, R., (1988, p.59-75, eng) 43-3024
Analysis of observed failure mechanisms for laboratory, first-year and multi-year ice. Blanchet, D., et al, (1988, p 89-136, eng) 43-3026
Modeling ice restraint forces in an ice boom. Perham, R.E., (1988, p.198-206, eng) 43-3033
Study on ice melting at high pressures. Krymskiĭ, A.V., et al, (1988, p.70-76, rus) 43-3305
Proceedings. (1988, 64p., eng) 43-3495
Limit force loads and measurements of pack ice driving forces in the Beaufort Sea. Croasdale, K.R., et al, (1988, p.5-11, eng) 43-3496
Global and local ice loads for structure design. Allyn, N., (1988, p.13-22, eng) 43-3497
Ice stress measurements around offshore structures. Johnson, J.B., (1988, p.55-59, eng) 43-3504
Mukluk ice stress measurement program. Cox, G.F.N., (1988, p.11-15, eng) 43-3643
Multiyear ridge force variability. Schreiber, R.W., et al, (1988, p.146-155, eng) 43-3720
Pressure-melting of ice. Nordell, B., (1989, p 249-258, eng) 43-3730
Compressive strength of antarctic frazil ice. Richter-Menge, J.A., et al, (1989, p.269-278, eng) 43-3732
Damage to polycrystalline ice under moderate pressure. Stone, B.M., et al, (1989, p.408-419, eng) 43-3744
Structure subjected to ice crushing. Timco, G.W., et al, (1989, p.420-430, eng) 43-3745
Global crushing forces on wide structures. Dorris, J.F., (1989, p.467-480, eng) 43-3749
On the Relationship between global and local ice crushing loads. Dorris, J.F., et al, (1989, p.481-491, eng) 43-3750
Creep of ice measured with a pressuremeter. Discussion and authors' reply. Ladanyi, B., et al, (1989, p.328-330, eng) 43-3827
M.V. *Arctic* manoeuvring performance in ice. Summary report. Kendrick, A.M., et al, (1984, 16p, rus) 43-4152
M.V. *Arctic* manoeuvring performance in ice. Final report. Kendrick, A.M., et al, (1984, 100p. + appends., eng) 43-4153
M.V. *Arctic* ice transiting performance, continuous mode. Final report. Albery, A.C.R., et al, (1984, var. p., eng) 43-4154
Interaction of ice floes with cylindrical piles. Matskevich, D.G., et al, (1988, p.180-184, rus) 43-4157
Scale effects in ice-structure interaction. analytical aspects. Jordaan, I.J., (1988, p.161-181, eng) 43-4181
Primary creep parameters for ice as measured *in-situ*. Shields, D.H., et al, (1989, p.281-290, eng) 43-4448

See also: Ice push; Ice loads; Pressure ridges

Ice prevention

Icicle prevention in railway tunnels by adiabatic treatment. Okada, K., (1987, p.5-9, eng) 43-450
Surface blowing as an aircraft anti-icing technique. Tabrizi, A.H., et al, (1988, p.343-348, eng) 43-1122
Light transport and general aviation aircraft icing research requirements. Breeze, R.K., et al, (1981, 142p. + appends, eng) 43-1571
Commercial aviation icing research requirements. Koegeboehn, L.P., (1981, 59p, eng) 43-1728
Deck variant of API 88 for the Canadian Coast Guard. Leonard, J., (1988, p.185-211, eng) 43-1758
Anti-icing/deicing capability for U.S. Army helicopters part 1. Werner, J.B., (1975, 253p., eng) 43-1789
Anti-icing/deicing capability for U.S. Army helicopters part 2. Werner, J.B., (1975, 220p, eng) 43-1790
Calcium chloride mixture (Verglimit) as an ice retardant for asphalt. Rainiero, J.M., (1988, p.44-53, eng) 43-2212
Double roofs to prevent ice damming on eaves. Baumgartner, A.M., et al, (1989, p.211-220, eng) 43-2370
U.S. naval landing craft, air cushion LCAC-008, cold weather tests. Ehrhardt, J., (1989, p.141-178, eng) 43-2438
Snow and ice control in North America. Thornes, J., (1986, 18p., eng) 43-2761
New icing prevention methods in folded mountain regions. Afanasenko, V.E., et al, (1987, p.253-260, rus) 43-3390
Insulation against ice in railroad tunnels. Sandegren, E., (1987, p.43-48, eng) 43-3816
NASA's rotorcraft icing research program. Shaw, R.J., et al, (1988, p.802-832, eng) 43-3817
Draining deicing pavings for bridge slabs Abbruzzese, F., (1989, p.14-19, ita) 43-3978
Study on keeping of underground fire cistern from freezing. Inaba, H., et al, (1989, p.303-308, eng) 43-4227
Development of an automatic weather station for cold regions. Strangeways, I.C., (1984, p.12-23, eng) 43-4311

See also: Chemical ice prevention; Ice control; Ice removal; Salting

Ice push

Effect of sea ice on Beaufort Sea coastal processes. (1987, 104p. + appends, eng) 43-281
Lithology of boulders in the Montmagny embayment, St. Lawrence shore. Dionne, J.C., (1987, p.161-169, fre) 43-318
Shear strength of ice-thrust mudstone. Cruden, D.M., et al, (1989, p.227-234, eng) 43-3825

Ice rafting

Ice-rafted debris in sediment cores. Grobe, H., (1987, p.123-126, eng) 43-405
Ice rafting: an indication of glaciation?. Reimnitz, E., et al, (1988, p.254-255, eng) 43-2373
Sea ice sediment entrainment and rafting in the Arctic. Kempema, E.W., et al, (1989, p.308-317, eng) 43-2690
Debris in icebergs: observations from Spitsbergen. Dowdeswell, J.A., et al, (1989, p.221-231, eng) 43-2776
Ice rafting along the shores of the upper Saint Lawrence Estuary. Dionne, J.C., (1987, p.67-96, fre) 43-3201
Particle-laden Eurasian Arctic sea ice: observations from July and August 1987. Pfirman, S., et al, (1989, p.59-66, eng) 43-4389

Ice reconnaissance

See also: Ice reporting; Ice conditions; Ice surveys

Ice regime

See also: Ice conditions

Ice relaxation

Mathematical analysis of glacier surges. Fowler, A.C., (1989, p.246-263, eng) 43-2131
Strain energy failure criterion for S2 freshwater ice in flexure. Cole, D.M., (1988, p.206-215, eng) 43-2923
New relaxation process in KOH-doped ice single crystal. Kawada, S., et al, (1989, p.54-57, eng) 43-3828
Quickening of dielectric relaxation of ice Ih by doping. Kawada, S., (1988, p.3694-3697, eng) 43-4534

Ice removal

Icing damages to the highways in Hulun Buir League, Nei Monggle, and its control. Bai, W., (1987, p.105-110, chi) 43-494
Physical oceanography of the northern Baffin Bay-Nares region. Addison, V.G., Jr., (1987, 108p, eng) 43-517
Process of making calcium acetate deicing agents. Gancy, A.B., (1984, 10 col., eng) 43-1070
Adhesiveness of ice on polymer materials. Andersson, A., (1987, 16p., eng) 43-1113
Atmospheric and sea spray icing. Andersson, A., (1987, 6p, eng) 43-1115
Development of a river ice prow. Tatinclaux, J.C., et al, (1988, 26p., eng) 43-1199
New Goodrich wind tunnel tests advanced aircraft de-icing systems. Phillips, E.H., (1988, p.78-80, eng) 43-1205
International Conference on Air Cushion Technology, Montreal, 1987. (1988, 381p, eng) 43-1747
Ice removal from port Chicoutimi. Desgagnés, G., (1988, p.93-102, fre) 43-1752
Anti-icing/deicing capability for U.S. Army helicopters part 1. Werner, J.B., (1975, 253p., eng) 43-1789
Anti-icing/deicing capability for U.S. Army helicopters part 2. Werner, J.B., (1975, 220p., eng) 43-1790
Deployment of floating bridges in ice-covered rivers. Mellor, M., et al, (1988, 38p., eng) 43-1839
Efficient numerical simulation of a one-dimensional electrothermal deicer pad. Roelke, R.J., et al, (1988, p.1097-1105, eng) 43-2027
Technology of snow and ice removal. Minsk, L.D., (1989, p.104-112, eng) 43-2093
Comparing chemical deicers. (1988, p.28-30, eng) 43-2157
Deicing chemicals and snow control. (1988, 53p, eng) 43-2205
Toxicity of calcium magnesium acetate used as deicer. Hiatt, G.F.S., et al, (1988, p.20-26, eng) 43-2208
Cable rime accretion measurements on a Laurentian Mountain. McComber, P., et al, (1989, p 427-434, eng) 43-2654
Predicting two-dimensional heat transfer in an electrothermal deicer pad. Wright, W.B., (1988, 138p., eng) 43-3968
Solutions to improve ice and snow control management on road, bridge, and runway surfaces. Kelley, J.R., (1988, p.152-161, eng) 43-4125
Investigation of power line de-icing by electro-impulse methods. Egbert, R.E., et al, (1989, p.1855-1861, eng) 43-4516

Ice reporting

Icy epic of the *Mossovet*. Matiiasevich, A., (1988, p.42-46, rus) 43-572
Scientifically based method of rapid information for ice navigation. Buzuev, A.IA., et al, (1988, p.130-141, rus) 43-811
Ice information obtained from meteorological satellites. Provorkin, A.V., et al, (1988, p.141-148, rus) 43-812
Checking the floe of ice: real-time processing of digital image data. Ramsay, B.R., et al, (1988, p.17-20, eng) 43-1573
Ice thickness data, winter 1984-85. (1988, 71p, eng) 43-1731
Report of the International Ice Patrol in the North Atlantic. Season of 1986. (1988, 71p., eng) 43-1817
Finnish Ice Service. Grönvall, H., (1988, p.95-110, eng) 43-1972
Ice load questions: some answers. Sanderson, T.J.O., (1989, p.377-385, eng) 43-2825
Problems of the Arctic and the Antarctic. Collection of articles, Vol.61. Krutskikh, B.A., ed, (1989, 103p., eng) 43-3226
Results of investigation of the dynamics of the Barents sea ice cover. Zubakin, G.K., et al, (1989, p.26-38, eng) 43-3228
Some meteorological service problems in the exploitation of the northern seas. Dement'ev, A.A., (1989, p 80-87, eng) 43-3232
Results of scientific and operational service to navigation and other fields of national economy in the Arctic. Borodachev, V.E., et al, (1989, p.31-36, eng) 43-4368
Manual for reporting ice conditions. (1989, Var. p., eng) 43-4473

See also: Ice surveys

Ice ridges

See also: Pressure ridges

Ice roads

Critical speed data for model floating ice roads and runways. Whitten, J., et al, (1988, p.151-161, eng) 43-1382
Critical speed data for an artificial floating ice sheet. Whitten, J., et al, (1988, p.115-132, eng) 43-1754

Ice roads *(cont.)*

Construction of snow-ice roads in the Arctic. Shabanov, P.P., et al, (1988, p.35-37, rus) 43-2231

Construction of ice roads and crossings by means of dusting. Krasnookiĭ, S.I., et al, (1988, p.38-39, rus) 43-2233

Permafrost problems in road engineering. Huang, X.M., (1988, p.344-351, chi) 43-2880

Snow and snow-ice surfaced roads. Alekseev, V.R., et al, (1988, p.191-199, rus) 43-3278

Ice rubber friction

See also: Rubber ice friction

Ice runways

Hard-surface runways in Antarctica. Mellor, M., (1988, 87p., eng) 43-1148

Improved techniques for construction of snow roads and airstrips. Lee, S.M., et al, (1988, 99p, eng) 43-1150

Critical speed data for model floating ice roads and runways. Whitten, J., et al, (1988, p.151-161, eng) 43-1382

Critical speed data for an artificial floating ice sheet. Whitten, J., et al, (1988, p.115-132, eng) 43-1754

Adelie land airport. Regrettier, J.F., et al, (1989, p.91-96, eng) 43-2614

Ice runways near the South Pole. Swithinbank, C., (1989, 42p, eng) 43-4598

Ice salinity

Numerical simulation of first-year sea ice. Cox, G.F.N., et al, (1988, p.12,449-12,460, eng) 43-721

Horizontal compressive strength of low salinity ice from the Gulf of Bothnia. Fransson, L., et al, (1987, 9p., eng) 43-1102

Study of the ice cover in Igloolik Bay. Murat, J.R., et al, (1988, p.239-249, eng) 43-1345

Multifrequency passive microwave observation of saline ice grown in a tank. Grenfell, T.C., et al, (1988, p.1687-1690, eng) 43-1896

Mechanical and physical properties of old and brackish ice. Jeffries, M.O, et al, (1988, p.177-187, eng) 43-2920

Distribution of brine drainage channels in sea ice. Kawamura, T., (1988, p.219-228, eng) 43-2995

Physico-mechanical properties of ice in fresh water reservoirs. Truskov, P.A., et al, (1988, p.38-49, rus) 43-3634

Temperature, salinity and density of fast ice in Liaodong Bay. Li, Z.J., et al, (1989, p.218-224, eng) 43-3727

Isotope tracing of multi-year land-fast sea ice. Jeffries, M.O., et al, (1989, p.9-16, eng) 43-4134

Profile properties of undeformed first-year sea ice. Cox, G.F.N., et al, (1988, 57p., eng) 43-4595

Ice sampling

Structure of upper zones of the Severnaya Zemlya glaciers. Govorukha, L.S, et al, (1987, p.86-88, rus) 43-233

Ice-sampling programme in the Thule area, North Greenland. Reeh, N., et al, (1987, p 81-84, eng) 43-748

Update on portable hot-water sea ice drilling. Govoni, J.W., et al, (1989, p.175-178, eng) 43-2366

Fracture toughness of S2 columnar freshwater ice. Dempsey, J.P., et al, (1989, p.83-89, eng) 43-2613

Sea ice thickness data: the many vs. the few. Eicken, H., et al, (1989, p.495-498, eng) 43-4431

Ice scoring

Survey of ice breakup processes, Canadian Beaufort Sea coastal zone. (1987, 15p. + appends. + maps, eng) 43-217

Effect of sea ice on Beaufort Sea coastal processes. (1987, 104p. + appends, eng) 43-281

Ice scour surveys, statistics and forces. Chari, T.R., et al, (1987, p.99-118, eng) 43-445

Hindcast study of iceberg drift on the Labrador Coast. Banke, E.G., et al, (1984, 161p., eng) 43-448

Development of optimum techno-economic decisions for Arctic offshore installations. Nasseri, T., et al, (1988, p.551-565, eng) 43-646

Iceberg scoring and sedimentology of Baffin I. continental shelf Pereira, C.P G., et al, (1988, p.221-230, eng) 43-1032

Geotechnical aspects of seabed pits in the Grand Banks area. Clark, J.I., et al, (1988, p.448-454, eng) 43-1051

Comparison of iceberg scour marks with trajectories on the Labrador Shelf. Todd, B.J., et al, (1988, p.1374-1383, eng) 43-1499

Icebergs rework shelf sediments to 500 m off Antarctica. Barnes, P.W., et al, (1988, p.1130-1133, eng) 43-1835

Preliminary study of scour under an ice jam Wuebben, J.L., (1988, p.177-192, eng) 43-2171

Iceberg/seabed interaction events observed during the DIGS experiment. Lever, J.H., et al, (1989, p.205-220, eng) 43-2629

Beaufort Sea cased gloryhole drilling. Gilbert, D., et al, (1989, p.451-458, eng) 43-2657

Ice scour mechanisms. Palmer, A., et al, (1989, p.123-132, eng) 43-3718

Small scale modelling of iceberg scouring of the seabed. Poorooshasb, F, et al, (1989, p.133-145, eng) 43-3719

Iceberg scouring marks high North Sea areas. (1988, p.40-41, eng) 43-4094

Scouring and bottom morphology on Weddell Sea shelf. Lien, R, et al, (1989, p.43-57, eng) 43-4388

See also: Striations

Ice sheets

Ice wells in the Schirmacher Oasis area. Vtiurin, B.I., (1987, p.103-107, rus) 43-238

Ice cover dynamics of northeastern Mid-Siberian Highlands in Late Pleistocene. Andreeva, S.M., et al, (1987, p 112-118, rus) 43-240

Ice forces associated with pressure ridges. Abdelnour, R., et al, (1986, p.227-245, eng) 43-271

Observed velocity fluctuations on a major antarctic ice stream. Stephenson, S.N., et al, (1988, p.695-697, eng) 43-339

Elasticity of ice sheets subjected to loads. Newbury, G.S., et al, (1988, p.691-701, eng) 43-655

Finite element analysis of floating ice sheets. Horrigmoe, G., et al, (1988, p.715-725, eng) 43-657

Modification of landscapes by ice sheets, northern Scotland. Hall, A.M., et al, (1987, p.531-542, eng) 43-703

Interactions between ice sheets and climate in the Northern Hemisphere. Neeman, B.U., et al, (1988, p.11,175-11,191, eng) 43-724

Tandem-accelerator mass-spectrometry measurements of Cl-36, I-129 and osmium isotopes in diverse natural samples. Gove, H.E., (1987, p.103-119, eng) 43-773

Evidence from Fram Strait (78N) for early glaciation. Jones, G.A., et al, (1988, p.56-59, eng) 43-783

Antarctic ice sheet response to changes. Robin, G. de Q., (1988, p.31-50, eng) 43-1095

Mathematical modeling of floating ice sheets. Nyström, M., (1987, 11p., eng) 43-1106

Drift carbonate on the Canadian Shield 2. Dredge, L.A., (1988, p.783-787, eng) 43-1129

Effect and mechanism of episodic sea level events: the record preserved within the Late Wisconsinan-Holocene incised valley-fill sequences. Thomas, M.A., et al, (1988, p 399-406, eng) 43-1151

Greenland ice sheet mass balance. Reeh, N., (1985, p 53-59, eng) 43-1158

Potential climatic effects on the Greenland ice sheet. Bindschadler, R.A., (1985, p.60-61, eng) 43-1159

Origin of the Greenland ice sheet. North, G.R., (1985, p 66-67, eng) 43-1161

Antarctic oases, Davis Station and the Vestfold Hills. Pickard, J., (1986, p.1-19, eng) 43-1189

Gravitational separation of gases and isotopes in polar ice caps. Craig, H., et al, (1988, p.1675-1678, eng) 43-1202

Device for reaming holes in ice. Heath, C.W., et al, (1988, p.173-175, eng) 43-1374

Thermal regime of plateau ice caps in northern Norway. Gellatly, A.F., et al, (1988, p.983-986, eng) 43-1476

Late Quaternary surface fluctuations of Beardmore Glacier, Antarctica. Denton, G.H., et al, (1988, p.90-92, eng) 43-1619

Search for microfossils beneath the Greenland and west antarctic ice sheets. Harwood, D.M., (1988, p.105-106, eng) 43-1621

Geophysical program at Upstream B camp, Siple Coast. Bentley, C.R., et al, (1988, p.109-110, eng) 43-1622

Dynamics and mass balance of ice stream B. Whillans, I.M., (1988, p.112-113, eng) 43-1624

Interaction between ice stream B and Ross Ice Shelf, Antarctica Bindschadler, R.A., et al, (1988, p.113-115, eng) 43-1625

Paleoclimatic ice core program at Siple Station. Mosley-Thompson, E., et al, (1988, p.115-117, eng) 43-1626

Lloyd's mirror at 250 megahertz: footnote on antarctic telemetry. Bering, E.A., III, et al, (1988, p.270-273, eng) 43-1646

Surging potential of ice sheets. Radok, U., et al, (1987, 21p., eng) 43-1714

Surging potential of ice sheets. Jenssen, D., et al, (1985, 81p., eng) 43-1716

Critical speed data for an artificial floating ice sheet. Whitten, J., et al, (1988, p.115-132, eng) 43-1754

Symposium on Antarctic Glaciology, Bremerhaven, Sep. 7-11, 1987. (1988, 229p., eng) 43-1934

Three-dimensional model of the antarctic ice sheet. Herterich, K., (1988, p.32-35, eng) 43-1940

Use of continuum thermodynamics in the formulation of ice-sheet dynamics. Hutter, K., et al, (1988, p.46-51, eng) 43-1943

Evolution of East Antarctica's ice sheet. Huybrechts, P., et al, (1988, p.52-59, eng) 43-1944

Effect of stratigraphy on radar-altimetry data collected over ice sheets. Jezek, K.C., et al, (1988, p.60-63, eng) 43-1945

Formation of the west antarctic ice sheet. Lindstrom, D.R., (1988, 71-76, eng) 43-1947

Comparison of results from transit satellite tracking. McDonald, J., et al, (1988, p.83-88, eng) 43-1949

Dynamics of the ice-crushing process. Jordaan, I.J., et al, (1988, p.318-326, eng) 43-1988

Ice-sheet dynamics of Baffin Island and Hudson Strait. Miller, G.H., et al, (1988, p.116-136, eng) 43-2012

Erosion by continental ice sheets. White, W.A., (1988, p.137-150, eng) 43-2013

Problems of the Arctic and Antarctic, Vol.59, 1989. Krutskikh, B.A., ed, (1989, 153p., eng) 43-2041

General mathematical model of a quasi-stationary ice cover. Potapenko, V.IU., et al, (1989, p.21-27, eng) 43-2043

Criteria analysis of equations describing thermodynamic processes in ice covers Potapenko, V.IU., et al, (1989, p.95-100, eng) 43-2052

Use of radar sounding method in the study of dynamics of the antarctic ice cover. Sheremet'ev, A.N., (1989, p.143-149, eng) 43-2060

Investigating variations in the gravitational constant. Cooper, A.P.R., et al, (1989, p.55-58, eng) 43-2219

Critique of article on nitrate in antarctic snow. Laird, C.M., et al, (1988, p.233-240, eng) 43-2245

Bedrock topography beneath Greenland ice sheet. Fisher, E., et al, (1989, p.2874-2882, eng) 43-2394

Growth of radial cracks in ice sheets. Cocks, A.C.F., (1989, p.7-12, eng) 43-2603

Ice reinforced with Geogrid. Haynes, F.D., et al, (1989, p.179-185, eng) 43-2626

Calculation of ice sheet stress-strain state by numerical method. Kozin, V.M., et al, (1989, p.315-318, eng) 43-2641

Model study of a cable-moored platform in sheet ice. Nixon, W.A., et al, (1989, p.459-468, eng) 43-2658

Ice flow over viscous basal sediment, ice stream B. MacAyeal, D.R., (1989, p.4071-4087, eng) 43-2721

Evidence for the response of the antarctic ice sheet to climate warming. Prentice, M.L., et al, (1987, p.56-58, eng) 43-2731

Glacial geology of the Reckling Moraine on the east antarctic ice sheet. Faure, G., et al, (1987, p.61-63, eng) 43-2733

Late Wisconsin glacial history of the South Orkney Plateau. Herron, M J, (1987, p.63-65, eng) 43-2734

Transient behavior of ice stream B and Crary Ice Rise, West Antarctica. Bindschadler, R.A., et al, (1987, p.66-67, eng) 43-2735

Flow of ice streams B and C. Whillans, I.M., (1987, p 67-68, eng) 43-2736

Geophysical studies of the Siple Coast area. Bentley, C.R., et al, (1987, p 68-70, eng) 43-2737

Analysis of Siple Coast firn cores. Alley, R B, et al, (1987, p.70-71, eng) 43-2738

Numerical study of the west antarctic ice sheet formation Lindstrom, D.R., et al, (1987, p.71-73, eng) 43-2739

Glaciology of the east antarctic ice sheet at the Allan Hills. Faure, G., et al, (1987, p.74-75, eng) 43-2740

Modern coherent radar for ice-sheet sounding. Moore, R.K., (1987, p 83-84, eng) 43-2746

Failure mechanisms for laboratory, first-year and multi-year ice. Blanchet, D., et al, (1989, p.77-124, eng) 43-2815

Ice-induced vibrations of structures Sodhi, D S, (1989, p.189-221, eng) 43-2818

Ice core evidence of ice sheet melting on Greenland. Koerner, R.M., (1989, p.964-968, eng) 43-2859

Problem of year-round navigation along the Northern Sea Route. Arikainen, A., (1988, p.18-42, eng) 43-2908

Design ice force estimating system for a structure-level ice interaction. Kato, K., (1988, p.361-370, eng) 43-2936

Ice forces on framed structure. Tatsuta, M., et al, (1988, p.385-394, eng) 43-2938

Variations in the global water budget. Street-Perrott, A., ed, (1983, 518p., eng) 43-3035

Sea-level control of ice sheet disintegration. Fastook, J.L., (1983, p.391-401, eng) 43-3036

Extension of the Allan Hills triangulation network system. Annexstad, J.O., et al, (1989, p.17-22, eng) 43-3078

Modeling the growth and decay of the Antarctic Peninsula Ice Sheet. Payne, A.J., et al, (1989, p.119-134, eng) 43-3162

Sedimentation and Quaternary glacial history of Marguerite Bay. Kennedy, D.S., et al, (1989, p.255-276, eng) 43-3168

Dating of Late-Pleistocene-Holocene sediments of east antarctic continental shelf. Domack, E.W., et al, (1989, p 277-287, eng) 43-3169

Altitudinal shift of the Greenland ice sheet equilibrium line. Ambach, W., et al, (1989, p.281-288, eng) 43-3189

Convective heat transfer in water over melting ice sheet. Lunardini, V.J., (1986, p.42-51, eng) 43-3218

Steady-state coupled ice-ocean model. Willmott, A.J., et al, (1989, p.501-518, eng) 43-3293

Antarctic-type ice sheets in the Northern Hemisphere. Grosval'd, M.G., (1988, p.3-25, rus) 43-3299

Radio echo sounding of Nordaustlandet glaciers. Macheret, IU.IA., et al, (1988, p.44-56, rus) 43-3302

Model of the mechanical motion of ice cover. Ivanov, A.I., (1988, p.57-62, rus) 43-3303

Calculation of ice sheet thickness from mathematical models. Bitiukov, IU.N., et al, (1988, p.111-113, rus) 43-3312

Current state of island ice caps in the Soviet Arctic. Govorukha, L.S., (1988, p.114-117, rus) 43-3313

Dynamics of the antarctic ice sheet. Budd, W.F., et al, (1989, p.16-22, eng) 43-3329

Dynamics of a Svalbard ice cap. Dowdeswell, J.A., et al, (1989, p.37-45, eng) 43-3332

Dynamics of the Law Dome Ice Cap. Etheridge, D.M., (1989, p.46-50, eng) 43-3333

Thermo-mechanically coupled ice sheets. Hindmarsh, R.C.A., et al, (1989, p.57-69, eng) 43-3335
Computational ice-divide analysis of a cold plane ice sheet. Szidarovszky, F., et al, (1989, p.170-177, eng) 43-3354
Ice velocity related to ice thickness in Wilkes Land. Young, N.W., et al, (1989, p.192-197, eng) 43-3357
Aerosol transport from sources to ice sheets. Shaw, G.E., (1989, p.13-27, eng) 43-3678
Failure modes of an ice sheet on an inclined plane Michel, B., et al, (1989, p.235-248, eng) 43-3729
Omega navigation in the shadow of Antarctica. Barr, R., et al, (1989, p.236-247, eng) 43-3822
Antarctic-style ice sheet in the Northern Hemisphere Grosval'd, M.G., (1988, p.239-267, eng) 43-4069
Present state of ice cap islands in the Soviet Arctic. Govorukha, L.S., (1988, p.312-316, eng) 43-4071
Satellite analyses of antarctic katabatic wind behavior. Bromwich, D.H., (1989, p.738-749, eng) 43-4072
Map-plane finite-element model of ice sheets. Fastook, J.L., et al, (1989, p.48-52, eng) 43-4140
Mapping the topography of continental ice. Remy, F., et al, (1989, p.98-107, eng) 43-4146
Sheet glaciation of the arctic shelf and plains in northern Eurasia. Danilov, I.D., (1987, p.80-88, rus) 43-4234
Steady thermomechanical flow along two-dimensional flow lines in large grounded ice sheets Dahl-Jensen, D., (1989, p.10,355-10,362, eng) 43-4344
Stable isotopes and climate of East Antarctica. Hermichen, W.D., et al, (1988, p.33-53, eng) 43-4515
Numerical scheme for calculating stresses and strain rates in glaciers. Van der Veen, C.J., (1989, p 363-377, eng) 43-4602

Ice shelves

Structure of Wordie Ice Shelf. Reynolds, J.M., (1988, p.57-64, eng) 43-287
Structure and growth of Arctic ice shelves and ice islands. Jeffries, M.O., (1987, p.39-51, eng) 43-901
Mechanical properties of shelf ice. Frederking, R., et al, (1987, p 67-78, eng) 43-903
Surface waveforms on the Ellesmere Island ice shelves and ice islands. Holdsworth, G., (1987, p.385-403, eng) 43-916
Fluctuations of ice shelves and outlet glaciers in Antarctica. Zakharov, V.G., (1988, p 41-51, rus) 43-935
Disintegration of the Larsen Ice Shelf in Antarctica. Zakharov, V.G., et al, (1988, p.105-108, rus) 43-943
Effect and mechanism of episodic sea level events. the record preserved within the Late Wisconsinan-Holocene incised valley-fill sequences. Thomas, M.A., et al, (1988, p.399-406, eng) 43-1151
Research results from antarctic automatic weather stations. Stearns, C.R., et al, (1988, p 45-61, eng) 43-1404
Interaction between ice stream B and Ross Ice Shelf, Antarctica. Bindschadler, R.A., et al, (1988, p.113-115, eng) 43-1625
Oxygen-isotope studies and isotopic dates from Antarctica. Grootes, P.M., et al, (1988, p.122, eng) 43-1630
Preliminary results of marine geologic investigations, Marguerite Bay. Kennedy, D.S., et al, (1988, p.149-151, eng) 43-1632
Biotic provinces in modern Amundsen Sea sediments: implications for glacial history. Kellogg, D.E., et al, (1988, p.154-156, eng) 43-1633
Tide dependent dynamics of the Ekström Ice Shelf. Kobarg, W., (1988, 164p., ger) 43-1870
Symposium on Antarctic Glaciology, Bremerhaven, Sep 7-11, 1987. (1988, 229p., eng) 43-1934
Ice-shelf flow at the boundary of Crary Ice Rise, Antarctica. Bindschadler, R.A., et al, (1988, p.8-13, eng) 43-1936
Ice thickness and sea depth from seismic reflection measurements. Determann, J., et al, (1988, p.14-18, eng) 43-1937
Numerical models of steady-state thickness and basal ice configurations of the central Ronne Ice Shelf, Antarctica Lange, M.A., et al, (1988, p 64-70, eng) 43-1946
Can relict crevasse plumes on antarctic ice shelves reveal a history of ice-stream fluctuation. MacAyeal, D.R., et al, (1988, p.77-82, eng) 43-1948
Glacial geodetic contributions to the mass balance and dynamics of ice shelves. Möller, D., et al, (1988, p.89-94, eng) 43-1950
Glaciological map of Filchner-Ronne Ice Shelf, Antarctica. Swithinbank, C., et al, (1988, p.150-155 + map, eng) 43-1958
Oceanic environment of George VI Ice Shelf, Antarctic Peninsula. Talbot, M.H., (1988, p.161-164, eng) 43-1960
Thinning and grounding-line retreat on Ross Ice Shelf, Antarctica. Thomas, R.H., et al, (1988, p.165-172, eng) 43-1961
Special aspects of the central part of Filchner-Ronne Ice Shelf, Antarctica. Thyssen, F., (1988, p.173-179, eng) 43-1962
Ekström Ice Shelf, Antarctica. Thyssen, F., et al, (1988, p.180-183, eng) 43-1963
Some morphometric characteristics of the Novolazarevskaya Ice Shelf. Eskin, L.I., et al, (1989, p.71-76, eng) 43-2049
Morphological and structural peculiarities of the SP-22 drifting ice island. Grishchenko, V.D., et al, (1989, p.77-86, eng) 43-2050
Thermal action of coastal waters on the boundary of the antarctic ice cover. Dubrovin, L.I., et al, (1989, p.101-108, eng) 43-2053
Relationship of dynamics of the border zone of the antarctic ice cover with tides. Sytinskiĭ, A.D., et al, (1989, p.137-142, eng) 43-2059
Glacial-turbidite deposits of a glacial shelf Lavrushin, IU.A., et al, (1988, p.173-177, rus) 43-2154
Bathymetric measurements from antarctic ice shelves. Kogan, A.L., (1988, p.37-40, rus) 43-2222
Shoreline dynamics of the eastern and southern Weddell Sea. Kozlovskiĭ, A.M., (1988, p.62-66, rus) 43-2224
Submerged shorelines on continental shelves. Grosval'd, M.G., (1989, p.113-121, eng) 43-2229
New front of Filchner Ice Shelf. Skvarca, P., (1988, p 20-24, spa) 43-2598
BAS review of ice streams and ice shelves. Morris, E.M., (1989, p.17-36, eng) 43-2660
Summary of India's geophysical programme in Antarctica. Gupta, H.K., (1989, p.153-170, eng) 43-2662
Transient behavior of ice stream B and Crary Ice Rise, West Antarctica. Bindschadler, R.A., et al, (1987, p 66-67, eng) 43-2735
Numerical study of the west antarctic ice sheet formation. Lindstrom, D.R., et al, (1987, p.71-73, eng) 43-2739
Enigmatic basal sea-ice layer of the Filchner-Ronne Ice Shelf. MacAyeal, D.R., et al, (1987, p.89-91, eng) 43-2750
Ice fronts and icebergs in the Ross and Weddell seas. Jacobs, S.S., (1987, p.91-94, eng) 43-2751
Ice mechanical properties in relation to Arctic engineering activities. Sackinger, W.M., (1988, p.9-25, eng) 43-3021
Peculiarities of a snow-firn sequence and variations of the marginal parts of the Filchner-Ronne Ice Shelf. Diurgerov, M.B., et al, (1988, p.103-108, rus) 43-3310
Numerical models of ice-shelf flow: ideal/real. Lange, M.A., et al, (1989, p.97-103, eng) 43-3342
Underside scarring of floating ice shelves. Musil, G.J., (1989, p.118-123, eng) 43-3345
Ice shelf topography and structure from space imagery. Stephenson, S.N., et al, (1989, p.162-169, eng) 43-3353
Strength profiles of Dakshin Gangotri Ice Shelf Sharma, S.S., (1989, p.289-299, eng) 43-3734
Analysis and interpretation of an airborne SAR image of "Hobson's Choice". Jeffries, M.O., et al, (1989, p.1032-1041, eng) 43-3800
Fluctuations in ice shelves and outlet glaciers in Antarctica. Zakharov, V.G., (1988, p.297-311, eng) 43-4070
Satellite analyses of antarctic katabatic wind behavior. Bromwich, D.H., (1989, p.738-749, eng) 43-4072
Thermohaline circulation under Ronne Ice Shelf. Hellmer, H.H., (1989, 87p., ger) 43-4075
Modelling antarctic fast-ice growth. Crocker, G.B., et al, (1989, p.3-8, eng) 43-4133
Ice shelf response to ice stream discharge, III. MacAyeal, D.R., (1989, p.38-42, eng) 43-4138
Scouring and bottom morphology on Weddell Sea shelf. Lien, R., et al, (1989, p.43-57, eng) 43-4388
Resonance tide in the World Ocean and problems of geodynamics. Zimov, S.A., (1989, 120p. (pertinent p 56-66), rus) 43-4511
On spatial arrangement of crystalline structure of ice in antarctic seas. Strakhov, M.V., (1989, p.67-70, rus) 43-4542
Drift of a giant iceberg in the Weddell Sea. Komyshenets, V.I., et al, (1989, p.71-73, rus) 43-4543
North Greenland ice islands. Higgins, A.K., (1989, p 207-212, eng) 43-4549

Ice sintering

Science of ice. Maeno, N., (1988, 229p., rus) 43-2327
Study of ice adhesion and sintering. Shen, W., et al, (1989, p.373-382, eng) 43-3582

Ice snow interface

See also: Snow ice interface

Ice solid interface

Ice interaction with offshore structures. Cammaert, A.B., et al, (1988, 432p., eng) 43-1
IAHR Symposium on Ice, 8th, 1986. (1986, 599p., eng) 43-258
Winter ice interactions with an Arctic offshore structure. Wright, B., et al, (1986, p 49-73, eng) 43-261
Ice interaction with Adams Island, winter 1984-85. Frederking, R., et al, (1986, p.127-143, eng) 43-266
Numerical and finite element techniques in calculation of ice-structure interaction. Jordaan, I.J., (1987, p.119-155, eng) 43-446
Field techniques for ice force measurements. Croasdale, K.R., et al, (1987, p.157-196, eng) 43-447
Loads due to the impact of a ship against an ice floe edge. Kurdiumov, V.A., et al, (1987, 8p., eng) 43-609
International Conference on Technology for Polar Areas, Trondheim, 1988. (1988, 782p. (2 Vols.), eng) 43-610
Dynamics of ship/ice interaction. Jebaraj, C., et al, (1988, p.89-100, eng) 43-614
Probabilistic design for drifting Arctic ice features. Mizikos, J.P., et al, (1988, p.179-190, eng) 43-620
Impact of ice bergy bits on a concrete semisubmersible. Putot, C., et al, (1988, p.191-207, eng) 43-621
Conditions for a load combination ice-earthquake. Klingmüller, O., et al, (1988, p.209-219, eng) 43-622
Gulf of Bothnia—a testing area for Arctic offshore installations. Högbom, T., et al, (1988, p.249-260, eng) 43-625
Numerical simulation of ice behaviour and ice structure interaction. Nygård, M.K., et al, (1988, p.261-274, eng) 43-626
Impact of icebergs on structures. Fylling, I.J., et al, (1988, p.523-538, eng) 43-645
Pendulum indentation tests on manufactured ice. Fransson, L., et al, (1988, p 669-678, eng) 43-653
Ice/hull friction coefficient study—summary report. Baker, D.N., (1987, 29p., eng) 43-681
Ice/hull friction coefficient study—main report. Baker, D.N., (1987, 85p. + append., eng) 43-682
R-class icebreaker testing requirements. Glen, I.F., (1988, 29p. + append., eng) 43-775
Research in ice engineering. Christensen, F.T., et al, (1988, p.3-10, eng) 43-787
Interaction between floating ice and structures due to water level fluctuations. Thunbo Christensen, F., (1986, 252p., eng) 43-879
Workshop on Extreme Ice Features, Banff, Alta., Nov. 3-5, 1986. (1987, 463p., eng) 43-899
Calculation of ice-structure loads Jordaan, I.J., (1987, p.193-232, eng) 43-907
Extreme ice feature-structure interaction. Croasdale, K.R., (1987, p.233-277, eng) 43-908
Ice/structure interaction research needs. Zimmerman, T., (1987, p 279-303, eng) 43-909
Surface waveforms on the Ellesmere Island ice shelves and ice islands. Holdsworth, G., (1987, p.385-403, eng) 43-916
Seminar on Applied Ice Mechanics, Narvik, Sep. 8-9, 1987. (1987, var.p., eng) 43-1099
Mechanical properties of ice—laboratory testing and *in situ* testing. Fransson, L., et al, (1987, 9p. + append., eng) 43-1101
Ice-rock interfaces and subglacial erosion. Vivian, R., (1988, p.207-218, fre) 43-1165
Numerical modeling of pack ice interaction with ships. Hamza, H., (1988, 44p. + appends., eng) 43-1362
Radio scattering of antarctic ice sheet. Uratsuka, S., et al, (1988, p.157-160, eng) 43-1506
Viscosity of nonfreezing electrolyte solutions between ice and silicates. Dediulia, I.V., et al, (1988, p.204-207, eng) 43-2034
Experimental study on properties of multi-layer sea ice of Bohai Sea. Li, H.S., et al, (1989, p 43-46, eng) 43-2608
Uncertainties and difficulties in codified design for ice loading. Maes, M.A., (1989, p.97-103, eng) 43-2615
Probability of winter environmental forces on arctic offshore structures. Tunik, A.L., et al, (1989, p.105-112, eng) 43-2616
Iceberg/seabed interaction events observed during the DIGS experiment. Lever, J.H., et al, (1989, p.205-220, eng) 43-2629
Model tests of load transmission through grounded ice rubble. Timco, G.W., et al, (1989, p.269-274, eng) 43-2636
Simple model for collision of floating bodies. Nawwar, A.M., et al, (1989, p.309-314, eng) 43-2640
Analytical investigation of ship resistance in broken or pack ice. Aboulazm, A.F., et al, (1989, p.359-363, eng) 43-2646
Design of the Great Belt western bridge for ice forces. Christensen, F.T., et al, (1989, p.365-376, eng) 43-2647
Penetration of floating ice sheets with cylindrical indentors. Sodhi, D.S., (1989, p.377-382, eng) 43-2648
Impact of icebergs with a semi-submersible platform. Lever, J.H., et al, (1989, p.393-403, eng) 43-2650
Working group on ice forces. 4th state-of-the-art report. Timco, G.W., ed, (1989, 385p., eng) 43-2812
Local ice loads and design of offshore structures. Iyer, S.H., (1989, p.1-57, eng) 43-2813
Large scale ice-structure interaction data base. Metge, M., et al, (1989, p.59-76, eng) 43-2814
Failure mechanisms for laboratory, first-year and multi-year ice. Blanchet, D., et al, (1989, p.77-124, eng) 43-2815
Modelling of progressive damage in ice. Jordaan, I.J., et al, (1989, p.125-165, eng) 43-2816
Dynamic ice loads on compliant structures. Frederking, R., (1989, p.167-187, eng) 43-2817
Ice-induced vibrations of structures. Sodhi, D.S., (1989, p.189-221, eng) 43-2818
Ice-induced vibrations of structures-self-excitation. Määttänen, M., (1989, p.223-230, eng) 43-2819
Ice forces on fixed and floating conical structures. Wessels, E., et al, (1989, p.231-257, eng) 43-2820
Transmission of loads through grounded ice rubble. Sayed, M., (1989, p.259-275, eng) 43-2821
Formation of spray ice on offshore structures Makkonen, L., (1989, p.277-309, eng) 43-2822

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Ships in ice. Kitagawa, H., et al, (1989, p.311-337, eng) 43-2823

Ice impact on ship hulls. Müller, L., et al, (1989, p.339-375, eng) 43-2824

Ice load question: some answers Sanderson, T.J.O., (1989, p.377-385, eng) 43-2825

IAHR Symposium on Ice, 9th, 1988. (1988, 3 vols, eng) 43-2906

Laboratory study on ice formation in navigation channels. Ettema, R., et al, (1988, p.1-11, eng) 43-2974

Analysis of observed failure mechanisms for laboratory, first-year and multi-year ice. Blanchet, D., et al, (1988, p.89-136, eng) 43-3026

Ice flow and blockage investigation of shrouded propellers. Laskow, V., (1988, var.p., eng) 43-3204

Viscoelastic response of a floating ice plate to a steadily moving load. Hosking, R.J., et al, (1988, p.409-430, eng) 43-3291

Sea ice characteristics, motion and interactions. Coon, M., (1988, p 41-44, eng) 43-3502

Total ice force measurements on an instrumented structure, an overview of ice islands, and spray ice bonding to offshore structure coatings. Sackinger, W.M., (1988, p.61-64, eng) 43-3505

Ice-structure interaction. Sunder, S S, et al, (1988, p.38-44, eng) 43-3644

Study of the behaviour of ice masses in marine environments. Romagnoli, R., et al, (1989, p.156-167, eng) 43-3721

Dynamic response of an icebeam with flooding water effect. Wang, S.L., et al, (1989, p 311-320, eng) 43-3736

Constitutive modeling of polycrystalline ice. Wu, M.S., et al, (1989, p.431-442, eng) 43-3746

Penetration of spheres and rods into ice. Domaschuk, L., et al, (1989, p.648-657, eng) 43-3765

Impact crushing strength of ice. Tunik, A.L., (1989, p 658-670, eng) 43-3766

Model tests on an icebreaker at two friction factors. Tatinclaux, J.C., (1989, p.774-784, eng) 43-3776

Underwater observations of ice/structure interactions in small-craft harbors. Wortley, C.A., et al, (1989, p.930-942, eng) 43-3790

Ice management in the Barents Sea. Jensen, H., et al, (1989, p.1107-1117, eng) 43-3807

Long-term ice load measurements onboard M/S *Kemira*, 1985-1988. Kujala, P., (1989, p.1118-1129, eng) 43-3808

Interaction of ice floes with cylindrical piles. Matskevich, D.G., et al, (1988, p.180-184, rus) 43-4157

Proceedings. (1988, 216p., eng) 43-4166

Review of field observations of ice failure modes. Metge, M., (1988, p.37-39, eng) 43-4168

Design issues for iceberg/structure interaction. Lever, J.H., (1988, p.57-59, eng) 43-4169

Selection of mechanical properties for design. Gold, L.W., (1988, p.93-101, eng) 43-4172

Scale effects in ice-structure interaction: analytical aspects. Jordaan, I.J., (1988, p.161-181, eng) 43-4181

Scale effects in ice. Timco, G.W, (1988, p.183-199, eng) 43-4182

Ice interaction with the U.S. Army ribbon bridge. Coutermarsh, B.A., (1986, 18p, eng) 43-4592

Ice spectroscopy

Pressure dependence of the elastic constants of ice Ih. Gagnon, R.E., et al, (1988, p.4522-5428, eng) 43-1030

Polarized Raman spectra for ices. Devlin, J.P, (1989, p.1322-1329, eng) 43-2904

Velocity spectra and cospectra and integral statistics over Arctic leads. Andreas, E.L., et al, (1979, p.1053-1070, eng) 43-3479

Organic solids produced by irradiation of carbon ices. Khare, B.N., et al, (1989, p (2)42-(2)53, eng) 43-4337

Residues from irradiation of carbon ices. Khare, B.N., et al, (1989, p.350-361, eng) 43-4391

Ice storms

Problems of the Arctic and the Antarctic. Collection of articles, Vol.61. Krutskikh, B.A., ed, (1989, 103p, eng) 43-3226

Hazardous meteorological events in the Arctic seas and Kola Peninsula. Polkhov, A.P., (1989, p.62-69, eng) 43-3230

Ice strength

Cause and prevention of freezetube breakage. Wang, Z., (1988, p.303-310, eng) 43-91

Ice forces on a pier due to water level changes. Kerr, A D., et al, (1986, p.105-113, eng) 43-264

Analysis of strength reduction caused by systems of microcracks in ice. Cormeau, A., et al, (1986, p.179-195, eng) 43-268

Strength of icebergs during impact. El-Tahan, H., et al, (1986, p.197-212, eng) 43-269

Controlled river ice cover breakup: part 2. Theory and numerical model studies. Ferrick, M.G., et al, (1986, p.293-305, eng) 43-275

Experience from ice reinforcement tests. Fransson, L., (1985, p.281-290, swe) 43-380

Determination of compressive strength of sea ice on Bohai aimed at designing. Li, F, (1987, p.97-102, chi) 43-492

Segmented model technology for ice resistance determination. Godon, A.M., et al, (1988, p.113-124, eng) 43-616

Conditions for a load combination ice-earthquake. Klingmüller, O., et al, (1988, p.209-219, eng) 43-622

Gulf of Bothnia—a testing area for Arctic offshore installations. Högbom, T., et al, (1988, p 249-260, eng) 43-625

Finite element analysis of floating ice sheets. Horrigmoe, G., et al, (1988, p.715-725, eng) 43-657

Ice forces on inclined model bridge piers. Haynes, F.D., et al, (1984, p.1167-1173, eng) 43-677

Ice/hull friction coefficient study—summary report. Baker, D.N., (1987, 29p., eng) 43-681

Ice/hull friction coefficient study—main report. Baker, D.N., (1987, 85p. + appends., eng) 43-682

Ice strength indexer. Baker, D.N., et al, (1987, 35p. + appends., eng) 43-683

Statistical analysis of fracture toughness and flexural strength of ice. Lal, M., (1988, 75p., eng) 43-774

R-class icebreaker testing requirements. Glen, I.F., (1988, 29p. + appends., eng) 43-775

Workshop on Extreme Ice Features, Banff, Alta., Nov. 3-5, 1986. (1987, 463p., eng) 43-899

Mechanical properties of multi-year sea ice. Richter-Menge, J.A., et al, (1987, p.121-153, eng) 43-905

Survey of physical and mechanical properties of icebergs. Nadreau, J.P., (1987, p.155-192, eng) 43-906

Compressive strength, deformation and Poisson's ratio of iceberg ice. Sinha, N.K., et al, (1987, p.413-429, eng) 43-918

Confined compressive strength of multi-year pressure ridge sea ice samples. Cox, G.F.N., et al, (1988, p.295-301, eng) 43-921

Seminar on Applied Ice Mechanics, Narvik, Sep. 8-9, 1987. (1987, var.p, eng) 43-1099

Horizontal compressive strength of low salinity ice from the Gulf of Bothnia. Fransson, L., et al, (1987, 9p., eng) 43-1102

Ice loads on structures. Määttänen, M., (1987, 15p, eng) 43-1103

Material modelling of ice—failure surfaces and plasticity theories. Horrigmoe, G., (1987, 18p. + graphs, eng) 43-1104

Constitutive modelling of brittle and ductile ice. Pulkkinen, E., (1987, ca20p, eng) 43-1105

Mathematical modeling of floating ice sheets. Nyström, M., (1987, 11p., eng) 43-1106

Constitutive model for ice as a damaging visco-elastic material. Sjölind, S.-G., (1987, 3p, eng) 43-1107

Techniques for using ice as base material in structures. (1987, 15p., eng) 43-1108

Reinforced ice. Elfgren, L., et al, (1987, 9p, eng) 43-1109

Field investigation of load-curvature characteristics of reinforced ice. Fransson, L., et al, (1987, 22p., eng) 43-1110

Icebreaking capacity of the *Captain Chechkin* icebreaker in rivers. Tronin, V.A., et al, (1982, 4p., eng) 43-1191

Full-scale tests of icebreaking performances of icebreaking tugs. Tronin, V.A., (1978, 6p., eng) 43-1192

New modelling ice. Beliakov, V.B., (1986, 8p., eng) 43-1193

Configuration and properties of a breakup jam. Beltaos, S., (1988, p.685-697, eng) 43-1361

Imjin River ice boom. Perham, R.E., (1988, 10p., eng) 43-1398

Effects of temperature and structure of ice on its flexural strength. Gow, A.J., et al, (1988, 43p, eng) 43-1399

Ship model testing in level ice: an overview Tatinclaux, J.C., (1988, 30p, eng) 43-1402

Impact strength of iceberg and artificial snow ice. El-Tahan, H., et al, (1985, p.365-380, eng) 43-1532

Tensile strength of ice containing cracks; final report. Schulson, E.M., (1988, 7p., eng) 43-1701

Determining structural ice requirements for military operation. Kuse, W.C., (1986, 110p, eng) 43-1740

Crack-enhanced creep in polycrystalline material. Sinha, N.K., (1988, p.4415-4428, eng) 43-1792

Formulae on level ice resistance to motion of a river icebreaker. Zuev, V.A., et al, (1978, 7p, eng) 43-1837

Strengthenings of ships for navigation in ice. (1986, c52p., eng) 43-1838

Effect of parallel midbody on the resistance of ships in level ice. Baker, D.N., et al, (1988, 83p. + appends., eng) 43-1925

Strength and stability of framing for ice strengthening. Daley, C., et al, (1988, 37p., eng) 43-2147

Arctic vessel performance and trafficability data base, 1983-87. Wells, D., et al, (1988, 80p., eng) 43-2148

Trafficability and performance of M.V. *Arctic* in ice regimes. Browne, R.P., et al, (1988, 56p. + tables, eng) 43-2149

Using the borehole jack to determine changes in river ice strength. Prowse, T.D., et al, (1988, p.283-303, eng) 43-2177

Relation to describe rate-dependent material failure. Voight, B., (1989, p.200-203, eng) 43-2315

Use of foil strain gauges in ice over a wide loading rate. Sinha, N.K., (1989, p.145-158, eng) 43-2363

Primary creep of polycrystalline ice under constant stress. Azizi, F., (1989, p.159-165, eng) 43-2364

Tensile strength test for multi-year sea ice. Sinha, N.K., (1989, p.1-6, eng) 43-2602

Mechanics of the fracture of equiaxed freshwater ice. Nixon, W.A., et al, (1989, p.23-29, eng) 43-2605

Uniaxial tension/compression tests on ice—preliminary results. Cole, D.M., et al, (1989, p 37-41, eng) 43-2607

Experimental study on properties of multi-layer sea ice of Bohai Sea. Li, H.S., et al, (1989, p.43-46, eng) 43-2608

Mechanics of the multidirectional microcracking of ice. Santaoja, K., (1989, p.55-65, eng) 43-2610

Peak pressures from a damage model for ice in compression. McKenna, R.F., et al, (1989, p.67-73, eng) 43-2611

Fracture toughness of S2 columnar freshwater ice. Dempsey, J.P., et al, (1989, p.83-89, eng) 43-2613

Probability of winter environmental forces on arctic offshore structures. Tunik, A.L., et al, (1989, p.105-112, eng) 43-2616

Structure and strength of first-year ice ridges in the Baltic Sea. Leppäranta, M., et al, (1989, p.169-174, eng) 43-2624

Ice reinforced with Geogrid. Haynes, F.D., et al, (1989, p.179-185, eng) 43-2626

Time dependent settlement of ice and earth offshore structures. Vinogradov, A.M., et al, (1989, p.263-268, eng) 43-2635

Calculation of ice sheet stress-strain state by numerical method. Kozin, V.M., et al, (1989, p.315-318, eng) 43-2641

Review of ship performance in level ice. Jones, S J., (1989, p.325-342, eng) 43-2643

Ice loads on propellers of small ferry. Jussila, M., et al, (1989, p 351-358, eng) 43-2645

Analytical investigation of ship resistance in broken or pack ice. Aboulazm, A.F., et al, (1989, p.359-363, eng) 43-2646

Experimental results on the tensile strength of atmospheric ice. Druez, J., et al, (1989, p.405-410, eng) 43-2651

On the elasticity of ice plates. Gold, L.W., (1988, p.1080-1084, eng) 43-2699

Working group on ice forces. 4th state-of-the-art report. Timco, G.W., ed, (1989, 385p., eng) 43-2812

Reference strengths of sea ice based on total porosity. Häusler, F.U., (1988, p.77-91, eng) 43-2911

On confined compressive strength of urea-doped ice. Taguchi, Y., et al, (1988, p.92-98, eng) 43-2912

Effects of end conditions on the strength and fracture of ice under compression. Lasonde, G.J., et al, (1988, p.99-108, eng) 43-2913

Experimental results on the failure of polycrystalline ice under triaxial stress conditions. Rist, M.A., et al, (1988, p.118-127, eng) 43-2915

Comparative study of sea ice research. Mawhinney, M., (1988, p.128-137, eng) 43-2916

Fracture of S2 columnar freshwater ice: floating double cantilever beam tests. Bentley, D.L., et al, (1988, p.152-161, eng) 43-2918

Mechanical and physical properties of old and brackish ice. Jeffries, M.O., et al, (1988, p.177-187, eng) 43-2920

Properties of ice from Hobson's ice island. Frederking, R., et al, (1988, p.188-198, eng) 43-2921

Failure criteria for multi year ice. Masterson, D.M., et al, (1988, p.227-251, eng) 43-2925

Iceberg-structure interaction: force, energy and probability. Duthinh, D., et al, (1988, p.324-340, eng) 43-2933

Elasto-plastic analysis of ice force on a circular pile. Tanaka, S., et al, (1988, p.351-360, eng) 43-2935

Resistance tests in ice on structure and ship models. Takekuma, K., et al, (1988, p.570-579, eng) 43-2955

Ice mechanical properties in relation to Arctic engineering activities. Sackinger, W.M., (1988, p.9-25, eng) 43-3021

Assessment of the effect of length and orientation of a multi-year ridge on the force acting on conical structures. Abdelnour, R., (1988, p.59-75, eng) 43-3024

On measuring the shear strength of ice. Frederking, R., et al, (1988, p.76-88, eng) 43-3025

Analysis of observed failure mechanisms for laboratory, first-year and multi-year ice. Blanchet, D., et al, (1988, p.89-136, eng) 43-3026

Fracture experiments on freshwater and urea model ice. Bentley, D.L., et al, (1988, 152p., eng) 43-3040

Laws governing deformation of debris-laden ice Golubev, V.N., et al, (1988, p.76-78, rus) 43-3259

Development of ice-compound materials. Vasil'ev, N.K., (1988, p.202-206, rus) 43-3280

Full-thickness ice strength measurements. Ralston, T.D., (1988, p.29-31, eng) 43-3499

Ice loads and failure mechanisms Churcher, A., (1988, p.33-35, eng) 43-3500

Sea ice characteristics, motion and interactions. Coon, M., (1988, p.41-44, eng) 43-3502

Fracture of freshwater and urea model ice. Bentley, D.L., (1989, 142p, eng) 43-3610

Fracture toughness of S2 columnar freshwater ice. Dempsey, J.P., et al, (1989, p.199-207, eng) 43-3725

Creep behavior of damaged ice under uniaxial compression. Meyssonnier, J., et al, (1989, p 225-234, engj 43-3728
Creep behavior of fresh water ice. Palathingal, P., (1989, p.259-268, engj 43-3731
Compressive strength of antarctic frazil ice. Richter-Menge, J.A., et al, (1989, p 269-278, engj 43-3732
Fracture of multi-year sea ice under triaxial stress. Sammonds, P.R., et al, (1989, p.279-288, engj 43-3733
Field instrument for fracture toughness testing of ice Stehn, L., et al, (1989, p.300-310, engj 43-3735
Elastic coefficients of Bohai Sea ice. Shen, W., et al, (1989, p.321-331, engj 43-3737
Plane strain fracture toughness K(IC) of sea ice. Zhang, M.Y., et al, (1989, p 332-341, engj 43-3738
Penetration of spheres and rods into ice. Domaschuk, L., et al, (1989, p.648-657, engj 43-3765
Impact crushing strength of ice. Tunik, A.L., (1989, p.658-670, engj 43-3766
Strength and deformation of spray ice. Chen, A.C T., et al, (1989, p 681-693, engj 43-3768
Straightforward method for calculation of ice resistance of ships. Lindqvist, G., (1989, p.722-735, engj 43-3772
About physical modelling of kinetic friction between ice and ship. Liukkonen, S., (1989, p 736-749, engj 43-3773
Analysis of factors influencing ship response in collision with multi-year ice floes Riska, K., (1989, p 750-763, engj 43-3774
Model tests on an icebreaker at two friction factors. Tatinclaux, J.C., (1989, p.774-784, engj 43-3776
In situ testing of river-ice strength using a hydraulic borehole jack. Demuth, M.N., et al, (1988, p.181-185, engj 43-4128
M.V. *Arctic* ice transiting performance, continuous mode. Final report. Albery, A.C.R., et al, (1984, var. p., engj 43-4154
Crack formation in ice during compression. Epifanov, V.P., (1988, p.181-188, rusj 43-4156
Proceedings. (1988, 216p., engj 43-4166
Review of field observations of ice failure modes. Metge, M., (1988, p.37-39, engj 43-4168
Brief overview of the fracture of ice. Parsons, B.L., (1988, p.103-112, engj 43-4173
Specific energy of impact crushing of ice. Tunik, A.L., (1988, p.113-120, engj 43-4174
Scale effects in ice-structure interaction: analytical aspects. Jordaan, I.J., (1988, p.161-181, engj 43-4181
Scale effects in ice. Timco, G W., (1988, p.183-199, engj 43-4182
Bending strength of alluvium-reinforced ice. Nixon, W.A., (1989, p.309-313, engj 43-4451
Profile properties of undeformed first-year sea ice. Cox, G.F.N., et al, (1988, 57p., engj 43-4595
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Ice structure

Chemical irradiation effects in ices. Benit, J., et al, (1988, p.349-353, engj 43-52
Microcomputer-based image-processing system. Perovich, D.K., et al, (1988, p.249-252, engj 43-172
Structure of upper zones of the Severnaya Zemlya glaciers. Govorukha, L S., et al, (1987, p.86-88, rusj 43-233
Ice wells in the Schirmacher Oasis area. Vtiurin, B I., (1987, p.103-107, rusj 43-238
Numerical estimation of fracturing and banding in glaciers. Ivanov, A.I., et al, (1987, p.175-179, rusj 43-254
IAHR—recommendations on testing methods of ice 5th report of Working Group on Testing Methods in Ice. (1986, p.595-599, engj 43-280
Structure of Wordie Ice Shelf. Reynolds, J M., (1988, p.57-64, engj 43-287
Ice structure analysis of river ice on Datonghe, nearby Liancheng power station. Li, J., et al, (1987, p.79-82, chij 43-489
Use of combined hydrochemical and isotope methods in studying ground ice. Kritsuk, L.N., et al, (1988, p.91-98, rusj 43-595
Gas inclusions in lake ice and radioluminescent temperature of the ice sheet Bordonskiĭ, G S., et al, (1985, p 60-66, engj 43-662
Ice structures, appearing to be penitents, in the Schirmacher Hills region. Richter, W., (1986, p.104-111, gerj 43-725
Peculiarities of sea ice desalination in winter. Grishchenko, V.D., (1988, p.55-64, rusj 43-804
Formation of frazil ice. Monakhov, E.I., (1988, p.64-71, rusj 43-805
Results of radar sounding of drifting sea ice from its surface. Bogatyrev, E.F., et al, (1988, p.148-151, rusj 43-813
Structure and growth of Arctic ice shelves and ice islands. Jeffries, M.O., (1987, p.39-51, engj 43-901
Possibility of using seismoacoustic methods in studying fracturing anisotropy of glacier ice Ivanov, A.I., et al, (1988, p.159-165, rusj 43-956
Structure of the Davydov glacier from data of radar echo sounding and thermal drilling. Vasilenko, E.V., et al, (1988, p.208-215, rusj 43-964
Rheological properties of ice with the addition of surfactants. Dediulia, I.V., et al, (1987, p.485-489, engj 43-1138
Study of the ice cover in Igloolik Bay. Murat, J.R., et al, (1988, p.239-249, engj 43-1345
Effects of temperature and structure of ice on its flexural strength. Gow, A.J., et al, (1988, 43p, engj 43-1399
Soliton dynamics of hydrogen-bonded networks. Pnevmatikos, S., (1988, p.1534-1537, engj 43-1489
One-dimensional ice made clear. Maddox, J., (1988, p.677, engj 43-1490
Studies of injected ice of naled fields (e g. in Transbaikal). Sannikov, S.A., (1988, p.134-145, rusj 43-1612
Determining structural ice requirements for military operation. Kuse, W.C., (1986, 110p, engj 43-1740
Unusual ice crystals in central Antarctica. Ostroumov, M.N., et al, (1988, p.97-101, rusj 43-1766
All around but ice. Kozlovskiĭ, A.M., (1988, 112p, rusj 43-1801
Electrical properties of model ice. Inkpen, S., et al, (1989, p.201-209, engj 43-2369
Of restless bondage. Dore, J., (1988, p.25-28, engj 43-2586
Geometry, flow, and age of firn and ice in the Swiss Alps. Haeberli, W., et al, (1988, p.1-19, engj 43-2594
Mechanical and physical properties of old and brackish ice Jeffries, M.O., et al, (1988, p.177-187, engj 43-2920
Ice mechanical properties in relation to Arctic engineering activities. Sackinger, W.M., (1988, p.9-25, engj 43-3021
Ice shelf topography and structure from space imagery. Stephenson, S.N., et al, (1989, p.162-169, engj 43-3353
Physico-mechanical properties of ice in fresh water reservoirs. Truskov, P.A., et al, (1988, p.38-49, rusj 43-3634
Properties of sea ice coastal regime in southeastern Weddell Sea. Eicken, H., et al, (1989, p.8193-8206, engj 43-3821
Morphology of a Baltic Sea ice pressure ridge. Kankaanpää, P., (1988, p.15-33, engj 43-4380
Mechanical properties of multi-year sea ice. Richter-Menge, J.A., et al, (1988, 27p, engj 43-4593

Ice sublimation

Aeolian processes and landforms in south Pangnirtung Pass, southeast Baffin Island, N.W.T. McKenna Neuman, C.L., (1988, ?p, engj 43-122
Ice dynamics in mountain caves, Yukon, Canada. Lauriol, B., et al, (1988, p.215-220, engj 43-1031
Parametrization of the precipitation processes in mixed and in ice clouds in numerical models. Sergeev, B.N., (1988, p.32-35, rusj 43-1078
Meteorite concentrations in Antarctica: sites of katabatic wind ablation?. Cresswell, R.G., (1988, p.342-345, engj 43-1421
Evaporation and melting of ice crystals. Oraltay, R.G., (1989, 101p., engj 43-3606
Interstellar and cometary H2O.CO ices. Sandford, S.A., et al$4 700 $Allamandola, L.J., (1988, p 201-224, engj 43-3985
Evolution of interstellar and precometary ice analogs. Allamandola, L.J., et al, (1988, p.225-252, engj 43-3986
Atmospheric changes producing polar mesospheric clouds. Memmesheimer, M., et al, (1988, p 178-184, engj 43-4376

Ice surface

Surface waveforms on the Ellesmere Island ice shelves and ice islands. Holdsworth, G., (1987, p.385-403, engj 43-916
Topographic effects on light scattering from snow. Rees, W.G., et al, (1988, p.161-164, engj 43-1507
SAR image statistics related to atmospheric drag over sea ice. Burns, B.A., et al, (1988, p.409-412, engj 43-1515
Search for meteorites in the Allan Hills region, 1985-1986. Schutt, J., et al, (1988, p.82-83, engj 43-1616
Geophysical program at Upstream B camp, Siple Coast, Bentley, C.R., et al, (1988, p.109-110, engj 43-1622
Interaction between ice stream B and Ross Ice Shelf, Antarctica. Bindschadler, R.A., et al, (1988, p.113-115, engj 43-1625
Dominion Range ice core. Mayewski, P A., (1988, p.120-121, engj 43-1629
Making artificial snow for laboratory use. Sommerfeld, R.A., et al, (1988, 3p., engj 43-1700
Ice surface hydrolysis of diisopropylfluorophosphate (DFP). Leggett, D.C., (1987, p.809-815, engj 43-1876
SAR imaging of ocean waves in the Marginal Ice Zone. Lyden, J., et al, (1988, p.1435-1437, engj 43-1894
Ice and bedrock survey of New Schwabenland and Berkner I. Hoppe, H., et al, (1988, p.42-45, engj 43-1942
Bare ice field in east Queen Maud Land, Antarctica, caused by horizontal divergence of drifting snow. Takahashi, S., et al, (1988, p.156-160, engj 43-1959
Mass balance of Ice Stream B, West Antarctica. Whillans, I.M., et al, (1988, p.187-193, engj 43-1965
Portable digital data-acquisition system for surface-based ice-radar studies. Jacobel, R.W., et al, (1988, p.349-354, engj 43-1992
Science of ice. Maeno, N., (1988, 229p., rusj 43-2327
Adfreeze strength of soils. Sadovskiĭ, A.V., (1989, p.917-929, engj 43-3157
Snow and snow-ice surfaced roads. Alekseev, V.R., et al, (1988, p.191-199, rusj 43-3278
Reflected fluxes for broken clouds over a lambertian surface. Welch, R.M., et al, (1989, p.1384-1395, engj 43-3519
Choosing between some incompatible regional surface-mass-balance data sets in Antarctica. Giovinetto, M.B., et al, (1989, p.7-13, engj 43-3614
See also: Glacier surfaces

Ice surveys

Winter data resources of the Swedish Meteorological and Hydrological Institute. Lindkvist, T., (1985, p.30-34, swej 43-357
Eastern Snow Conference, 44th, 1987. (1987, 216p., engj 43-383
Snow and ice research—IUGG 19 General Assembly 1987, Vancouver, Canada. Shi, Y., et al, (1988, p.90-93, chij 43-472
Ice reconnaissance and forecasts in Storfjorden, Svalbard. Håkansson, B., (1988, p.447-454, engj 43-639
Aerial surveillance system for ice management in the marginal ice zone. Rudkin, P., et al, (1988, p.471-483, engj 43-641
Acoustic remote sensing instruments for monitoring of polar drift ice. Kvinge, T., et al, (1988, p.485-493, engj 43-642
Geophysical investigations at the inland ice margin of the Pâkitsoq basin, central West Greenland. Thorning, L., et al, (1987, p.114-121, engj 43-744
Bibliography of snow and ice hazards on highways. Schweiger, A.J., comp, (1987, 110p., engj 43-753
Twelfth Northern Libraries Colloquy, 5-9 June 1988. (1988, 331p., engj 43-792
Characteristics of pack-ice distribution in the East Siberian Sea during the summer period. Kovalev, E.G., (1988, p.23-27, rusj 43-799
Studying discontinuities of sea ice cover from radar data. Brestkin, S.V., et al, (1988, p.94-103. rusj 43-808
Ice information obtained from meteorological satellites. Provorkin, A.V., et al, (1988, p.141-148, rusj 43-812
Results of radar sounding of drifting sea ice from its surface. Bogatyrev, E.F., et al, (1988, p.148-151, rusj 43-813
Radar measurements of sea ice thickness from an icebreaker. Kralniukov, A.V., et al, (1988, p.152-156, rusj 43-814
JARE wintering party activities, 1986-1987. Naito, Y., (1988, p.163-186, jpnj 43-841
Arctic and Arctic-related environmental sciences; Proceedings, Vol.1. (1987, 371p., engj 43-847
Corps of Engineers research in the Arctic. Smallidge, P.D., et al, (1987, p.81-87, engj 43-848
Snow/ice/frozen ground properties: working group report. Sterrett, K.F., et al, (1987, p.163-166, engj 43-855
Capabilities and problems in modeling the arctic cryosphere and clouds. Crum, T.D., (1987, p 289-292, engj 43-863
Computer processing of ice data analyses obtained from side looking radar. Prokof'ev, I.A., et al, (1987, p 86-90, rusj 43-890
Remote sensing of ice and snow (review). Jezek, K.C., (1987, p.51, engj 43-919
Cartographic and acrospace monitoring of the Elbrus glaciation system. Knizhnikov, IU.F., et al, (1988, p.153-157, rusj 43-955
Federal meteorological handbook, No.1. Surface observations. (1988, 12 chapters, engj 43-981
Map of snow, ice and frozen ground in China—explanation. (1988, c50p., engj 43-1356
IGARSS '88 remote sensing: moving towards the 21st century Vol.1. (1988, 632p., engj 43-1504
Thinning and grounding-line retreat on Ross Ice Shelf, Antarctica. Thomas, R.H., et al, (1988, p.165-172, engj 43-1961
Nimbus-7 data product summary. Oakes, A.G., et al, (1989, 106p., engj 43-2247
Measurements of ridge sails in the Beaufort Sea. Sayed, M., et al, (1989, p.16-21, engj 43-2706
Ice load question: some answers. Sanderson, T.J.O., (1989, p.377-385, engj 43-2825
Review and prospect of snow and ice remote sensing in China. Zeng, Q.Z., (1988, p.352-355, chij 43-2881
Ice conditions and research for economical development and exploitation of natural resource in the cold regions of China. Shen, W., (1988, p.1-17, engj 43-2907
General view of ice mechanics in China. Shen, W., et al, (1988, p.378-389, engj 43-3010
Extension of the Allan Hills triangulation network system. Annexstad, J.O., et al, (1989, p.17-22, engj 43-3078
Aurora, Dec. 1986, Vol.6, No.2. (1986, 44p., engj 43-3091
Problems of the Arctic and the Antarctic. Collection of articles, Vol.61. Krutskikh, B.A., ed, (1989, 103p., engj 43-3226
Ice surveys and forecasts for the North Atlantic. Kogan, B.A., et al, (1989, p.17-25, engj 43-3227
Results of investigation of the dynamics of the Barents sea ice cover. Zubakin, G.K., et al, (1989, p.26-38, engj 43-3228
Some meteorological service problems in the exploitation of the northern seas. Dement'ev, A.A., (1989, p 80-87, engj 43-3232

Ice surveys *(cont.)*

Aerospace monitoring of naleds Topchiev, A.G., (1988, p.120-123, rus) 43-3268

Naleds in the Yamal and Gydan peninsulas. Kritsuk, L.N., (1988, p.89-96, rus) 43-3308

Glaciological investigations in Siberia, Vol.2. Antipov, A.N., ed, (1987, 162p., rus) 43-3652

Ice reserves in the south of Eastern Siberia Orel, G.F., et al, (1987, p.15-27, rus) 43-3654

Satellite observations of sea ice. Voituriez, B., (1989, 22p., fre) 43-4020

Remote sensing methods for the analysis of ice integrity. Kirby, M.E., et al, (1986, p.38-48, eng) 43-4036

Problems in monitoring the cryolithozone. Mel'nikov, P.I., et al, (1987, p.103-106, rus) 43-4231

Sea ice thickness data. the many vs. the few. Eicken, H., et al, (1989, p.495-498, eng) 43-4431

25 years of surveys from the ice in Alasheyev Bight. Petrov, N.M., (1989, p.79-85, rus) 43-4545

See also: Ice reporting

Ice temperature

Experimental study on abrasion of concrete due to sea ice. Itoh, Y., et al, (1988, p 61-68, eng) 43-712

Structure of the Davydov glacier from data of radar echo sounding and thermal drilling. Vasilenko, E.V., et al, (1988, p.208-215, rus) 43-964

Model computation of moisture content in polythermal glaciers. Hutter, K., et al, (1988, p.12,205-12,214, eng) 43-1068

Study of the ice cover in Igloolik Bay Murat, J.R., et al, (1988, p.239-249, eng) 43-1345

Optical studies of antarctic sea ice. Schlosser, E., (1988, p.289-293, eng) 43-1349

Effects of temperature and structure of ice on its flexural strength. Gow, A.J., et al, (1988, 43p., eng) 43-1399

Ice sheet temperature distribution and surface paleotemperature changes. Putikov, O.F., (1989, p.28-36, eng) 43-2044

Factors affecting motion of a stationary dome-shaped glacier. Barkov, N.I., et al, (1989, p.37-46, eng) 43-2045

Paleoclimatic interpretation of the results of thermometry of holes to a depth of 900 m at Vostok Station. Vostretsov, R.N., et al, (1989, p.119-123, eng) 43-2056

Study of noise characteristics of antarctic ice sheets in radiowave decimeter range. Bogorodskiĭ, V V., et al, (1988, p.92-99, rus) 43-2228

Temperature in a 700 m borehole at Mizuho Station. Okuhira, M., et al, (1988, p.277-285, jpn) 43-2328

Comparative study of sea ice research. Mawhinney, M., (1988, p.128-137, eng) 43-2916

Ice forces on the Nanisivik wharf. Frederking, R., et al, (1988, p.463-472, eng) 43-2945

Thermal ice thrust by expanding ice cover. Yamaoka, I., et al, (1988, p.473-482, eng) 43-2946

Study on ice static pressure on ice cover in reservoir. Sui, X.Z., (1988, p.483-492, eng) 43-2947

Measurements of the properties and brightness temperature of saline ice and snow. Welsh, J.P., et al, (1988, p.623-632, eng) 43-2960

Peculiarities of a snow-firn sequence and variations of the marginal parts of the Filchner-Ronne Ice Shelf. Diurgerov, M.B., et al, (1988, p.103-108, rus) 43-3310

Dynamics of the antarctic ice sheet. Budd, W.F., et al, (1989, p.16-22, eng) 43-3329

Modelling flow and depth-age profiles in Greenland ice. Dahl-Jensen, D., (1989, p.31-36, eng) 43-3331

Interpretation of the temperature profile, Vostok ice core. Ritz, C., (1989, p.138-144, eng) 43-3349

Temperature, salinity and density of fast ice in Liaodong Bay. Li, Z.J., et al, (1989, p.218-224, eng) 43-3727

Profile properties of undeformed first-year sea ice. Cox, G.F.N., et al, (1988, 57p., eng) 43-4595

Ice thermal properties

Double-diffusive convection under sea ice. Atkinson, J.F., et al, (1988, p.89-95, eng) 43-149

Thermophysical properties of snow and ice on the Vavilov Dome, Severnaya Zemlya. Nikolenko, A.V., (1987, p.51-58, rus) 43-227

Thermophysics of stratified fresh-saline antarctic lakes. Krass, M.S., (1988, p.76-89, rus) 43-796

On mesoscale modelling of the dynamics and thermodynamics of sea ice. Lu, Q., (1987, 154p., eng) 43-1411

Ice loads on hydraulic structures in the Volga River Semenov, IU.A., (1988, p.165-171, rus) 43-1780

Use of continuum thermodynamics in the formulation of ice-sheet dynamics. Hutter, K., et al, (1988, p.46-51, eng) 43-1943

Evolution of East Antarctica's ice sheet. Huybrechts, P., et al, (1988, p.52-59, eng) 43-1944

Ice sheet temperature distribution and surface paleotemperature changes. Putikov, O.F., (1989, p.28-36, eng) 43-2044

Steady-state distribution of temperature in the central part of Antarctica. Vostretsov, R.N., et al, (1989, p.87-94, eng) 43-2051

Paleoclimatic interpretation of the results of thermometry of holes to a depth of 900 m at Vostok Station. Vostretsov, R.N., et al, (1989, p.119-123, eng) 43-2056

Ice temperature measurement in deep holes of Antarctica using a heat sensor embedded in the hole bottom. Vostretsov, R.N., et al, (1989, p.129-136, eng) 43-2058

Thermal ice thrust by expanding ice cover. Yamaoka, I., et al, (1988, p.473-482, eng) 43-2946

Study on ice melting at high pressures. Krymskiĭ, A.V., et al, (1988, p.70-76, rus) 43-3305

Dynamic and thermodynamic modelling of sea ice in coastal seas. Omstedt, A., (1989, p.377-384, eng) 43-3742

Steady thermomechanical flow along two-dimensional flow lines in large grounded ice sheets. Dahl-Jensen, D., (1989, p.10,355-10,362, eng) 43-4344

Ice thickness

Ice rubble consolidation. Timco, G.W., et al, (1988, p.427-438, eng) 43-2942

Resistance tests in ice on structure and ship models. Takekuma, K., et al, (1988, p.570-579, eng) 43-2955

Airborne sea ice thickness sounding. Kovacs, A., et al, (1989, p.1042-1052, eng) 43-3041

Radar profiling of ice thickness. Arcone, S.A., (1985, 11p., eng) 43-3945

Final report on continued development of an ice thickness radar system. Iizuka, K., et al, (1986, var. p., eng) 43-4159

Step frequency radar for determining the thickness of saline ice. Iizuka, K., (1984, var. p., eng) 43-4160

Ice-ocean coupled model. Mellor, G.L., et al, (1989, p.10,937-10,954, eng) 43-4529

See also: Glacier thickness; Ice cover thickness

Ice tongues

See also: Glacier tongues

Ice transported material

See also: Ice rafting

Ice underside

See also: Ice bottom surface

Ice veins

See also: Ground ice; Ice wedges

Ice volume

Influence of the Vilyuy hydroelectric power plant on winter regime of the Vilyuy and Lena rivers. Kusatov, K.I., (1987, p.60-64, rus) 43-47

Fresh water content of Hudson Bay and Foxe Basin due to ice melting. Prinsenberg, S.J., (1988, p 6-11, eng) 43-156

Cryogenic structure of the Edoma ice-bearing deposits in Kolyma. Torgovkin, IA.I., (1988, p.97-100, rus) 43-532

Use of combined hydrochemical and isotope methods in studying ground ice. Kritsuk, L.N., et al, (1988, p.91-98, rus) 43-595

Role of sea ice in the dynamics of the Arctic climatic system. Subbotin, V.V., (1988, p.82-97, rus) 43-762

Lithospheric thickness, antarctic deglaciation history, and ocean basin discretization effects in a global model of postglacial sea level. Peltier, W.R., (1988, p.325-346, eng) 43-785

Studying and forecasting the development of anomalous ice phenomena. Kovalev, E.G., (1988, p.28-32, rus) 43-800

Formulas for calculating volume of sea ice. Smirnov, V.I., (1987, p.24-28, rus) 43-888

Reconstruction of the Tuyuksu glacier mass balance for the last century. Vilesov, E.N., et al, (1988, p.51-58, rus) 43-936

Thickness and volume of the Dzhungarskiy Alatau glaciers from airborne radar-echo soundings. Macheret, IU.IA., et al, (1988, p.59-71, rus) 43-937

Volume changes accompanying creep of frozen soil. Knutsson, S., (1987, 13p., eng) 43-1112

Greenland ice sheet mass balance. Reeh, N., (1985, p.53-59, eng) 43-1158

Looking at the Earth from space. Geller, M.A., (1988, p.95-102, eng) 43-1502

Glacier mass balance investigations in the balance year 1986-87 Hagen, J.O., (1988, p.205-209, eng) 43-2010

Ice content and thermal properties of cryoturbated soils. Van Vliet-Lanoë, B., (1988, p.119-135, fre) 43-2299

Calculating the volume of composite glaciers according to their surface area. Glazyrin, G.E., et al, (1988, p.91-96, rus) 43-2685

Ice fronts and icebergs in the Ross and Weddell seas. Jacobs, S.S., (1987, p.91-94, eng) 43-2751

Ice cover breakup on the Susquehanna River. Ruggles, R.W., et al, (1988, p.229-238, eng) 43-2996

Field determination of ice jam porosity. Prowse, T.D., (1988, p.316-325, eng) 43-3004

Variations in the global water budget. Street-Perrott, A., ed, (1983, 518p., eng) 43-3035

Illusions and problems in water-budget synthesis. Morner, N.A., (1983, p.419-423, eng) 43-3038

Thickness and subglacial topography of Chongce Ice Cap. Zhu, G.C., (1989, p.7-14, eng) 43-3435

Relation of deep sea oxygen isotopic record to global ice volume history. Prentice, M.L., (1989, 567p., eng) 43-4575

Ice water interface

Coupled air-ice-ocean models. Hibler, W.D., III, (1987, p.131-137, eng) 43-850

Air/ocean/ice models' working group report. Tipper, R.C., et al, (1987, p.139-142, eng) 43-851

Thermodynamics of phase boundaries between ice and water. Alts, T., et al, (1988, p 221-280, eng) 43-922

Multiple similarity solutions of buoyancy induced flows for ice melting in cold pure water. Wang, C., et al, (1988, p.1007-1017, eng) 43-972

Ice/water interface: a molecular dynamics simulation study Karim, O.A., et al, (1988, p.6889-6896, eng) 43-1366

Light scattering at the surface of growing crystals. Mazur, P., et al, (1988, p.5267-5274, eng) 43-1423

Dynamic light scattering at a growing crystal interface: ice-water system. Vesenka, J.P., et al, (1988, p.5310-5315, eng) 43-1424

Canadian Arctic islands; program and abstracts. (1988, 110p., eng) 43-1452

Meridional heat transport by the ice and ocean in the western Arctic. Pease, C.H., (1988, p.16-19, eng) 43-1493

Dynamics of phase boundaries between ice and water, Pt. 3. Alts, T., et al, (1988, p.301-329, eng) 43-1572

Oceanic environment of George VI Ice Shelf, Antarctic Peninsula. Talbot, M.H., (1988, p.161-164, eng) 43-1960

Enhanced radar scattering from water inclusions in ice. Bamber, J.L., (1988, p.293-296, eng) 43-1984

Displacement of the crystallization front in the ice-water system. Potapenko, V.IU., et al, (1989, p.109-113, eng) 43-2054

Continuum description of phase boundary thermodynamics of ice and water pt.4. Alts, T., et al, (1989, p.1-22, eng) 43-2241

Transformation of petroleum films in the ocean-ice-atmosphere system. Izmailov, V.V., (1988, 144p., rus) 43-2282

Eulerian-Lagrangian model for the prediction of ice hazards in shallow waters. Bruno, M.S., (1989, p.229-233, eng) 43-2631

Open water in lake ice due to submerged power plant outlet. Tesaker, E., et al, (1988, p.72-80, eng) 43-2981

Heat transfer between water and ice cover. Matoušek, V., et al, (1988, p.367-377, eng) 43-3009

Effects of natural convection on ice formation around a cylinder. Cheng, K.C., et al, (1988, p.931-937, eng) 43-3088

Convective heat transfer in water over melting ice sheet. Lunardini, V.J., (1986, p.42-51, eng) 43-3218

Simple approach to air and water drag on sea ice. Myrhaug, D., (1989, p.466-476, eng) 43-3410

Supercooling and superheating effects in phase transitions. Visintin, A., (1985, p.233-256, eng) 43-3480

New model for supercooling and superheating effects. Visintin, A., (1986, p.141-157, eng) 43-3481

Bioecology and sedimentation of Lake Hoare. Wharton, R.A., Jr., et al, (1989, p.305-320, eng) 43-3701

Water drag on sea ice—a revisit. Myrhaug, D., (1989, p.113-122, eng) 43-3717

Dynamic response of an icebeam with flooding water effect. Wang, S.L., et al, (1989, p.311-320, eng) 43-3736

Studies of sea ice forcing during MIZEX'87. Sandven, S., et al, (1989, p.1073-1083, eng) 43-3804

Effect of polar ice on the North Pacific subtropical high. Fang, Z.F., et al, (1987, p.190-195, eng) 43-3830

Ice-ocean mixed layer model of the marginal ice zone. Ikeda, M., (1989, p.9699-9709, eng) 43-3961

Geometry of water veins and nodes in polycrystalline ice. Nye, J.F., (1989, p.17-22, eng) 43-4135

International Symposium on Cold Regions Heat Transfer, 1989. (1989, 314p., eng) 43-4193

Ice formation phenomena. Hirata, T., et al, (1989, p.33-38, eng) 43-4196

Experimental study of melting of ice about hotizontal cylinders. Torikoshi, K., et al, (1989, p.45-50, eng) 43-4198

Heat transfer from water flowing through a chilled-bed open channel Richmond, P.W., et al, (1989, p.51-58, eng) 43-4199

Coupled heat transfer of a two-phase closed thermosyphon with solidification. Wu, C.Z., et al, (1989, p.183-188, eng) 43-4214

Two-dimensional coupled ice-ocean model of the Bering Sea Marginal Ice Zone. Kantha, L.H., et al, (1989, p.10,921-10,935, eng) 43-4528

Ice-ocean coupled model. Mellor, G.L., et al, (1989, p.10,937-10,954, eng) 43-4529

Acoustic waves incident on a seawater/sea ice interface. Jezek, K.C., (1985, 10p., eng) 43-4588

Ice (water storage)

Two types of intraglacial meltwater regime for the Bertil Glacier, Svalbard. Gokhman, V.V., (1987, p 241-248, eng) 43-128

Water resources of the North Slope, Alaska. Sloan, C.E., (1987, p.233-252, eng) 43-2372

Fluvio-glacial resources of the Issyk-Kul' region. Dikikh, A.N., ed, (1988, 129p., rus) 43-2382
Ice wedges
Use of combined hydrochemical and isotope methods in studying ground ice. Kritsuk, L.N., et al, (1988, p.91-98, rus) 43-595
Ice-wedge casts and relict polygonal patterns in Scandinavia. Svensson, H., (1988, p.57-67, eng) 43-1005
Late pleistocene periglacial wedge sites in Wyoming: an illustrated compendium Mears, B, Jr., (1987, 77p, eng) 43-1968
See also: Ground ice, Ice veins
Ice wharves
Ice wharf at McMurdo Station. Barthelemy, J.L., et al, (1988, p.601-609, eng) 43-2958
Ice wood friction
See also: Wood ice friction
Iceberg towing
Hindcast study of iceberg drift on the Labrador Coast. Banke, E.G., et al, (1984, 161p., eng) 43-448
Theory of equilibrium configurations of buoyantly unstable icebergs. Jessup, R.G., (1989, p.187-195, eng) 43-2627
Feasibility study of full scale iceberg impact experiments. Duthinh, D., et al, (1989, p.383-392, eng) 43-2649
Drill-anchor for iceberg towing. Kolle, J.J., (1989, p.469-476, eng) 43-2659
Icebergs
Strength of icebergs during impact El-Tahan, H, et al, (1986, p.197-212, eng) 43-269
Iceberg impact forces. Nevel, D.E., (1986, p.345-369, eng) 43-278
Ice-rafted debris in sediment cores. Grobe, H., (1987, p.123-126, eng) 43-405
Ice scour surveys, statistics and forces. Chari, T.R., et al, (1987, p.99-118, eng) 43-445
Design loads for detachable platforms subjected to iceberg impact loads. Waegter, J., et al, (1988, p 221-234, eng) 43-623
Argos and the 1990's system efficiency in polar regions. Vassal, C., (1988, p.455-470, eng) 43-640
Aerial surveillance system for ice management in the marginal ice zone. Rudkin, P., et al, (1988, p.471-483, eng) 43-641
Impact of icebergs on structures. Fylling, I.J., et al, (1988, p.523-538, eng) 43-645
Some ocean drift ice scaling ideas. Korsnes, R., (1988, p.647-659, eng) 43-651
Monitoring giant antarctic icebergs. Rutledge, G.K., (1988, p.663-665, eng) 43-786
Program for the analysis of iceberg rolling. Peters, G.R., (1988, p.33-50, eng) 43-788
Surface textures of grains from iceberg and submarine sediments in Lützow-Holm Bay. Shimizu, F., et al, (1988, p.129-139, jpn) 43-840
Survey of physical and mechanical properties of icebergs. Nadreau, J.P., (1987, p.155-192, eng) 43-906
Ultimate extreme ice feature: antactic icebergs. Thomson, R.B., (1987, p.369-371, eng) 43-914
Compressive strength, deformation and Poisson's ratio of iceberg ice. Sinha, N.K., et al, (1987, p 413-429, eng) 43-918
Disintegration of the Larsen Ice Shelf in Antarctica. Zakharov, V.G., et al, (1988, p.105-108, rus) 43-943
Iceberg scoring and sedimentology of Baffin I. continental shelf. Pereira, C.P.G., et al, (1988, p.221-230, eng) 43-1032
Geotechnical aspects of seabed pits in the Grand Banks area. Clark, J.I., et al, (1988, p.448-454, eng) 43-1051
Comparison of iceberg scour marks with trajectories on the Labrador Shelf. Todd, B.J., et al, (1988, p.1374-1383, eng) 43-1499
Impact strength of iceberg and artificial snow ice. El-Tahan, H., et al, (1985, p.365-380, eng) 43-1532
Aerogeophysical survey yields new data in the Weddell Sea. LaBrecque, J., et al, (1988, p.69-70, eng) 43-1615
Biotic provinces in modern Amundsen Sea sediments: implications for glacial history. Kellogg, D.E., et al, (1988, p.154-156, eng) 43-1633
Hibernia construction program gets underway (1988, p.44-45, eng) 43-1739
Report of the International Ice Patrol in the North Atlantic. Season of 1986. (1988, 71p., eng) 43-1817
Icebergs rework shelf sediments to 500 m off Antarctica. Barnes, P.W., et al, (1988, p.1130-1133, eng) 43-1835
Sedimentation from icebergs in a proglacial lake in Norway. McManus, J., et al, (1988, p.215-223, eng) 43-1871
Relationship of dynamics of the border zone of the antarctic ice cover with tides. Sytinskii, A.D., et al, (1989, p.137-142, eng) 43-2059
Iceberg distribution in the Atlantic sector of the southern ocean. Kovalev, A.D., et al, (1988, p.73-78, rus) 43-2227
Radar detection of ice masses. Klein, K., et al, (1988, 240p. + appends, eng) 43-2257
New front of Filchner Ice Shelf. Skvarca, P., (1988, p.20-24, spa) 43-2598
Conference on offshore mechanics and Arctic engineering, 8th, 1989. (1989, 476p, eng) 43-2601
Icebergs in the Barents Sea. Vinje, T.E., (1989, p.139-145, eng) 43-2620
Application of decision analysis to arctic exploration structures. Nessim, M.A., et al, (1989, p.161-168, eng) 43-2623
Model simulation of the dynamic behavior of icebergs. Venkatesh, S., (1989, p.197-204, eng) 43-2628
Iceberg/seabed interaction events observed during the DIGS experiment. Lever, J.H., et al, (1989, p.205-220, eng) 43-2629
Over the-horizon target detection from a floating platform. Khan, R.H., et al, (1989, p.221-228, eng) 43-2630
Iceberg collision reliability model. Isaacson, M., et al, (1989, p.293-299, eng) 43-2639
Impact of icebergs with a semi-submersible platform. Lever, J.H., et al, (1989, p.393-403, eng) 43-2650
Experimental studies of tropospheric refraction in the littoral zone of Antarctica. Mikhailov, N.F., (1988, p.96-103, rus) 43-2727
Ice fronts and icebergs in the Ross and Weddell seas. Jacobs, S.S., (1987, p.91-94, eng) 43-2751
Debris in icebergs: observations from Spitsbergen. Dowdeswell, J.A., et al, (1989, p.221-231, eng) 43-2776
Ice load question: some answers. Sanderson, T.J.O., (1989, p.377-385, eng) 43-2825
Iceberg-structure interaction: force, energy and probability. Duthinh, D., et al, (1988, p.324-340, eng) 43-2933
Design procedures for detachable platforms located in iceberg infested areas. Waegter, J., et al, (1988, p.451-462, eng) 43-2944
Icebergs of the Ross Sea. Keys, H., et al, (1989, p.85-88, eng) 43-3339
Bibliography of remote sensing, mapping and characterization of sea ice. (1989, 114p, eng) 43-3467
Development of ice drift models for the Barents Sea. Carstens, T., et al, (1989, p.31-43, eng) 43-3710
Small scale modelling of iceberg scouring of the seabed. Poorooshasb, F., et al, (1989, p.133-145, eng) 43-3719
Parametric study of iceberg impact loads. Duthinh, D., (1989, p.492-503, eng) 43-3751
Response of concrete platforms to iceberg impact. Holthe, K., (1989, p.527-536, eng) 43-3754
Calculation of iceberg impact forces. Johnson, R.C., et al, (1989, p.546-556, eng) 43-3756
Iceberg structure collision model. Pintur, D.A., et al, (1989, p.586-595, eng) 43-3760
Ice management in the Barents Sea. Jensen, H., et al, (1989, p.1107-1117, eng) 43-3807
Iceberg scouring marks high North Sea areas. (1988, p.40-41, eng) 43-4094
Iceberg field testing: medium scale iceberg test program. Benoit, J.R., (1988, p.127-129, eng) 43-4176
Probabilistic ice information system for Canadian waterways. Perchanok, M., et al, (1989, p.28-32, eng) 43-4255
Scouring and bottom morphology on Weddell Sea shelf. Lien, R., et al, (1989, p.43-57, eng) 43-4388
Icebergs rework sediments on antarctic shelf. Barnes, P.W., et al, (1989, p.130-131, eng) 43-4438
Drift of a giant iceberg in the Weddell Sea. Komyshenets, V.I., et al, (1989, p.71-73, rus) 43-4543
Ice regime and navigation conditions in 1987 along the Mawson Coast. Vanda, IU.A., (1989, p.74-78, rus) 43-4544
North Greenland ice islands. Higgins, A.K., (1989, p.207-212, eng) 43-4549
Measuring meltwater patterns around icebergs. Hirst, J.F., (1989, p.252-254, eng) 43-4550
Icebound lakes
Sedimentary geology of the Valles Marineris, Mars and antarctic Dry Valley lakes. Nedell, S.S., (1987, p.269-444, eng) 43-1699
Nitrogen uptake in antarctic lakes. Priscu, J.C., et al, (1989, p.335-351, eng) 43-2404
Mudflows; collected articles, No.10. Stepanov, B.S., ed, (1988, 172p., rus) 43-2417
Outbreaks of moraine lakes. Keremkulov, V.A., et al, (1988, p.62-77, rus) 43-2420
Glacial mud flows and outburst floods from icebound lakes in China. Xu, D.M., et al, (1988, p.284-289, chi) 43-2870
See also: Frozen lakes
Icebound rivers
Capacity of ice-covered canals. Gladkov, E.G., et al, (1987, p.539-542, eng) 43-137
Predicting flowrates in an ice covered stream. Santeford, H.S., et al, (1984, p.1031-1043, eng) 43-668
Two-power law for analysis of velocity profiles in ice covered rivers. Papadakis, J.E., (1988, 13p. + append., eng) 43-932
River-flow studies in the BAM zone in winter. Sokolov, B.L., et al, (1987, p.96-110, rus) 43-1436
Long range forecasting of river freezeup in Kazakhstan. Shmarova, I.N., (1988, p.93-98, rus) 43-1786
Ice cover distribution in Vermont and New Hampshire Atlantic salmon rearing streams. Calkins, D.J., et al, (1988, p.85-96, eng) 43-2166
Glacial Lake Atna, Copper River Basin, Alaska. Ferrians, O.J., Jr., (1989, p.85-88, eng) 43-3625
Icebreakers
Influence of ship hull forms on propulsion performance in calm and agitated seas. Tsoi, L.G., et al, (1987, p.14-19, rus) 43-31
Economic calculations and icebreaker services. Arikainen, A., (1988, p.19-20, rus) 43-136
Basic characteristics and the elements of adaptive simulation of transportation processes on the Northern Sea Route. Arikainen, A.I., et al, (1987, p.20-33, rus) 43-314
Deformation and cracking of ice cover due to the icebreaker's motion. Koshkin, S.V., (1988, 5p, eng) 43-409
Problems and tendencies in studies of ice propulsion of ships. Kashtelian, V.I., et al, (1988, 17p., eng) 43-410
Ice propulsion definition for river icebreakers and transport ships. Segal, Z.B., (1988, 10p., eng) 43-411
Ice navigation. (1988, p.22-25, eng) 43-415
Oceanography of the Baffin Bay and Nares Strait, Sep. 1986. Bourke, R.H., et al, (1988, 32p. + appends., eng) 43-421
Icy epic of the *Mossovet*. Matiiasevich, A., (1988, p.42-46, rus) 43-572
Segmented model technology for ice resistance determination. Godon, A.M., et al, (1988, p.113-124, eng) 43-616
Evaluation of marine oil transportation systems for Arctic areas. Lawson, W.A., et al, (1988, p.125-146, eng) 43-617
Exploration base in the high Arctic; discussion and case study. Ammendrup, H., et al, (1988, p.309-318, eng) 43-630
Behaviour of steel at low temperatures: state of the art. Gowda, S.S., (1988, p.733-748, eng) 43-658
Fracture mechanics approach to various Arctic steel structures and their reliability analysis. Hagiwara, Y., et al, (1988, p.757-768, eng) 43-660
Ice strength indexer. Baker, D.N., et al, (1987, 35p. + appends., eng) 43-683
Ice loads and the requirements for hulls of icebreakers. Segal, Z., (1987, p.31-32, rus) 43-697
Ice experiment. Zheleznov, S., et al, (1988, p.20-21, rus) 43-699
Mechanics of destruction and some problems of ice destruction. Gol'dshtein, R.V., et al, (1987, 41p. + appends., eng) 43-719
On modelling of ship motion in level ice. Zuev, V.A., et al, (1987, 6p. + appends., eng) 43-720
R-class icebreaker testing requirements. Glen, I.F., (1988, 29p. + appends., eng) 43-775
Radar measurements of sea ice thickness from an icebreaker. Krainiukov, A.V., et al, (1988, p.152-156, rus) 43-814
Developing the structure of the ice-breaking fleet for objectives of the national economy. Arikainen, A.I., (1988, p.99-103, rus) 43-1090
Icebreaking capacity of the *Captain Chechkin* icebreaker in rivers. Tronin, V.A., et al, (1982, 4p., eng) 43-1191
Full-scale tests of icebreaking performances of icebreaking tugs. Tronin, V.A., (1978, 6p., eng) 43-1192
Conceptual development of an ice piloting information system. Coburn, J.L., et al, (1988, 57p., eng) 43-1352
Numerical modeling of pack ice interaction with ships. Hamza, H., (1988, 44p. + appends., eng) 43-1362
Modelling the resistance of ice to ship motion. Gramusov, E.M., (1984, 8p., eng) 43-1836
Formulae on level ice resistance to motion of a river icebreaker. Zuev, V.A., et al, (1978, 7p., eng) 43-1837
Strengthenings of ships for navigation in ice. (1986, c52p., eng) 43-1838
Large-heat input steel weldability for low temperature service. Horii, Y., et al, (1988, p.1-9, eng) 43-1845
Local corrosion of welds of high-strength steels for icebreakers. Inoue, T., et al, (1988, p.52-58, eng) 43-1846
Finnish Ice Service. Grönvall, H., (1988, p.95-110, eng) 43-1972
Design of an icebreaker hull. Baudin, M., et al, (1987, p.103-106, fre) 43-2072
Icebreakers and river ice strength. IAkovlev, M.S., (1988, 2p., eng) 43-2140
Increasing the ice propulsion capability of the icebreaker "Mudyug". Zakharov, B.N., et al, (1988, 8p., eng) 43-2141
Effects of icebreakers' forms on ice breaking capability. Ionov, B.P., (1988, 12p., eng) 43-2142
Arctic vessel performance and trafficability data base, 1983-87. Wells, D., et al, (1988, 80p., eng) 43-2148
Trafficability and performance of M.V. *Arctic* in ice regimes. Browne, R.P., et al, (1988, 56p. + tables, eng) 43-2149
Vessel performance study for the MV *Arctic* 1987; Appends A, B, C. (1988, 2 pieces, eng) 43-2151
Calculation of the ice resistance of ships. Zuev, V., (1988, 5p. + figs, eng) 43-2161
First antarctic voyage of a Soviet icebreaker. Likhomanov, V.A., et al, (1988, p.10-18, rus) 43-2220

Icebreakers *(cont.)*
First experience of using an icebreaker in the Soviet Antarctic Expedition. Likhomanov, V.A., et al, [1988, p.18-22, rus] 43-2221
Soviet Arctic marine transportation. Brigham, L.W., [1988, p.20-23, eng] 43-2376
Second Icebreaking Technology Expedition with R.V. *Polarstern*. Final report, Vol.1. Schwarz, J., et al, [1987, 354 leaves, ger] 43-2430
Review of ship performance in level ice. Jones, S.J., [1989, p.325-342, eng] 43-2643
Experimental study of the icebreaking cycle in 2-D. Valanto, P., [1989, p.343-349, eng] 43-2644
Particularities of ship propulsion in broken ice. Derevianchenko, M.T., et al, [1984, 7p., eng] 43-2693
Friction characteristics of an icebreaker's model. Pozniak, I.I., [1981, 11p., eng] 43-2694
Modeling of ice class shafting and propeller systems. Final report. Cowper, D.N.B., et al, [1988, 38p., eng] 43-2801
IAHR Symposium on Ice, 9th, 1988. [1988, 3 vols., eng] 43-2906
Model tests of an icebreaker in snow-covered ice. Narita, S., et al, [1988, p.216-226, eng] 43-2924
Scientific ocean drilling in ice-laden regions. Foss, G.N., et al, [1988, p.674-685, eng] 43-2964
Research of ice-going qualities of river icebreakers. Tronin, V.A., et al, [1988, p.686-696, eng] 43-2965
Scientific and operational support of river navigation in ice conditions. Tronin, V.A., et al, [1988, p.697-705, eng] 43-2966
Adaptive simulation of transportation marine system along the Northern Sea Route. Arikainen, A., et al, [1988, p.706-718, eng] 43-2967
Revolution in polar shipping—Thyssen/Waas in the Arctic. Varges, G., [1988, p.719-734, eng] 43-2968
Ramming forces on the USCGC *Polar Sea*. Tunik, A.L., et al, [1988, p.746-761, eng] 43-2970
Some model experiments on performance of a ship in simplified ridges. Kitagawa, H., et al, [1988, p.762-771, eng] 43-2971
Full-scale and model tests performed with a nozzle and an open propeller simultaneously. Kannari, P., [1988, p.772-781, eng] 43-2972
Development of a river ice-prow. Part 2. Tatinclaux, J.C., [1988, 44-52, eng] 43-2978
Beaufort environmental monitoring project, 1987-1988 final report. [1989, 136p., eng] 43-3062
Tests of ships in ice. Ryvlin, A.IA., et al, [1980, 269p., eng] 43-3159
Ramming automated monitoring system. Cheung, H.C., et al, [1986, var. p., eng] 43-3361
Instrumentation and analysis of an Arctic Class IV vessel propulsion system. Cowper, D.N.B., [1989, 34p., eng] 43-3364
MV *Arctic* structural performance. Final report. Glen, I.F., et al, [1985, var. p., eng] 43-3365
The AML icebreaker. [1978, 18p., eng] 43-3626
Ice resistance and its components. Ionov, B.P., [1988, 79p., rus] 43-3707
About physical modelling of kinetic friction between ice and ship. Liukkonen, S., [1989, p.736-749, eng] 43-3773
Analysis of factors influencing ship response in collision with multi-year ice floes. Riska, K., [1989, p.750-763, eng] 43-3774
Mission-based approach in modern icebreaker design. Soininen, H., [1989, p.764-773, eng] 43-3775
Extra high strength structural steels for ice breakers. Nordén, R., [1989, p.839-851, eng] 43-3782
Estimation of ship and convoy speed in Arctic waters in evaluating fleet development effectiveness. Arikainen, A., et al, [1989, p.962-974, eng] 43-3793
Ship trials for the Soviet antarctic research ship *Akademik Fedorov*. Haapinen, M.E., [1989, p.975-982, eng] 43-3794
Icebreakers. [1986, var. p., eng] 43-3854
Conditional standards of ice qualities of a ship. Shimanskiĭ, IU.A., [1938, 51p., eng] 43-3857
Advances in icebreaker design W Ger conversion of Soviet ship. Varges, G., [1987, 25p., eng] 43-3962
Power generation system for Coast Guard icebreakers. Wilkerson, L.A., et al, [1989, p.82-92, eng] 43-3973
International Colloquium: Arctic Technology and Economy; Present Situation, Problems, and Future Issues, Paris, Feb 15-17, 1989 (Proceedings) [1989, Var. p., fre] 43-4017
Present development of polar ships. Fedorovsky, B., [1989, 23p., fre] 43-4025
Icebreaking vessel research. Joensuu, A., [1989, 12p., eng] 43-4030
Model and full-scale tests in ice. Schwarz, J., [1989, 6p., eng] 43-4031
M.V. *Arctic* manoeuvring performance in ice. Summary report. Kendrick, A.M., et al, [1984, 16p., rus] 43-4152
M.V. *Arctic* manoeuvring performance in ice. Final report. Kendrick, A.M., et al, [1984, 100p. + appends., eng] 43-4153
M.V. *Arctic* ice transiting performance, continuous mode. Final report. Albery, A.C.R., et al, [1984, var. p., eng] 43-4154
Analyzing vessel performance in snow-covered fast ice and pack ice. Gill, R.J., [1988, p.21-36, eng] 43-4167
Ship mass effect on propulsion in continuous ice fields. Popov, IU.N., et al, [1988, 5p., eng] 43-4440
Effects of icebreakers' forms on ice breaking capability. Ionov, B.P., [1988, 7p., eng] 43-4441
Study on hull corrosion and coatings. Levelton, B.H., et al, [1988, Var. p., eng] 43-4474
See also: Ice breaking
Icefalls
Glacial hazards in Glacier National Park, Montana. Butler, D.R., [1989, p.53-71, eng] 43-3963
Iceland
Ecosystem disturbance in Iceland. Arnalds, A., [1987, p.508-513, eng] 43-199
Nature and restoration of denuded areas in Iceland. Arnalds, O., et al, [1987, p.518-525, eng] 43-201
Afforestation and reforestation in Iceland. Blöndal, S., [1987, p.526-529, eng] 43-202
Interpretation of Icelandic tundra features from Landsat MSS data. Vaughan, R.A., et al, [1988, p.375-376, eng] 43-1514
—Reykjavik
Reykjavik, Iceland: a northern capital. Thorvaldsson, T.S., et al, [1988, p.191-204, eng] 43-4243
—Surtsey
Plant colonization of a volcanic island, Surtsey, Iceland. Fridriksson, S., [1987, p.425-431, eng] 43-191
Icing
Rational design of lock mechanical devices operating under ice conditions. Balanin, V., et al, [1986, p.307-321, eng] 43-276
Atmospheric icing offshore eastern Canada. Mitten, P., [1986, p.325-341, eng] 43-277
Heat transfer characteristics of glaze ice accretions on an airfoil. Pais, M.R., [1988, 172p., eng] 43-345
U.S. Marine Corps cold weather combat operations study. [1980, var.p., eng] 43-439
Icicle prevention in railway tunnels by adiabatic treatment. Okada, K., [1987, p.5-9, eng] 43-450
Ice accretion on drilling platforms off the east coast of Canada. Brown, R.D., et al, [1988, p.409-421, eng] 43-636
Technical operation of sea port structures. Kostiukov, V.D., ed, [1987, 128p., rus] 43-756
Analyzing the process of icing of marine hydraulic structures. Demin, IU.A., et al, [1987, p.88-94, rus] 43-758
Arctic and offshore research. [1988, 44p., eng] 43-763
Mobility: working group report. Blaisdell, G.L., et al, [1987, p.273-274, eng] 43-862
Snow-ice deposits in karst hollows of the Khipstinskiy Mountains. Mavliudov, B.R., et al, [1988, p.148-153, rus] 43-954
Seminar on Applied Ice Mechanics, Narvik, Sep. 8-9, 1987. [1987, var.p., eng] 43-1059
Adhesiveness of ice on polymer materials. Andersson, A., [1987, 16p., eng] 43-1113
Atmospheric and sea spray icing. Andersson, A., [1987, 6p., eng] 43-1115
Frazil ice formation on water intake. Andersson, A., et al, [1987, 11p., eng] 43-1116
New England mountain icing climatology. Ryerson, C.C., [1988, 35p., eng] 43-1339
Atmospheric icing and broadcast antenna reflections. Ryerson, C.C., [1988, 13p., eng] 43-1400
International Conference on Air Cushion Technology, Montreal, 1987. [1988, 381p., eng] 43-1747
Specification and acquisition of API.8B by the Canadian Coast Guard. Melhuish, T.F., [1988, p.163-184, eng] 43-1757
Accuracy of information for ice load estimation. Mytarev, M.N., [1988, p.150-158, rus] 43-1779
Problem of protecting ventilator facilities of mines in the North against freezing. Afanas'ev, V.P., et al, [1987, p.50-54, rus] 43-2290
Mountain-top riming at sites in California and Nevada, U.S.A. Berg, N.H., [1988, p.429-447, eng] 43-2484
Formation of spray ice on offshore structures. Makkonen, L., [1989, p.277-309, eng] 43-2822
Adhesiveness of ice on rubber materials. Andersson, L.O., [1988, p.271-280, eng] 43-2928
Numerical model of ice accretion on structures. Svensson, U., et al, [1988, p.436-445, eng] 43-3015
Icing of petroleum industry offshore structures and ships. Romagnoli, R., [1988, p.486-497, eng] 43-3019
Modeling of atmospheric icing on small scale. Anno, Y., [1988, p.498-503, eng] 43-3020
Icing in alimentation area of glacier in Spitsbergen. Izumi, K., [1988, p.121-129, jpn] 43-3525
Roof design in cold regions. Tobiasson, W., [1989, p.462-472, eng] 43-3590
Numerical model of water droplet trajectories. Andersson, A., et al, [1989, p.671-680, eng] 43-3767
Atmospheric icing of masts. Häggström, M., et al, [1989, p.705-711, eng] 43-3770
Adhesion of ice to polymer materials. Andersson, L.O., [1989, p.786-795, eng] 43-3777
Development of an automatic weather station for cold regions. Strangeways, I.C., [1984, p.12-23, eng] 43-4311
Climatic atlas of Alaskan coastal regions and shelf waters. Brower, W.A., Jr., et al, [1988, 3 vols., eng] 43-4476
See also: Aircraft icing; Glaze; Ice loads; Power line icing; Road icing; Ship icing
Icing detection
See also: Ice detection
Icing rate
Marine icing. Lozowski, E.P., [1988, p.43-66, eng] 43-2909
Power line icing in mountains. Druez, J., et al, [1988, p.477-485, eng] 43-3018
Atmospheric icing of transmission lines. Henry, K., [1987, 15p., eng] 43-3640
Soviet marine icing data. Zakrzewski, W.P., et al, [1989, 125p., eng] 43-4034
Icing rate in a horizontally inhomogeneous atmospheric boundary layer. Ivanova, L.A., et al, [1988, p.48-56, rus] 43-4586
See also: Ice accretion
Illumination
See also: Sunlight
Impact strength
Iceberg impact forces. Nevel, D.E., [1986, p.345-369, eng] 43-278
Evidence for sea-ice impact on Icy Reef, Beaufort Sea coast. Reimnitz, E., et al, [1988, p.190-192, eng] 43-514
Ice force estimation during local impact of a ship's plate. Omar, A.F., et al, [1988, p.101-112, eng] 43-615
Design loads for detachable platforms subjected to iceberg impact loads. Waegter, J., et al, [1988, p.221-234, eng] 43-623
Ice crushing by impact and indentation: a literature review. Jordaan, I.J., et al, [1988, 126p., eng] 43-679
Ice loads and the requirements for hulls of icebreakers. Segal, Z., [1987, p.31-32, rus] 43-697
Sea ice effect on oscillations of cylindrical drilling-platform supports. Khrapatyĭ, N.G., et al, [1986, p.34-41, rus] 43-729
Ice effect on reinforced concrete supports of offshore drilling structures. Shmaevich, L.I., [1986, p.134-148, rus] 43-730
Pressure ridge effect on structures erected on the shelf. Vardanian, S.S., et al, [1986, p.148-158, rus] 43-731
Ice pressures during the impact of an ice mass. Kivisild, H.R., [1987, p.359-368, eng] 43-913
Ice loads on structures. Määttänen, M., [1987, 15p., eng] 43-1103
Experiments on snow-avalanche dynamics. Nishimura, K., et al, [1987, p.395-404, eng] 43-1248
Energy loss of snow blocks passing through a supporting structure. Bachmann, O., [1987, p.613-622, eng] 43-1267
Tests of propeller ice loads in laboratory and full scale. Jussila, M., [1988, p.105-122, eng] 43-2008
Model tests of load transmission through grounded ice rubble. Timco, G.W., et al, [1989, p.269-274, eng] 43-2636
Failure analysis of impacting ice floes. Bhat, S.U., et al, [1989, p.275-285, eng] 43-2637
Iceberg collision reliability model. Isaacson, M., et al, [1989, p.293-299, eng] 43-2639
Simple model for collision of floating bodies. Nawwar, A.M., et al, [1989, p.309-314, eng] 43-2640
Calculation of ice sheet stress-strain state by numerical method. Kozin, V.M., et al, [1989, p.315-318, eng] 43-2641
Measurements of ice impact forces on a vertically-faced bridge pier. Frederking, R., et al, [1989, p.319-323, eng] 43-2642
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Feasibility study of full scale iceberg impact experiments. Duthinh, D., et al, [1989, p.383-392, eng] 43-2649
Impact of icebergs with a semi-submersible platform. Lever, J.H., et al, [1989, p.393-403, eng] 43-2650
Iceberg-structure interaction. force, energy and probability. Duthinh, D., et al, [1988, p.324-340, eng] 43-2933
Ramming forces on the USCGC *Polar Sea*. Tunik, A.L., et al, [1988, p.746-761, eng] 43-2970
MV *Arctic* structural performance. Final report. Glen, I.F., et al, [1985, var. p., eng] 43-3365
Parametric study of iceberg impact loads. Duthinh, D., [1989, p.492-503, eng] 43-3751
Response of concrete platforms to iceberg impact. Holthe, K., [1989, p.527-536, eng] 43-3754
Calculation of iceberg impact forces. Johnson, R.C., et al, [1989, p.546-556, eng] 43-3756
Iceberg structure collision model. Pintur, D.A., et al, [1989, p.586-595, eng] 43-3760
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Impact tests
Local ice pressures measured in thick level ice in Antarctica. Final report. St. John, J., et al, [1986, 174p., eng] 43-976

Impact strength of iceberg and artificial snow ice. El-Tahan, H , et al, (1985, p.365-380, eng) 43-1532
IAHR Symposium on Ice, 9th, 1988. (1988, 3 vols., eng) 43-2906
Results from indentation tests on freshwater ice. Sodhi, D.S., et al, (1988, p.341-350, eng) 43-2934
Resistance tests in ice on structure and ship models. Takekuma, K., et al, (1988, p.570-579, eng) 43-2955
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Proceedings. (1988, 216p., eng) 43-4166
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Internal friction
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International cooperation
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Proceedings. (1988, Var. p., eng) 43-2556
Report of the U.S. Arctic Research Commission, 1988. (1989, 39p., eng) 43-2765
Science and politics in polar areas. Gjelsvik, T., (1988, p.87-94, eng) 43-2900
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Arctic research in the United States, Vol.3. (1989, 72p., eng) 43-4482
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Polarized Raman spectra for ices. Devlin, J.P., [1989, p.1322-1329, eng] 43-2904
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Lithology and fracturing of rock glaciers in Southwestern Alps. Evin, M., [1987, p.83-106, eng] 43-3048
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Swiss Federal Institute of Snow and Avalanche Research. Dickman, S., [1988, p.330-331, eng] 43-1144
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Laboratory hail studies. Prodi, F., [1987, p.111-136, eng] 43-2251
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Frost shattering experiments. Pt. 6, New results on limestone facies. [1974, 42p., fre] 43-3977
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Labrador Sea
Hibernia construction program gets underway. [1988, p.44-45, eng] 43-1739
Mapping of seasonal sea ice off Labrador with C-band SAR imagery. Holt, B., et al, [1988, p.1423-1424, eng] 43-1891
Iceberg/seabed interaction events observed during the DIGS experiment. Lever, J.H., et al, [1989, p.205-220, eng] 43-2629

Lacustrine deposits
Holocene glaciolacustrine sedimentation in Muir Inlet and ice advance in Glacier Bay, Alaska, U.S.A. Goodwin, R.G., [1988, p.55-69, eng] 43-13
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Glacier fluctuations recorded in lacustrine sediments on Mount Kenya. Karlén, W., et al, [1988, p.219-232, eng] 43-970
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Geographic interpretation of satellite survey data. Vasil'ev, L.N., ed, [1988, 132p., rus] 43-108
Albedo of characteristic surfaces of Mongolia according to land and satellite survey data. Grinberg, A.M., et al, [1988, p.101-109, rus] 43-110
Natural and man-induced snow-ice phenomena in Spitsbergen. Il'ina, E.A., et al, [1987, p.157-161, rus] 43-250
Gas inclusions in lake ice and radioluminescent temperature of the ice sheet. Bordonskiĭ, G.S., et al, [1985, p.60-66, eng] 43-662
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Salts in pond waters of the Labyrinth; lithium and boron contents. Takamatsu, N., et al, [1988, p.103-112, eng] 43-839
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Sand/ice interactions and sediment deposition in ice-covered lakes. Simmons, G.M., Jr., et al, [1988, p.217-220, eng] 43-1643
Mathematical thermal model of lake freezing and its testing. Shishkaev, S.M., [1988, p.18-24, eng] 43-2126
Statistical assessment of ice jam formation in Canadian rivers. Sarraf, S., [1988, p.327-344, eng] 43-2179
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Studies on ice conditions in rivers, lakes and seas in China. Chen, Z.T., [1988, p.279-283, chi] 43-2869
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Physico-mechanical properties of ice in fresh water reservoirs. Truskov, P.A., et al, [1988, p.38-49, rus] 43-3634
Glaciological investigations in Siberia, Vol.2. Antipov, A.N., ed, [1987, 162p., rus] 43-3652
Ice reserves in the south of Eastern Siberia. Orel, G.F., et al, [1987, p.15-27, rus] 43-3654
Chemical composition of indigenous ice in the lower Amur River region. Ivanov, A.V., et al, [1987, p.28-38, rus] 43-3655
Experiments on the cutting process in ice. Ueda, H.T., et al, [1989, 36p., eng] 43-3895
Thermal stratification of Larsemann Hills lakes. Burgess, J., et al, [1988, p.147-149, eng] 43-4043

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Isotopes in antarctic research: contributions of the GDR, III. (1988, 189p, eng) 43-4512
Hydrology of lakes in Central Wohlthat Massif. Haendel, D., et al, (1988, p.7-14, eng) 43-4513
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Building codes for avalanche hazard regions. Grakovich, V.F., et al, (1987, p.343-352, rus) 43-2540
Forecasting technique for anthropogenic changes in cryogenic conditions. Garagulia, L.S., (1985, 224p., rus) 43-3073
All-Union conference "Soil cryogenesis theory," 5th, Pushchino, Feb. 6-10, 1989. Abstracts. (1989, 114p., rus) 43-3976
Snow hydrology—forest harvesting interface. Toews, D.A.A., et al, (1988, p 13-22, eng) 43-3992

Land ice
Antarctic aerosols: a review. Shaw, G.E., (1988, p.89-112, eng) 43-1405
Surface winds over the antarctic continent: a review, Parish, T.R., (1988, p.169-180, eng) 43-1407
Synthetic aperture radar data over terrestrial ice Rees, W.G., (1988, p.165-168, eng) 43-1508
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Data report for the Siple Coast Project. Bindschadler, R.A., et al, (1988, 102p, eng) 43-3235
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Northern environmental disturbances. Kershaw, P., ed, (1988, 70p, eng) 43-2303
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Rock glaciers of the Dalton Range, Kluane Ranges, southwest Yukon Territory, Canada. Johnson, P.G., et al, (1988, p.327-332, eng) 43-1989
Arctic lowlands. Carter, L.D., et al, (1987, p.583-628, eng) 43-2415
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LANDSAT
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Studies and mapping of forests using spaceborne scanner imagery obtained in winter. Kravtsova, V.I., et al, (1988, p.56-65, rus) 43-586
Assessment of polar climate change using satellite technology. Hall, D.K., (1988, p.26-39, eng) 43-1403
Constrained cluster analysis and image understanding. Banfield, J.D., (1988, 105p., eng) 43-1912
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Landscape development
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Limnological investigations of Lake Unter-See. Kaup, E.B., et al, (1988, p.101-111, rus) 43-797
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Failure of spring turnover in Onondaga Lake, N.Y., U.S.A. Effler, S.W., et al, (1987, p.285-291, eng) 43-1075
Seasonal pH depressions in Wisconsin lakes caused by pCO2 increases. Kratz, T.K., et al, (1987, p.1082-1088, eng) 43-1198
Sand/ice interactions and sediment deposition in ice-covered lakes. Simmons, G.M., Jr., et al, (1988, p.217-220, eng) 43-1643
Microbially mediated Mn(II) oxidation in an oligotrophic Arctic lake. Johnston, C.G., et al, (1988, p.1440-1445, eng) 43-1788
Nitrogen uptake in antarctic lakes. Priscu, J.C., et al, (1989, p.335-351, eng) 43-2404
Reconstruction of natural conditions near Beaver Lake in Early Pleistocene. Bardin, V.I., et al, (1988, p.108-111, rus) 43-3311
Chemistry of pond waters in the Labyrinth. Torii, T., et al, (1989, p.255-264, eng) 43-3700
Bioecology and sedimentation of Lake Hoare. Wharton, R.A., Jr., et al, (1989, p.305-320, eng) 43-3701
Contemporary glaciation of the Soviet Arctic. Govorukha, L.S., (1989, 255p., rus) 43-3814
Thermal stratification of Larsemann Hills lakes. Burgess, J., et al, (1988, p.147-149, eng) 43-4043
Microbial biomass in ponds of McMurdo Ice Shelf. Howard-Williams, C., et al, (1989, p.125-131, eng) 43-4184
Isotopes and hydrogeochemistry of Lakes Beaver and Radok. Wand, U., et al, (1988, p.99-111, eng) 43-4517
Early Martian environments: the antarctic and other terrestrial analogs. Wharton, R.A., et al, (1989, p.147-153, eng) 43-4580
Biogeochemical survey of streams in Alaskan mountains and foot-hills. Lock, M.A., et al, (1989, p.499-521, eng) 43-4603
See also: Lakes

Linings
State of the art: engineering design of shafts. Klein, J., (1988, p.235-243, eng) 43-83
Shaft linings in ground stabilized by freezing. Auld, F.A., (1988, p.255-262, eng) 43-85
Shaft lining and freeze wall deformation. Auld, F.A., (1988, p.263-272, eng) 43-86
Structure and stress analysis of seepage resistant linings in shafts sunk with the freezing method. Xu, X., et al, (1988, p.311-318, eng) 43-92
Frost action prevention in road tunnels. Takeichi, K., et al, (1989, p.721-730, eng) 43-3142

Liquefied gases
Ground freezing with liquid nitrogen. Capitaine, P., et al, (1988, p.273-277, eng) 43-87
Two practical applications of soil freezing by liquid nitrogen. Orth, W., (1988, p.389-394, eng) 43-101
Reinforced concretes for the containment of cryogenic liquids offshore. Berner, D.E., (1988, p.173-178, eng) 43-709

Liquid cooling
Dynamics of freezing and liquid instability. Bagchi, B., (1987, p.29-33, eng) 43-4338
Cooling of cryoagents by the pumping-out of vapor. Kirichenko, IU.A., et al, (1989, p.63-68, eng) 43-4399

Liquid phases
Theory of freezing for monatomic systems. Laird, B.B., (1988, 167p., eng) 43-2890
Freezing around a vertical cylinder in porous media. Wang, C.Y., et al, (1989, p.297-302, eng) 43-4226
Dynamics of freezing and liquid instability. Bagchi, B., (1987, p.29-33, eng) 43-4338

Liquid solid interfaces
Solid-liquid interface layer of growing ice crystals. Halter, P.U., et al, (1988, p.2622-2629, eng) 43-419
Heat transfer and structure formation during processes of freezing the eutectic-forming systems. Brazhnikov, S.M., et al, (1988, p.44-46, rus) 43-549
Double diffusive convection due to melting. Beckermann, C., et al, (1988, p.2077-2089, eng) 43-1162
Formation of a solid nucleus in supercooled liquid, 1. Alexiades, V., et al, (1988, p 281-300, eng) 43-1446
Theory of freezing for monatomic systems. Laird, B.B., (1988, 167p., eng) 43-2890
Phase changes following the initiation of a hot turbulent flow over a cold solid surface. Huppert, H.E., (1989, p.293-319, eng) 43-3292
New model for supercooling and superheating effects. Visintin, A., (1986, p.141-157, eng) 43-3481
Study on freezing of undercooled solution. Hayashi, Y., et al, (1989, p.85-90, eng) 43-4202
Heat transfer involving convective melting. Saitoh, T., et al, (1989, p.169-174, eng) 43-4213
Coupled heat transfer of a two-phase closed thermosyphon with solidification. Wu, C.Z., et al, (1989, p.183-188, eng) 43-4214
Phase change heat transfer around cylindrical heat source. Sasaguchi, K., et al, (1989, p.43-49, eng) 43-4373
Phase-change tracking using surface temperature. Choi, H.O., (1988, p.691-696, eng) 43-4457
Formation of a solid nucleus in supercooled liquid, Pt.2. Alexiades, V., et al, (1980, p.99-109, eng) 43-4533
Freezing of water-saturated porous media. Chellaiah, S., et al, (1989, p.425-432, eng) 43-4617
Density functional theory of freezing with a self-consistent effective liquid. Baus, M., (1989, p.3131-3134, eng) 43-4620

Liquids
Heat transfer and structure formation during processes of freezing the eutectic-forming systems. Brazhnikov, S.M., et al, (1988, p.44-46, rus) 43-549
Surface tension of organic liquids against ice and against water at 0 C. Miller, N.F., (1937, 53p., eng) 43-1865
Natural and surface tension driven convection in open cavities. Tokura, I., et al, (1989, p.215-220, eng) 43-4215
See also: Frozen liquids

Lithology
Lithology of boulders in the Montmagny embayment, St. Lawrence shore. Dionne, J.C., (1987, p.161-169, fre) 43-318
Physical, chemical and mechanical bases of cryolithogenesis. Ershov, E.D., (1987, p.54-66, rus) 43-687
Lithology and fracture of rock glaciers. Evin, M., (1988, p.137-158, fre) 43-2300
Hydrocarbon generation in strata of perennially frozen rock. Mel'nikov, P.I., et al, (1989, p.118-128, rus) 43-2445
Lithology and fracturing of rock glaciers in Southwestern Alps. Evin, M., (1987, p.83-106, eng) 43-3048
Geocryology of the European USSR. Ershov, E.D., ed, (1988, 357p., rus) 43-3067
Glaciation of Bonavista Peninsula, northeast Newfoundland. Brookes, I.A., (1989, p.2-18, eng) 43-3358
Geocryological studies. Ershov, E.D., ed, (1987, 292p., rus) 43-3368
Cryolithozone development in northern Eurasia during the late Cenozoic. Danilov, I.D., (1987, p.45-62, rus) 43-3370
Cryogenic age of rocks in the cryolithozone of the USSR. Baulin, V.V., et al, (1987, p.62-71, rus) 43-3371
Azonal factors in rain runoff formation in the Kolyma water balance station. Boiarintsev, E.L., (1988, p.67-94, rus) 43-3637
Remote sensing of the cryolithozone in Yakutia. Petropavlovskaia, M.S., (1988, 71p., rus) 43-3705
Cryolithological structure of Kolyma River deposits. Koniakhin, M.A., et al, (1989, p.48-53, rus) 43-4384

Litter
Forest litter in the middle Angara region. Popova, E.P., et al, (1988, p.13-20, eng) 43-2192
Decomposition of plant residues and humus formation in the Khibiny Mountains. Pereverzev, V.N., (1988, p.48-57, eng) 43-2193

Loading
Some experimental observations on concrete behavior at low temperature. Lee, G.C., (1989, p.831-838, eng) 43-3781
Cyclic loading on lateral load capacity of an ice-resisting wall system. Stephens, M.J., et al, (1989, p.873-883, eng) 43-3785
See also: Unloading

Loads (forces)
Shear strength of soils with thawing and dynamic loads. Karlov, V.D., et al, (1988, p.193-196, eng) 43-77
Experience from ice reinforcement tests. Fransson, L., (1985, p.281-290, swe) 43-380
Effect of ground temperature and thawing depth on piles. Chang, B., (1988, p.15-21, chi) 43-463
Elasticity of ice sheets subjected to loads. Newbury, G.S., et al, (1988, p.691-701, eng) 43-655

Sandwich panels at low temperature. Hassinen, P., et al, (1988, p.749-756, eng) 43-659
Case histories in seasonal frost areas. Haas, W.M., et al, (1988, p.160-169, eng) 43-772
Stress intensity factors of cracked plates under thermal load. Matsumoto, E., et al, (1988, p 65-70, eng) 43-978
Constitutive model for ice as a damaging visco-elastic material. Sjölind, S.-G., (1987, 3p., eng) 43-1107
Reinforced ice. Elfgren, L., et al, (1987, 9p., eng) 43-1109
"Rutschblock" as a practical tool for slope stability evaluation. Föhn, P.M.B., (1987, p.223-228, eng) 43-1232
Use of index measurements in studies of snow under vertical loading. Irwin, G.J., (1987, p.137-163, eng) 43-1294
Energy analysis of confined compression and shear behavior of snow. Yong, R.N., (1987, p.165-192, eng) 43-1295
Reduced laying depths for supply mains. Elbinger, K., (1987, p 50-51, eng) 43-1320
Effects of cold weather on a n al gas pipeline Ney, S.C., et al, (1988, p.749-763, g) 43-1336
Reliability analysis of a transmission tower. Haldar, A.K., (1987, p.41-51, eng) 43-1585
Reliability of Ontario Hydro's 500 kV narrow base transmission structures. Goel, A.P., (1987, p.73-88, eng) 43-1587
Probability based design of wood pole distribution lines. Krishnasamy, S.G., et al, (1987, p.167-175, eng) 43-1589
Prediction of distribution line service reliability by probability methods. Xourafas, C.B., et al, (1987, p.195-202, eng) 43-1590
Computer program for the reliability analysis of transmission lines. Peyrot, A.H., et al, (1987, p 223-230, eng) 43-1591
Use of probability techniques in the design and uprating of transmission lines in Hydro-Quebec Ghannoum, E., et al (1987, p.535-547, eng) 43-1593
Studies of tangential forces of frost heave in soils. Elgin, B.B., et al, (1985, p.19-25, rus) 43-1651
Nonlinear method of designing foundation platforms for elevators. Vysokovskii, V.L., et al, (1985, p.88-97, rus) 43-1663
Determining structural ice requirements for military operation. Kuse, W.C., (1986, 110p., eng) 43-1740
Load restriction on thaw weakened flexible pavements. Rutherford, M.S., (1989, 35p., eng) 43-1821
Dynamics of the ice-crushing process. Jordaan, I.J., et al, (1988, p.318-326, eng) 43-1988
Hardening/softening model of snow for snow-working processes. Michalowski, R.L., (1989, p.113-121, eng) 43-2094
In-situ plate-load tests of frozen silt and gravel. Speck, R.C., et al, (1989, p 252-261, eng) 43-2107
Using the borehole jack to determine changes in river ice strength. Prowse, T.D., et al, (1988, p.283-303, eng) 43-2177
Load formation on sha supports permafrost and frozen ground. Zvonarev, N.K al, (1 , p.23-26, rus) 43-2264
Thermal properti f well Zimin, L.B., et al, (1987, p.75-80, rus) 43-2273
Strength of metals used at lo temperatures. Solntsev, IU.P., ed, (1987, 168p., rus) 43-2447
Technical demands on cold-resistant cast steel for payloader's wheels. Gol'dbukht, E.E., et al, (1987, p.10-12, rus) 43-2449
Effects of low temperatures on deformation and destruction of steels. Larionov, V.V., et al, (1987, p.37-43, rus) 43-2453
Fracture resistance of main pipelines made of 14G2AF-U steel. Bezko, E.M., (1987, p.73-78, rus) 43-2456
Resistance to destruction of steel pipes due to temperature and loads. Krasovskii, A.IA., et al, (1987, p.100-105, rus) 43-2458
Low-temperature strength of steel truss junctions. Kozlov, A.G., et al, (1987, p.106-111, rus) 43-2459
Growth of radial cracks in ice sheets. Cocks, A.C.F., (1989, p.7-12, eng) 43-2603
Mechanics of the fracture of equiaxed freshwater ice. Nixon, W.A., et al, (1989, p.23-29, eng) 43-2605
Uniaxial tension/compression tests on ice—preliminary results. Cole, D.M., et al, (1989, p.37-41, eng) 43-2607
Peak pressures from a damage model for ice in compression McKenna, R.F., et al, (1989, p 67-73, eng) 43-2611
Environmental loads on structures NPD—guidelines for loads and load effects. Kvitrud, A., et al, (1989, p.133-138, eng) 43-2619
Time dependent settlement of ice and earth offshore structures. Vinogradov, A.M., et al, (1989, p.263-268, eng) 43-2635
Finite element techniques for pipelines subjected to extreme loads. Row, D., et al, (1983, p.474-485, eng) 43-3420

See also: Dynamic loads; Ice loads; Ice pressure; Pile load tests; Snow loads; Soil pressure, Static loads, Water pressure; Wind pressure

Loams
Water erosion of frozen fines. IAkovlev, A.V., (1988, p.131-135, rus) 43-537
Thixotropy of water-saturated soils, its nature and the determining factors (scientific review). Osipov, V.I., (1988, p.3-31, rus) 43-597
Strength of thawed and frozen dam soils under stress. Vasil'ev, I.M., et al, (1988, p.27-33, eng) 43-1087
Calculating winter temperature conditions in a pile of loam. Kuznetsov, G.I., et al, (1987, p.36-44, rus) 43-1182
Relationship between freezing and water content in sandy loam. Black, P.B., et al, (1988, 37p., eng) 43-1843
Permafrost compressibility during thawing and construction problems. Khrustalev, L.N., et al, (1987, p 221-227, rus) 43-3386

Locks (waterways)
Data acquisition for refrigerated physical model. Zufelt, J.E., (1987, p.338-341, eng) 43-8
Rational design of lock mechanical devices operating under ice conditions. Balanin, V., et al, (1986, p.307-321, eng) 43-276
Thermal analysis of heated lockwalls for ice control. Nakato, T., et al, (1988, p 23-33, eng) 43-2976
High-flow air-screen bubbler systems to control ice in locks. Rand, J.H., (1988, p.34-43, eng) 43-2977
Lock rehabilitation: concrete repair and foundation investigation. Dahlquist, M.S., (1989, p 216-227, eng) 43-4408

Loess
Silicification of loess soils. Volianik, N.V., ed, (1985, 94p., rus) 43-41
Structure and origin of perennially frozen deposits in marginal parts of the aggradation plains of northern Yakutia. Gravis, G.F., (1986, p.79-85, rus) 43-111
Regularities governing the formation of composition and properties of loess in southern East Siberia and northern Mongolia. Riashchenko, T.G., (1988, p.98-106, rus) 43-596
Alkalinization—the new chemical method of stabilizing water—saturated loess and clayey soils Volkov, F.E., et al, (1988, p.15-29, rus) 43-599
Engineering geology today: theory, practice, problems. Sergeev, E.M., ed, (1988, 293p., rus) 43-883
Formation of loess structure, and settlement. Komissarova, N.N., et al, (1988, p 186-194, rus) 43-885
Engineering-geological properties of loess. Gerasimova, A.S., et al, (1988, p.216-226, rus) 43-887
Distribution patterns of loess materials and landforms—some distinctive features. Sollid, J.L., et al, (1988, p.265-270, nor) 43-929
Chemical soil stabilization and the environment. Sokolovich, V.E., (1988, p.233-236, eng) 43-1085
Development of sagging of loess rocks of aquatic genesis. Komissarova, N.N., et al, (1987, p.28-33, eng) 43-2332
Loess sources and eolian deposits in Antarctica. Claridge, G.G.C., et al, (1988, p.33-45, eng) 43-2337
Changes in grain size distribution in loess soils submitted to freezing. Wojtowicz, U.B., (1989, p.601-610, eng) 43-3132
Niveo-aeolian deposits and denivation forms in northwestern Alaska. Koster, E.A., et al, (1988, p.153-170, eng) 43-3531

Logging
See also, Electrical logging; Radioactive logging; Recording; Well logging

Logistics
Field water supply on the winter battlefield. Bouzoun, J.R., (1988, 7p., eng) 43-429
Arctic program annual report 1987. Curtin, T.B., (1987, 43p., eng) 43-515
Evolution of onshore facilities of the U.S. Antarctic Research Program. Splettstoesser, J.F., et al, (1988, p.287-295, eng) 43-628
U.S. airplane recovered from East Antarctica. Mathews, J.C., (1987, p 3-7, eng) 43-1669
Logistic support of Arctic research. (1988, 20p., eng) 43-1696
Operation Deep Freeze 89 end of season report. (1989, var. p., eng) 43-2442
Report of the U.S. Arctic Research Commission, 1988. (1989, 39p., eng) 43-2765
Proceedings. (1982, var. p., eng) 43-2802
U.S. National Science Foundation polar research programs. Wilkniss, P.E., et al, (1989, p.29-32, eng) 43-3220
Logistics of navigation in the Northern Sea Route. Chilingarov, A.N., (1989, 6p., fre) 43-4032

Long range forecasting
Long range forecasting of ice conditions in the Barents and Kara seas. Gudkovich, Z.M., et al, (1988, p.32-40, rus) 43-801
Long range forecasting of river freezeup in Kazakhstan. Shmarova, I.N., (1986, p.93-98, rus) 43-1786
Long range forecasting of ice conditions in the Barents Sea. Potanin, V.A., (1987, p.117-124, rus) 43-1883
Relationship between river ice breakup and atmospheric circulation. Lobovikova, Z.P., et al, (1988, p.21-31, rus) 43-2345
Air temperature and precipitation in a mountain-glacial area. Barashkova, N.K., et al, (1988, p.74-81, rus) 43-2352
Snow avalanche forecasting in the Zailiyskiy Alatau. Kolesnikov, E.I., et al, (1987, p.118-124, rus) 43-2509
Time variability of avalanche activity in the USSR. Kakurina, E.G., (1987, p.124-130, rus) 43-2510
Winter precipitation forecasting related to avalanche activity Dmitrenko, S.M., et al, (1987, p.130-139, rus) 43-2511
Recent progress in meteorology: some prospects for the Arctic. Labarthe, J.P., (1989, 22p., fre) 43-4021

Low temperature research
Specific heat measurement in the temperature range 100-300 K. Rajeswari, M., et al, (1988, p 1017-1022, eng) 43-1369
Comprehensive study of cold climate airport pavement cracking. Haas, R., et al, (1987, p.198-245, eng) 43-1863
Unique new cold weather testing facility. Eaton, R.A., (1989, p.335-342, eng) 43-2114
Polar regions: research in a changing world. Wilkniss, P.E., (1989, p.160-164, eng) 43-2230
Aurora, Dec. 1986, Vol.6, No.2. (1986, 44p., eng) 43-3091

Low temperature tests
Behaviour of steel at low temperatures: state of the art. Gowda, S.S., (1988, p.733-748, eng) 43-658
Sandwich panels at low temperature. Hassinen, P., et al, (1988, p.749-756, eng) 43-659
Structural fiber composite materials for cold regions. Dutta, P.K., (1988, p.124-134, eng) 43-873
International Congress on Experimental Mechanics, 6th, 1988. (1988, 1278p. (2 vols.), eng) 43-977
Brillouin light scattering in low temperature water-ethanol solutions. Benassi, P., et al, (1988, p.4469-4477, eng) 43-1029
Performance of laminated composites in cold. Dutta, P.K., et al, (1988, p.269-281, eng) 43-1037
Behavior of materials at low temperatures. Dutta, P.K., (1988, 68p., eng) 43-1146
Vapor pressures of HNO3/H2O solutions at low temperatures. Hanson, D., et al, (1988, p.6167-6170, eng) 43-1357
Low temperature properties of SF6 circuit breakers. Landry, M., et al, (1988, p.1029-1035, eng) 43-1559
Development of fracture criterion for asphalt mixes at low temperatures. Dongre, R., et al, (1989, 35p., eng) 43-1822
Deformation and low temperature features of recycled bituminous concretes. Hadipour, K., et al, (1988, p 615-645, eng) 43-1859
Behavior of bolted flanged connectors in low temperatures. Biriulev, V.V., et al, (1988, p.9-14, rus) 43-2432
Problems of design and service of machinery and structures for polar regions. Larionov, V., et al, (1989, p.820-830, eng) 43-3780

Lubricants
Thin coatings in boundary lubrication. Valli, J., et al, (1988, 28p. + appends., fin) 43-1868
On the frozen force between snow and ethylene tetrafluoride resin. Kobayashi, S., et al, (1988, p.107-112, jpn) 43-3523
Machinery maintenance in subzero temperatures. IAkuntsev, M.M., et al, (1988, p.11-13, rus) 43-3540

Luminescence
Red emission from pulse irradiated H2O ice. Quickenden, T.I., et al, (1988, p.403-412, eng) 43-1135
Light emission from colliding ice particles. Keith, W.D., et al, (1988, p.362-364, eng) 43-1145
Effect of crystal fragmentation on the luminescence from pulse-irradiated H2O ice. Bakker, M.G., et al, (1988, p.767-772, eng) 43-1799
Radioluminescence of ice containing MgCl2 and CaCl2. Wypych, M., et al, (1989, p.139-143, eng) 43-2778

See also: Thermoluminescence

Machinery
Operation of snow removal vehicles. Matsosaka, H., et al, (1986, p.1799-1808, jpn) 43-298
Winter knowledge in the Swedish forestry. Scholander, J., (1985, p.50-53, swe) 43-360
Mobility of different forest machines in snow. Sirén, M., et al, (1985, p.229-239, swe) 43-375
Problem of protecting ventilator facilities of mines in the North against freezing. Afanas'ev, V.P., et al, (1987, p.50-54, rus) 43-2290
Improving placer and ore mining technology Kirzhner, F.M., ed, (1987, 106p., rus) 43-2779
Technology of removal of frozen placer deposits. Brodiagin, V.A., et al, (1988, p.37-43, rus) 43-2781
Underground mining of frozen placer deposits. Kudlai, E.D., et al, (1988, p 62-73, rus) 43-2783
Transport of freezing cargoes: a handbook Noskov, IU.A., ed, (1988, 206p., rus) 43-2895
Machinery maintenance in subzero temperatures IAkuntsev, M.M., et al, (1988, p.11-13, rus) 43-3540
Shattering permafrost with the percussion power device of a stripping machine. Labutin, V.N., et al, (1988, p.87-92, rus) 43-3632
More effective means of cutting frozen solid fuel Madoian, A.A., et al, (1989, p.33-36, rus) 43-4101

Machinery *(cont.)*
Road and airport snowplows. Catalog-handbook. Shalman, D.A., et al, [1971, 121p., rus] 43-4102
Use of wind machines for freeze protection. Doesken, N.J., et al, [1989, p.194-205, eng] 43-4403
Machinery for working in permafrost. Rastegaev, I.K., [1986, 215p, rus] 43-4480

Magnetic resonance
See also: Nuclear magnetic resonance

Magnetic surveys
Geophysical methods in studying seasonal thawing and forecasting cryogenic phenomena. Vasil'ev, P.S., [1988, p.140-144, rus] 43-539
Greenland ice cap aeromagnetic survey, 1985. Thorning, L., et al, [1987, p.86-90, eng] 43-741
Locating buried utilities. Bigl, S.R., [1985, 48p, eng] 43-4589

Magnetism
See also: Geomagnetism

Maintenance
Rebuilding infrastructure for pleasure boating. Wortley, C.A., et al, [1989, p.188-201, eng] 43-2102
Roofer: a management tool for maintaining built-up roofs Bailey, D.M., et al, [1989, p.6-10, eng] 43-2691
Vapor retarders for membrane roofing systems. Tobiasson, W., [1989, p.31-37, eng] 43-2692
Facilities operations and maintenance. Watling, E.T., [1987, p.53-55, eng] 43-3295
Maintenance aspects of floating moorings in Greenland. Lindahl, J., et al, [1989, p.991-1000, eng] 43-3796
Offshore development in Cook Inlet, Alaska. Visser, R.C., [1989, p.1012-1022, eng] 43-3798
See also: Road maintenance, Subgrade maintenance, Winter maintenance

Manuals
Handbook of soil mechanics and foundation engineering. [1982, 1505p., jpn] 43-299
Cold weather handbook for surface ships. [1988, c 236p, eng] 43-3620

Mapping
Problems of mapping naled phenomena. Alekseev, V.R., [1987, p.140-142, rus] 43-246
Experience in compiling avalanche-danger maps for Rudnyy Altai. Kolesnikov, E.I., et al, [1987, p.170-175, rus] 43-253
Methods of engineering-geocryological investigations for level regions Mel'nikov, E.S., ed, [1986, 206p, rus] 43-338
Antarctica. Swithinbank, C., et al, [1988, 278p, eng] 43-412
Reflectances of glaciers as calculated using Landsat-5 thematic mapper data. Hall, D.K., et al, [1988, p.311-321, eng] 43-544
Studies and mapping of forests using spaceborne scanner imagery obtained in winter Kravtsova, V.I., et al, [1988, p.56-65, rus] 43-586
Permafrost, hydrogeology, and meliorative conditions of the Barguzinskaya Depression. Zamana, L.V., [1988, 134p., rus] 43-726
Landsat data of the Hubbard Glacier region, Alaska. Walker, K.M., et al, [1988, p.373-376, eng] 43-833
Avalanche formation factors in mountain regions of the USSR. Troshkina, E.S., [1988, p.85-89, rus] 43-940
Prospects of using mathematical modeling in mapping of avalanche-danger regions. Blagoveshchenskiĭ, V.P., et al, [1988, p.133-136, rus] 43-950
Cartographic and aerospace monitoring of the Elbrus glaciation system Knizhnikov, IU F., et al, [1988, p.153-157, rus] 43-955
Electrical mapping of permafrost beneath the Beaufort Sea. Edwards, R.N., et al, [1988, p.265-290, eng] 43-1458
Radar backscatter from sea ice. Gogineni, S.P., [1986, p.107-114, eng] 43-1479
Microcomputers (PCs) for snow cover analyses using multisensor satellite data Baumgartner, M.F., et al, [1988, p.459-460, eng] 43-1531
Effects of ice structure on microwave signatures of sea ice. Bowline, C., [1986, p 64-67, eng] 43-1828
Ice-shelf flow at the boundary of Crary Ice Rise, Antarctica. Bindschadler, R.A., et al, [1988, p 8-13, eng] 43-1936
Numerical analysis of landsat thematic mapper images of Antarctica: surface temperatures and physical properties. Orheim, O., et al, [1988, p.109-120, eng] 43-1954
Glaciological map of Filchner-Ronne Ice Shelf, Antarctica. Swithinbank, C., et al, [1988, p.150-155 + map, eng] 43-1958
Special aspects of the central part of Filchner-Ronne Ice Shelf, Antarctica. Thyssen, F., [1988, p.173-179, eng] 43-1962
Ekström Ice Shelf, Antarctica. Thyssen, F. et al, [1988, p.180-183, eng] 43-1963
Vegetation mapping in the Rocky Mountains with Landsat Thematic Mapper. Frank, T.D., [1988, p.1727-1734, eng] 43-2312
Application of the landscape indication method in Siberia. Bondarik, G.K., et al, [1987, p.11-22, eng] 43-2331
New procedure for the graphic mapping of changes in elevation of the surface of a glacier Kuz'michenok, V.A., [1988, p.103-109, rus] 43-2390
All-Union Conference on Avalanches, 2nd, Yangiabad, USSR, May 1985. Proceedings. [1987, 439p., rus] 43-2493
Results and prospects for mapping of avalanche hazard in the USSR. Miagkov, S.M., et al, [1987, p.167-180, rus] 43-2516
Regional mapping of avalanche hazard. Getker, M.I., et al, [1987, p.180-193, rus] 43-2517
Mapping of avalanche hazard by the "weighted value" method. Sezin, V.M., et al, [1987, p.193-198, rus] 43-2518
Mapping of avalanche hazard in the Caucasus Mountains. Abdushelishvili, L.K., et al, [1987, p.198-202, rus] 43-2519
Mapping of avalanche areas in mountains. Brukhanda, V.I., et al, [1987, p.202-214, rus] 43-2520
Avalanche mapping in Western Europe. Akif'eva, K.V., [1987, p.214-219, rus] 43-2521
BAS review of ice streams and ice shelves. Morris, E.M., [1989, p.17-36, eng] 43-2660
Method of preparing operational maps of snow accumulation distribution in mountain regions of Kazakhstan (in the example of Zailiyskiy Alatau). Kolesnikov, E.I., et al, [1988, p.20-25, rus] 43-2672
Experiment in mapping irregularities of underlying surfaces. Isaev, A.A., [1988, p.56-60, rus] 43-2679
Determining volumetric changes from digital data on West Gulkana Glacier. Thompson, L.S., et al, [1988, p.11-18, eng] 43-2789
Advances in glacier surveying and mapping in China. Chen, J.M., [1988, p.356-361, chi] 43-2882
Estimating the accuracy of glaciological maps. Glebova, L.N., et al, [1988, p.145-152, rus] 43-3272
Study on snow cover dynamics from scanner space images. Laptev, M.N., et al, [1988, p.182-186, rus] 43-3276
Surveying and mapping of Chongce Ice Cap in the West Kunlun Mountains. Chen, J.M., et al, [1989, p.1-5, eng] 43-3434
Bibliography of remote sensing, mapping and characterization of sea ice. [1989, 114p., eng] 43-3467
Perspective: ground loads and mapping. Tobiasson, W., [1989, p.512-513, eng] 43-3599
Choosing between some incompatible regional surface-mass-balance data sets in Antarctica. Giovinetto, M.B., et al, [1989, p.7-13, eng] 43-3614
AVHRR mosaic image of Antarctica. Merson, R.H., [1989, p.669-674, eng] 43-4065
Cloud track winds in the polar regions from sequences of AVHRR images. Turner, J., et al, [1989, p.695-703, eng] 43-4066
Underwater appearance of the Arctic. Korotaev, K., et al, [1988, p.74-76, rus] 43-4096
Activities at the Norwegian Hydrotechnical Laboratory. McClimans, T.A., [1989, p 617-623, eng] 43-4103
Multisensor snow cover mapping and snowmelt runoff simulations. Baumgartner, M.F., et al, [1988, p.186-191, eng] 43-4129
Problems in monitoring the cryolithozone. Mel'nikov, P.I., et al, [1987, p.103-106, rus] 43-4231
Coastal subsea permafrost and bedrock observations using dc resistivity Sellmann, P.V., et al, [1989, 13p, eng] 43-4386
Accuracy of a map of the Arctic National Wildlife Refuge coastal plain. Felix, N.A., et al, [1989, p 475-478, eng] 43-4394
Glacial transport processes at glacier margins. Clinch, J.M., [1988, 486p., eng] 43-4525
Methods of small-scale mapping of potential thermokarst. Parmuzin, S.IU., et al, [1989, p.99-104, rus] 43-4614
Electric sounding using transitional processes in geocryological mapping. Nim, IU.A., [1989, p.105-111, rus] 43-4615
See also: Infrared mapping; Sensor mapping; Soil mapping; Stereomapping

Maps
Ice feature maps of the Arctic Ocean. LeSchack, L.A., [1987, p.373-383, eng] 43-915
Map of snow, ice and frozen ground in China—explanation. [1988, c50p., eng] 43-1356
Research results from antarctic automatic weather stations. Stearns, C.R., et al, [1988, p.45-61, eng] 43-1404
Antarctic ice charts 1985-1986. [1987, 426p, eng] 43-1675
Phases of the ice season in the Baltic Sea (North of latitude 57N). Leppäranta, M., et al, [1988, 83p., eng] 43-1975
Using maps to calculate glacial runoff. Zverkova, N.M., et al, [1988, p.129-134, rus] 43-3270
Estimating the accuracy of glaciological maps. Glebova, L.N., et al, [1988, p.145-152, rus] 43-3272
See also: Charts; Geological maps; Meteorological charts; Topographic maps

Marginal ice zone
See also: Ice edge

Marine biology
Polar seas—a biological comparison. Hempel, G., [1987, p.173-189, ger] 43-408
Barents Sea environment. [1988, p.40-45, eng] 43-417
Environmental assessment of the Alaskan continental shelf. [1979, 107p, eng] 43-440
Canadian Arctic islands; program and abstracts. [1988, 110p., eng] 43-1452
Effects of river plume on sea-ice meiofauna in Hudson Bay. Grainger, E.H., [1988, p.131-141, eng] 43-1487
Outer Continental Shelf Environmental Assessment Program; comprehensive bibliography. [1988, 746p, eng] 43-1833
Environment and biological resources of Chukchi Sea. Hameedi, M.J., ed, [1988, 103p., eng] 43-2426
Expedition Arctic V/1a, 1b, and 2 with RV *Polarstern* 1988. Spindler, M., ed, [1989, 197p., ger] 43-3077
Scientific cruise reports of Arctic Expeditions ARK IV/1, 2 & 3. Krause, G., comp, [1989, 146p., eng] 43-4191

Marine deposits
Isotopic modeling of climate oscillations. Le Treut, H., et al, [1988, p.9365-9383, eng] 43-284
Antarctic cryogenic sediments. Kellogg, T.B, et al, [1988, p.51-74, eng] 43-1096
Marine geology. Naidu, A.S., et al, [1988, p.11-27, eng] 43-2427
Transgressive stratigraphy at sequence bounding unconformities. Nummedal, D., et al, [1987, p 241-260, eng] 43-3408
Soils and quaternary geology: a handbook for field scientists. Catt, J.A., [1986, 267p., eng] 43-3530
See also: Sediments

Marine geology
Gravity survey on ice offshore South-East Greenland. Jakobsdóttir, S.S., et al, [1987, p.69-72, eng] 43-747
Iceberg scoring and sedimentology of Baffin I. continental shelf Pereira, C.P.G., et al, [1988, p.221-230, eng] 43-1032
Outer Continental Shelf Environmental Assessment Program; comprehensive bibliography. [1988, 746p., eng] 43-1833
Environment and biological resources of Chukchi Sea. Hameedi, M.J., ed, [1988, 103p, eng] 43-2426
Marine geology. Naidu, A.S., et al, [1988, p.11-27, eng] 43-2427
Proceedings. [1988, Var. p., eng] 43-2556

Marine meteorology
Outer Continental Shelf Environmental Assessment Program; comprehensive bibliography. [1988, 746p., eng] 43-1833
Recent progress in meteorology: some prospects for the Arctic. Labarthe, J.P., [1989, 22p., fre] 43-4021

Marine transportation
New types of ships and their seagoing qualities. Peresypkin, V.I., ed, [1987, 136p., rus] 43-30
Influence of ship hull forms on propulsion performance in calm and agitated seas. Tsoĭ, L.G., et al, [1987, p.14-19, rus] 43-31
Experience in and problems of marine pipeline construction. Grudnitskiĭ, G.V., et al, [1988, p.33-36, rus] 43-567
Evaluation of marine oil transportation systems for Arctic areas. Lawson, W.A., et al, [1988, p.125-146, eng] 43-617
Beaufort Environmental Monitoring Project 1986-1987; final report. McKnight, B., [1987, 175p., eng] 43-664
Feasibility of submarine transportation of Arctic resources. Molyneux, W.D., et al, [1987, 15p., eng] 43-684
Offshore Technology Conference, 20th, 1988. [1988, 4 vols, eng] 43-708
Reinforced concretes for the containment of cryogenic liquids offshore. Berner, D.E., [1988, p.173-178, eng] 43-709
Requirements for ACV operations in Antarctica. Dibbern, J.S., [1988, p.133-146, eng] 43-1755
Design and operation of ACV lightering barges. IAkonovskiĭ, S.V., [1988, p.147-162, eng] 43-1756
Deck variant of AP1.88 for the Canadian Coast Guard. Leonard, J., [1988, p.185-211, eng] 43-1758
History of designing, building and operating Gepard amphibious hovercraft. Martynov, I.A., [1988, p.221-240, eng] 43-1759
Design of cargo ships used in ice-infested waters. Popov, IU.N., [1988, 14p., eng] 43-2143
Soviet Arctic marine transportation. Brigham, L.W., [1988, p.20-23, eng] 43-2376
IAHR Symposium on Ice, 9th, 1988. [1988, 3 vols, eng] 43-2906
Adaptive simulation of transportation marine system along the Northern Sea Route. Ankalnen, A., et al, [1988, p.706-718, eng] 43-2967
Revolution in polar shipping—Thyssen/Waas in the Arctic. Varges, G., [1988, p.719-734, eng] 43-2968
Operation and safe driving of amphibious vehicles. Stepanov, A.P., et al, [1988, 318p., rus] 43-3065
Sea ice in the Arctic Ocean and industrial development. Wadhams, P., [1989, 23p., eng] 43-4018
Present development of polar ships. Fedorovsky, B., [1989, 23p., fre] 43-4025

Markers
Measurements of ice-induced vibrations of channel markers. Nordlund, O.P., et al, [1988, p.537-548, eng] 43-2952

Full-scale measurements of the dynamic properties of a channel marker. Turunen, R., et al, (1988, p.549-560, eng) 43-2953

Marking

See also: Isotopic labeling

Mars (planet)

NASA Mars Project. evolution of climate and atmosphere. Clifford, S.M., et al, (1988, p.1585, 1595-1596, eng) 43-1052

Resurfacing history of Mars. Tanaka, K.L., et al, (1988, p.665-678, eng) 43-1762

Ice and permafrost on Mars Masson, P., (1987, p.379-385, fre) 43-2073

Ice-formed landscapes on Mars Lucchitta, B.K., (1987, p.387-398, fre) 43-2074

Morphological evidence of ancient ice caps on Mars. Battistini, R., (1987, p.399-411, fre) 43-2075

Morphological expression of cold on Mars. Bousquet, B., (1987, p.413-417, fre) 43-2076

Geohydrology of Mars. Risner, J K., (1989, p.184-192, eng) 43-4599

Marshes

See also: Swamps

Masonry

Laying masonry in cold weather. Suprenant, B.A., (1988, p.388-391, eng) 43-3907

Mass balance

Loss, decay, and recent drift of ice islands. Sackinger, W.M., et al, (1987, p.53-66, eng) 43-902

Greenland ice sheet mass balance. Reeh, N., (1985, p.53-59, eng) 43-1158

Dynamics and mass balance of ice stream B. Whillans, I.M., (1988, p.112-113, eng) 43-1624

Flow of ice streams B and C. Whillans, I.M., (1987, p 67-68, eng) 43-2736

Dynamics of a Svalbard ice cap. Dowdeswell, J.A., et al, (1989, p.37-45, eng) 43-3332

Choosing between some incompatible regional surface-mass-balance data sets in Antarctica. Giovinetto, M.B., et al, (1989, p.7-13, eng) 43-3614

Properties of sea ice coastal regime in southeastern Weddell Sea. Eicken, H., et al, (1989, p.8193-8206, eng) 43-3821

Use of surrogate snow samples to measure dry deposition on snowpacks in forests. Molesky, E.W., Jr., et al, (1988, p.74-83, eng) 43-4118

Five snowmelt models. a comparison of prediction accuracy. McGurk, B.J., (1985, p.171-174, eng) 43-4284

See also: Glacier mass balance

Mass movements (geology)

Mass movements, nivation processes and climatic fluctuations in northern Scandinavian mountains Rapp, A., et al, (1988, p.245-253, eng) 43-927

Glacigenic resedimentation related to mass-movement processes. Lawson, D.E., (1989, p.147-169, eng) 43-2130

Mass transfer

State of the art: heat and mass transfer in freezing soils. Kay, B.D., et al, (1988, p.3-21, eng) 43-55

Heat- and mass transfer during cooling and hardening of water drops in air streams. Filatkin, V.N., et al, (1988, p 86-88, rus) 43-550

Experimental studies of heat- and mass-transfer kinetics in salinized, freezing disperse rocks. Ershov, E.D., et al, (1988, p.39-41, rus) 43-552

Formation of thermal and moisture regime of macroporous media in regions with severe climatic conditions. Mukhetdinov, N.A., (1988, p 87, rus) 43-554

Mathematical modeling of heat and mass processes in media with phase transformations. Budnikova, T.F., et al, (1988, p.7-9, rus) 43-556

Modeling microphysical processes in clouds during seeding. Khvorost'ianov, V.I., et al, (1988, p.101-106, rus) 43-1082

Eastern Beaufortin. Nicod, J., (1988, p.121-146, fre) 43-1163

Snow-drifting. a review of the process and of modelling methods. Kind, R.J., (1987, p.411-434, eng) 43-1305

Numerical prediction of frost formation on cooled heat exchangers. Sami, S.M., et al, (1988, p.81-94, eng) 43-1457

Heat and mass transfer during thermal mine drilling Fomin, S.A., et al, (1987, p.30-33, rus) 43-2266

Determining heat and physical characteristics of frozen rocks. Kovalenko, V.N., et al, (1987, p 50-54, rus) 43-2270

Applications of mathematical methods in geocryology Garagulia, L.S., ed, (1987, 167p., rus) 43-2470

Thermo-physical aspects of developing mineral resources. Arens, V.Zh., et al, (1988, 336p., rus) 43-3006

Model for simulating freezing and thawing of unsaturated soils. Karvonen, T., et al, (1989, p.267-281, eng) 43-3104

Investigation of the supercooling in clayey soils. Kozlowski, T., (1989, p.293-299, eng) 43-3106

Effect of freeze thaw cycles on soil mass and heat transfer. Kurilko, A.S., et al, (1989, p.311-321, eng) 43-3108

Solidification dynamics of a flowing molten fluid. Chun, M.H., (1989, p.1-10, eng) 43-3282

Mass transfer in snow cover. Samoliuk, V.I., (1988, p.127-132, rus) 43-3316

Contemporary glaciation of the Soviet Arctic. Govorukha, L.S., (1989, 255p., rus) 43-3814

Snowmelt models for shallow and short-living snowpacks. Baumens, W., (1988, p.108-120, eng) 43-4121

Thaw rate and parameters of sprinkler preparation of ice-filled sediments. Bulskikh, A.A., et al, (1989, p.351-355, eng) 43-4470

See also: Permafrost mass transfer

Materials

Measuring thermophysical properties of conducting materials at low temperatures. Buravoĭ, S.E., et al, (1988, p.92-96, rus) 43-694

Performance of laminated composites in cold. Dutta, P.K., et al, (1988, p.269-281, eng) 43-1037

Behavior of materials at low temperatures Dutta, P.K., (1988, 68p., eng) 43-1146

Influence of thermal cycling on fiber composites. Dutta, P.K., et al, (1988, p.141-147, eng) 43-1213

Development of methodology for improved design of snow roads and airstrips. Lee, S.M., et al, (1988, p.301-302, eng) 43-1647

Influence of well casing materials on chemical species in ground water. Parker, L.V., et al, (1988, p.450-461, eng) 43-1813

Response of advanced composite space materials to thermal cycling. Dutta, P.K., et al, (1988, p.506-517, eng) 43-2277

Mathematical analysis

See also: Analysis (mathematics)

Mathematical models

Plotting a probability model of angular distribution of fractures in glacier ice. Ivanov, A I., (1987, p.99-103, rus) 43-237

Mathematical model of frost heave in granular materials. Piper, D., (1988, 248p., eng) 43-305

Application of a continuum theory of multiphase mixtures to snow on the ground. Adams, E.E., (1988, 205p., eng) 43-342

Mathematical modeling of two-dimensional crystallization in a cylinder at radiative-conductive heat exchange. Karvatskiĭ, A.IA., et al, (1988, p.124-126, rus) 43-547

Thermal regime of pipelines transporting coal-water suspensions in non-Newtonian rheological models. Ovsiannikov, V.M., (1988, p.51-52, rus) 43-551

Solution of non-linear heat conductivity problems for thermal deformations of materials. Brovka, G.P., (1988, p.122-122, rus) 43-555

Mathematical modeling of heat and mass processes in media with phase transformations. Budnikova, T.F., et al, (1988, p.7-9, rus) 43-556

Studying the stable and unstable growth of crystals in a mathematical model of heat transfer in two-phase media. Gulbe, M.L., et al, (1988, p.25-27, rus) 43-557

Mathematical simulation of orbital polarization lidars. Krekov, G.M., et al, (1988, p.44-51, rus) 43-587

Analysis of the weather conditions leading to especially severe avalanche situations during the last 100 years Hächler, P., (1988, p.175-186, ger) 43-606

Modelling of dynamic ice loading of offshore Arctic structures Hallam, S.D., et al, (1988. p 235-248, eng) 43-624

Sverdrup wave propagation in ice-free water and under ice. Legen'kov, A.P., (1987, p.53-58, rus) 43-889

Formation of thermal regime in the snow cover-ground system. Zviagin, V.V., et al, (1988, p.140-144, rus) 43-952

Possibility of using seismoacoustic methods in studying fracturing anisotropy of glacier ice Ivanov, A.I., et al, (1988, p.159-165, rus) 43-956

Local ice pressures measured in thick level ice in Antarctica. Final report St. John, J., et al, (1986, 174p., eng) 43-976

Model computation of moisture content in polythermal glaciers. Hutter, K., et al, (1988, p 12,205-12,214, eng) 43-1068

Possible mechanisms of crystal nucleation in clouds and their parametrization in numerical models. Mazin, I.P., (1988, p.7-13, rus) 43-1077

Modeling microphysical processes in clouds during seeding. Khvorost'ianov, V.I., et al, (1988, p.101-106, rus) 43-1082

Space-time distribution of atmospheric ice nucleating agents above Ukraine. Silaev, A.V., et al, (1988, p.142-153, rus) 43-1084

Simulation of convective snow band over the Japan Sea. Ikawa, M., et al, (1987, p.605-633, eng) 43-1168

Turbulent effects on river ice cover melting. Sarraf, S., (1988, p.178-189, eng) 43-1327

On mesoscale modelling of the dynamics and thermodynamics of sea ice. Lu, Q., (1987 154p., eng) 43-1411

Models of glacial flow Butts, E.C., (1985, 140p., eng) 43-1456

Snow growth by vapor deposition and aggregation. Mitchell, D.L., (1988, p.3431-3451, eng) 43-1533

Differential flow model for polycrystalline ice. Sunder, S.S., et al, (1989, p.45-62, eng) 43-1578

Mathematical characteristics of sea ice dynamics models. Pritchard, R.S., (1988, p.15,609-15,618, eng) 43-1736

Solving the problem of the consolidation and thawing of frozen soils. Klement'ev, A.F., et al, (1988, p.463-466, eng) 43-1802

Development of a Canadian Arctic bridge navigation simulator. Menon, B., et al, (1988, 53p. + append., eng) 43-1807

Formulae on level ice resistance to motion of a river icebreaker. Zuev, V.A., et al, (1978, 7p., eng) 43-1837

Ice-ocean circulation and floe movement model. Bruno, M.S., et al, (1989, p.2065-2077, eng) 43-2004

General mathematical model of a quasi-stationary ice cover. Potapenko, V.IU., et al, (1989, p.21-27, eng) 43-2043

Mapping icing rates on sea-going ships. Zakrzewski, W.P., et al, (1988, p.661-675, eng) 43-2122

Development of a comprehensive numerical river ice model. Petryk, S., (1988, p.345-367, eng) 43-2180

River cooling and frazil and anchor ice formation. Tsang, G., (1988, p.393-416, eng) 43-2182

Mathematical model of avalanche motions. Nohguchi, Y., (1985, p.409-414, eng) 43-2190

Model of snow in a study of motion in universal gliding units. Ostashov, V.G., (1988, p.52-61, rus) 43-2341

Modeling motion of universal gliding units. Ostashov, V.G., (1988, p.90-101, rus) 43-2342

Mathematical model of border-ice formation in rivers. Svensson, U., et al, (1989, p.179-189, eng) 43-2367

Parameterization of the dynamics of sea ice cover in climatological studies. Makshtas, A.P., et al, (1988, p.128-136, rus) 43-2444

Three-dimensional rheological model of media deforming over time. El'mesov, A.M., et al, (1988, p 8-13, rus) 43-2559

Numerical experiments on fluctuation in glacial climate. Verbitskiĭ, M.IA., (1988, p.52-54, eng) 43-2599

Cloud physics and weather modification. Plaude, N.O., ed, (1988, 136p., rus) 43-2709

Numerical model of the atmospheric boundary layer over a marginal ice zone. Kantha, L.H., et al, (1989, p.4959-4970, eng) 43-2723

Mathematical modeling of ocean circulation Marchuk, G.I., et al, (1988, 302p., rus) 43-2837

Startup from the frozen state and performance of heat pipes. Jang, J.H., (1988, 217p., eng) 43-2891

Numerical moueling of pack ice interaction with ships. Hamza, H., et al, (1988, p.735-745, eng) 43-2969

Ramming forces on the USCGC *Polar Sea*. Tunik, A.L., et al, (1988, p.746-761, eng) 43-2970

Modeling the thermal regime of estuaries. Omstedt, A., (1988, p.346-355, eng) 43-3007

Mathematical model for river ice processes. Shen, H.T., et al, (1988, p.356-366, eng) 43-3008

Simulation of experimental freshwater icicle growth with a simple 740 $Numerical model of freshwater icicle growth. Johnson, K., et al, (1988, p.425-435, eng) 43-3014

Numerical model of ice accretion on structures. Svensson, U., et al, (1988, p.436-445, eng) 43-3015

Recent approaches in the modeling of ship icing. Zakrzewski, W.P., et al, (1988, p.458-476, eng) 43-3017

Numerical modeling of Argentière Glacier. Huybrechts, P., et al, (1989, p.373-389, eng) 43-3195

Model of historic front variations of Rhône Glacier Stroeven, A., et al, (1989, p.391-405, eng) 43-3196

Tensor algebra modeling of glacier crevassing. Ivanov, A.I., (1988, p.33-37, rus) 43-3252

Solidification dynamics of a flowing molten fluid. Chun, M.H., (1989, p.1-10, eng) 43-3282

Viscoelastic response of a floating ice plate to a steadily moving load. Hosking, R.J., et al, (1988, p.409-430, eng) 43-3291

Use of mathematical models of wave propagation. Lundien, J.R., et al, (1987, p.227-249, eng) 43-3296

Calculation of ice sheet thickness from mathematical models. Bitiukov, IU.N., et al, (1988, p.111-113, rus) 43-3312

Computer modeling of avalanches, mudflows and floods. Mironova, E.M., et al, (1988, p.161-165, rus) 43-3324

Dynamics of a Svalbard ice cap. Dowdeswell, J.A., et al, (1989, p 37-45, eng) 43-3332

Numerical models of ice-shelf flow: ideal/real Lange, M.A., et al, (1989, p.97-103, eng) 43-3342

Finite element techniques for pipelines subjected to extreme loads. Row, D., et al, (1983, p 474-485, eng) 43-3420

New model for supercooling and superheating effects. Visintin, A., (1986, p.141-157, eng) 43-3481

Results of the Arctic buoy program. Moritz, R.E., (1988, p.45-54, eng) 43-3503

Modeling the main fixed bearing operation during ice-propeller interaction. Basalygin, G.M., (1988, p 66-73, rus) 43-3630

Hydrodynamic modeling of ice drift in Far Eastern seas. Pokrashenko, S.A., (1988, p 49-53, rus) 43-3635

Calculating the quantity of ground ice in alassy landscapes Bosikov, N.P., et al, (1987, p.143-151, rus) 43-3662

Numerical model of water droplet trajectorie.. Andersson, A., et al, (1989, p.671-680, eng) 43-3767

Numerical modelling of sea spray icing on vessels Horjen, I., et al, (1989, p.694-704, eng) 43-3769

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Snowmelt models for shallow and short-living snowpacks. Baumens, W., (1988, p.108-120, eng) 43-4121

Numerical solutions for laminar heat transfer with freezing and thawing. Nakamura, H., et al, (1989, p.39-44, eng) 43-4197

Similarity solutions for avalanches of granular materials down curved beds. Savage, S B., et al, (1988, p.153-174, eng) 43-4253

Probabilistic ice information system for Canadian waterways. Perchanok, M., et al, (1989, p.28-32, eng) 43-4255

Stochastic models for forecasting snowmelt runoff. Haltiner, J.P., et al, (1985, p.127-135, eng) 43-4276

Aerosol particle collection by falling ice crystals. Miller, N.L., et al, (1989, p.1656-1663, eng) 43-4419

Modeling winter storms during CASP. Mailhot, J., et al, (1989, p.24-58, eng) 43-4460

Numerical simulations of hailstorm feeder-cloud initiation. Cheng, L., (1989, p.279-305, eng) 43-4559

FORTRAN microcomputer program for heat and mass transfer in frozen soils. Panday, S , et al, (1989, p.709-726, eng) 43-4600

Some mathematical models for permafrost. Grigorian, S., et al, (1989, p.429-439, eng) 43-4601

See also: Computerized simulation

Measurement

Radio echo-sounding as a glaciological technique—a bibliography. Macqueen, A.D , (1988, 37p , eng) 43-1806

Measurement of frost heave forces on H-piles and pipe piles. Johnson, J.B., et al, (1988, 49p , eng) 43-2029

Measuring snow accumulation for avalanche engineering. Zhidkov, V.A , (1987, p 269-274, rus) 43-2529

Measurement of statistical dielectric transmittance of snow. Vakalov, I.A., et al, (1988, p.3-8, rus) 43-2558

On measuring the shear strength of ice. Frederking, R., et al, (1988, p.76-88, eng) 43-3025

Velocity spectra and cospectra and integral statistics over Arctic leads. Andreas, E.L., et al, (1979, p.1053-1070, eng) 43-3479

Limit force loads and measurements of pack ice driving forces in the Beaufort Sea. Croasdale, K.R , et al, (1988, p.5-11, eng) 43-3496

Ice stress measurements around offshore structures. Johnson, J.B., (1988, p.55-59, eng) 43-3504

Physical oceanography instrumentation for the polar regions: a review. Morison, J.H., (1989, p.173-185, eng) 43-3513

Position measurements with radiosondes. Tüg, H., (1989, p.208-210, eng) 43-3517

Perspective: ground loads and mapping. Tobiasson, W., (1989, p.512-513, eng) 43-3599

Long-term ice load measurements onboard M/S *Kemira*, 1985-1988. Kujala, P., (1989, p.1118-1129, eng) 43-3808

Contribution of the SNOwpack TELemetry system. Doesken, N.J., et al, (1987, p.20-30, eng) 43-3924

Beaufort Sea current measurements, Mar.-Aug. 1987. McCullough, D., et al, (1988, 42p., eng) 43-4035

Final report on continued development of an ice thickness radar system. Iizuka, K., et al, (1986, var. p., eng) 43-4159

SNOW IV field experiment data report. Wright, E.A., ed, (1989, 250p , eng) 43-4296

Airborne particle measurements. Berger, R.H., (1989, p.31, eng) 43-4302

Millimeter wavelength radar propagation measurements at SNOW IV. Statton, S.R., (1989, p.103-153, eng) 43-4306

Dilution method for measuring liquid water in snow. Perla, R., et al, (1984, p.80-85, eng) 43-4318

Two-wavelength method of measuring path-averaged turbulent surface heat fluxes. Andreas, E L., (1989, p.280-292, eng) 43-4400

Comment on "Monitoring the unfrozen water content of soil and snow using time domain reflectometry" by Jean Stein and Douglas L. Kane. Patterson, D.E., et al, (1985, p.1055-1058, eng) 43-4494

Blending radiometer and buoy data into a sea ice model. Thomas, D.R., et al, (1989, p.10,907-10,920, eng) 43-4527

See also: Acoustic measurement, Electrical measurement, Flow measurement; Geothermometry; Height finding; Photogrammetry; Photometry; Radiometry; Sampling; Sounding; Spectroscopy; Temperature measurement; Underwater geothermal measurement; Velocity measurement; Well logging

Measuring instruments

Albedo of characteristic surfaces of Mongolia according to land and satellite survey data. Grinberg, A.M., et al, (1988, p 101-109, rus) 43-110

Determining the bearing-strength of piles in plastic frozen soils. Isaev, O.N., et al, (1988, p.194-198, eng) 43-145

Automated information system for determining avalanche danger. Belima, A.S., et al, (1987, p.167-170, rus) 43-252

Sea ice variations observed by Nimbus 7, 1978-1987. Gloersen, P., et al, (1988, p.10,666-10,674, eng) 43-507

Icy epic of the *Mossovet*. Matiiasevich, A., (1988, p.42-46, rus) 43-572

Measuring thermophysical properties of conducting materials at low temperatures. Buravoi, S.E., et al, (1988, p.92-96, rus) 43-694

Measuring temperature of the surface water layer. Cherniak, A.V., (1987, p.91-99, rus) 43-891

Laboratory-determined characteristics of water vapor diffusion in snow cover. Nikolenko, A.V., (1988, p.90-96, rus) 43-941

Remote sensing of water in soil and snow cover from natural penetrating radiations. Fridman, Sh.D., ed, (1987, 86p., rus) 43-1038

Neutron irradiation technique of measuring snow water equivalence. Avdiushin, S.I., et al, (1987, p 10-18, rus) 43-1040

Calculating the neutron field of cosmic radiation near the surface of snow-covered soil. Altbaev, F.B., et al, (1987, p.18-36, rus) 43-1041

DSS-2 assembly for determining water equivalent of snow from cosmic ray neutrons. Abelentsev, V.V., et al, (1987, p.37-48, rus) 43-1042

Cosmic neutron measurements linked to automatic weather stations. Vorob'ev, A.A., et al, (1987, p.49-51, rus) 43-1043

Neutron flow, snow water reserves and soil moisture. Altbaev, F.B., et al, (1987, p.52-56, rus) 43-1044

Measurement of snow water reserves by neutron measurements at automatic stations. Avdiushin, S.I., et al, (1987, p.57-68, rus) 43-1045

Influence of soil moisture dynamics on determining snow water reserves from cosmic ray neutrons. Kolomeets, E.V., et al, (1987, p 69-72, rus) 43-1046

Influence of atmospheric precipitation intensity on the neutron component of cosmic radiation. Kolomeets, E.V., et al, (1987, p.72-75, rus) 43-1047

Simultaneous measurement of water reserves in snow and the soil moisture content from the neutron component of cosmic radiation. Altbaev, F.B., et al, (1987, p.76-79, rus) 43-1048

Measurement of water reserves by ionizing cosmic radiation. Pegoev, A.N., et al, (1987, p.79-82, rus) 43-1049

Errors in airborne snow surveying due to the global soil pollution with Cs-137. Pegoev, A.N., et al, (1987, p.82-85, rus) 43-1050

"Rutschblock" as a practical tool for slope stability evaluation. Föhn, P.M.B., (1987, p.223-228, eng) 43-1232

Measurements of the concentration of falling snow. Stallabrass, J.R., (1987, p.389-410, eng) 43-1304

Impact of automation on winter precipitation measurement. Goodison, B.E., (1987, p.471-490, eng) 43-1308

Calibration of capacitive cells for measuring water in snow. Perla, R., et al, (1988, p.225-231, eng) 43-1343

Specific heat measurement in the temperature range 100-300 K. Rajeswari, M., et al, (1988, p.1017-1022, eng) 43-1369

Measuring piezometric level in severe climatic conditions. Vishnevskaia, L.M., (1987, p 48-51, rus) 43-1392

Rock stress measurements by wire stressmeter at high temperatures. Dutta, P.K., et al, (1987, p.43-58, eng) 43-1484

Evaluation of sea ice thickness sensors. Rossiter, J.R., et al, (1988, 58p , eng) 43-1732

Stresses and deformations in a first-year ice cover Sayed, M., et al, (1988, p.726-734, eng) 43-1803

Pulse-counting technique for the measurement of drifting snow. Tüg, H., (1988, p.184-186, eng) 43-1964

Portable digital data-acquisition system for surface-based ice-radar studies. Jacobel, R.W., et al, (1988, p 349-354, eng) 43-1992

Technological limitations on satellite glaciology. Rees, W.G., et al, (1989, p.7-22, eng) 43-2002

Ice temperature measurement in deep holes of Antarctica using a heat sensor embedded in the hole bottom. Vostretsov, R.N., et al, (1989, p.129-136, eng) 43-2058

Blowing snow particle detector. Brown, T., et al, (1989, p.167-174, eng) 43-2365

Electrical properties of model ice. Inkpen, S., et al, (1989, p 201-209, eng) 43-2369

Instruments to measure snow characteristics in the field. Samoilov, R.S., (1987, p.261-269, rus) 43-2528

Measuring the complex shear modulus of ice using the Fitzgerald apparatus. Clark, J.H., et al, (1989, p.31-35, eng) 43-2606

Uniaxial tension/compression tests on ice—preliminary results. Cole, D.M., et al, (1989, p.37-41, eng) 43-2607

Progress in the study of instruments for glaciology and geocryology. Wang, L.W., (1988, p.362-363, chi) 43-2883

Radiation studies in the Arctic. Valero, F.P.J., et al, (1988, p.271-276, eng) 43-3075

Field tests of electronic densimeters. Zhidkov, V.A., et al, (1988, p.186-190, rus) 43-3277

Atmosphere subgroup discussions. Andreas, E.L., (1984, p.97-98, eng) 43-3360

Collection efficiency of a net-type blowing snow trap meter. Abe, O., (1989, p.247-254, jpn) 43-3471

Microwave instrument to measure snow properties. Toikka, M., (1989, p.75-80, eng) 43-3494

Stress and strain instruments developed for field measurements of ice. Duckworth, R., et al, (1989, p.159-165, eng) 43-3511

Physical oceanography instrumentation for the polar regions: a review. Morison, J.H., (1989, p 173-185, eng) 43-3513

Autonomous ocean profiler: a current-driven oceanographic sensor platform. Echert, D.C., et al, (1989, p.195-202, eng) 43-3515

Instrument frame for measuring turbulence and internal waves in the Arctic. McPhee, M.G., (1989, p.203-207, eng) 43-3516

Position measurements with radiosondes. Tüg, H., (1989, p 208-210, eng) 43-3517

Measurement of pore pressures in freezing and thawing soils. Eigenbrod, K.D., et al, (1989, p.943-952, eng) 43-3791

Creep of ice measured with a pressuremeter Discussion and authors' reply. Ladanyi, B., et al, (1989, p.328-330, eng) 43-3827

Accuracy and repeatability of in situ snow wetness measurements. Bergman, J A., (1987, p.142-145, eng) 43-3937

Toward correlating California's wilderness snow sensors. Brandow, C.A., et al, (1988, p.136-147, eng) 43-4005

Canadian automatic snow depth sensor: a performance update. Goodison, B.E , et al, (1988, p.178-181, eng) 43-4013

Site-specific meteorology. Bates, R.E., et al, (1989, p.13-15, eng) 43-4299

Snow concentration and precipitation rate measurements during SNOW IV. Lacombe, J., (1989, p.25-29, eng) 43-4301

Extinction, transmission, and scattering measurements during SNOW IV. Koenig, G.G., et al, (1989, p.83-102, eng) 43-4305

Development of an automatic weather station for cold regions. Strangeways, I.C., (1984, p.12-23, eng) 43-4311

Swiss improvements of the FMCW radar for snow measurements. Schmidt, R.A., et al, (1984, p 24-32, eng) 43-4312

Hydrometeorological instrumentation and automation. Strauss, F.A., (1984, p 43-47, eng) 43-4314

Snowmelt lysimeters: design and use. Kattelmann, R.C., (1984, p.68-79, eng) 43-4317

Large, adjustable tipping bucket gauge for measuring snowmelt. Wilford, D.J., (1984, p.176-179, eng) 43-4330

Use of holography for airborne cloud physics measurements Brown, P.R.A., (1989, p 293-306, eng) 43-4401

Reducing dew and frost on the domes of net pyrradiometers. McGinn, S.M., et al, (1989, p.528-531, eng) 43-4405

Comment on "Monitoring the unfrozen water content of soil and snow using time domain reflectometry" by Jean Stein and Douglas L. Kane. Topp, G.C., et al, (1985, p.1059-1061, eng) 43-4495

Measuring meltwater patterns around icebergs Hirst, J.F., (1989, p 252-254, eng) 43-4550

See also: Airborne radar; Barometers; Borehole instruments; Calorimeters; Cloud height indicators; Dynamometers; Evaporimeters; Frigorimeters; Hygrometers; Magnetometers; Meteorological instruments; Moisture meters; Nucleus counters; Penetrometers; Photometers; Precipitation gages; Probes; Psychrometers; Radiation measuring instruments; Snow pillows, Snow survey tools; Strain measuring instruments; Thermistors; Thermocouples; Thickness gages

Mechanical ice prevention

See also: Ice removal

Mechanical properties

Marine glacio-isostatic hypothesis of glaciations. Lapshin, A.V., (1987, p.30-36, rus) 43-224

Second Icebreaking Technology Expedition with R.V. *Polarstern*. Final report, Vol.1. Schwarz, J., et al, (1987, 354 leaves, ger) 43-2430

Mechanical properties of antarctic sea ice. Inoue, M., et al, (1988, p.162-176, eng) 43-2919

Mechanical and physical properties of old and brackish ice. Jeffries, M.O., et al, (1988, p.177-187, eng) 43-2920

Properties of ice from Hobson's ice island. Frederking, R., et al, (1988, p.188-198, eng) 43-2921

Finite element discretization of sea ice plates. Horrigmoe, G., et al, (1988, p 439-450, eng) 43-2943

Model ice of the NKK Ice Model Basin. Narita, S., et al, (1988, p.782-792, eng) 43-2973

See also: Avalanche mechanics; Ice mechanics; Rock mechanics; Snow mechanics; Soil mechanics

Mechanical tests

Results of full-scale trials of an ice class river dry cargo ship. Sandakov, IU.A., et al, (1982, 5p., eng) 43-3170

Instrumentation and analysis of an Arctic Class IV vessel propulsion system. Cowper, D.N.B., (1989, 34p., eng) 43-3364

Meetings

Restoration and vegetation succession in circumpolar lands: the conference. Webber, P.J., et al, (1987, p.343-344, eng) 43-183

Oil-gas construction in the Soviet North. Moldavanov, O.I., et al, (1988, p.15-24, rus) 43-897
Southern ocean—the Antarctic: present and past. (1988, p.1-179, eng) 43-1093
CRS workshop on antarctic environmental protection. Fletcher, S.R., (1989, 57p. + 20p. appends., eng) 43-2568
Avalanche triggering by explosives Sonnier, J., (1988, p.3-62, fre) 43-2828
Proposals for natural hazard forecasting in mountains. Sonnier, J., (1988, p.63-90, fre) 43-2829
Report of the Arctic Environmental Data Workshop. Laughlin, T.L., comp, (1988, var p., eng) 43-3363
Arctic research in the United States, Vol.3. (1989, 72p., eng) 43-4482

Melting

Process of melting by rolling contact. Bejan, A., (1988, p.2273-2283, eng) 43-1379
Melting and freezing. Yao, L.S., et al, (1989, p 1-95, eng) 43-2555
Heat transfer involving convective melting. Saitoh, T., et al, (1989, p.169-174, eng) 43-4213
Phase change heat transfer around cylindrical heat source. Sasaguchi, K., et al, (1989, p.43-49, eng) 43-4373
Surface melting. Dash, J.G., (1989, p.89-100, eng) 43-4434
Winter storm structure and melting-induced circulations. Stewart, R.E., et al, (1989, p.5-23, eng) 43-4459
On the nature of rapidly deepening Canadian East Coast winter storms. Stewart, R.E., et al, (1989, p 87-107, eng) 43-4461
See also: Artificial melting; Defrosting; Glacier melting; Ice melting, Snow melting; Thawing

Melting points

Evolution of dendritic instability at the crystal-melt interface. Cummins, H.Z., et al, (1988, p.7-9, eng) 43-1742
Phase changes following the initiation of a hot turbulent flow over a cold solid surface. Huppert, H.E., (1989, p.293-319, eng) 43-3292
Properties of gels obtained by freezing/thawing of PVA/water/DMSO solutions. Yamaura, K., et al, (1989, p 2709-2718, eng) 43-3483
Melting of snowflakes below freezing level in the atmosphere. Matsuo, T., et al, (1981, p.10-25, eng) 43-4416
Surface melting. Dash, J.G., (1989, p.89-100, eng) 43-4434

Meltwater

Internal geometry and evolution of moulins, Storglaciären, Sweden. Holmlund, P., (1988, p 242-248, eng) 43-171
Meltwater movement in natural heterogeneous snow covers. Marsh, P., et al, (1985, p.1710-1716, eng) 43-181
Thermodynamics of meltwater seepage into snow-firn cover. Kazanskiĭ, A.B., (1987, p.58-62, rus) 43-228
Influence of ice layers on the travel time of meltwater flow through a snowpack. Furbish, D.J., (1988, p.265-272, eng) 43-288
Incorporation of sulfur dioxide into snow and depositing ice. Valdez, M.P., (1988, 189p., eng) 43-307
Meltwater supply for irrigation in high mountains. Butz, D., (1987, p.34-47, eng) 43-387
Nitrogen fluxes in a boreal forest ecosystem during the spring melt period. Jones, H.G., (1987, p.80-89, eng) 43-392
Analysis and forecasting of low runoff in the Northwest. Li, X., et al, (1988, p.28-35, chi) 43-465
Glacier water resources of Qilian Mountains. Yang, Z., (1988, p.36-46, chi) 43-466
Observations of oversnow flow in subalpine meadows of Colorado. Kattelmann, R., (1987, p.185-188, eng) 43-581
Formation of gullies in the southeastern part of West Siberia. Putilin, A.F., (1988, 81p., rus) 43-714
Trace-element studies in a Scottish upland catchment, Pt1. Abrahams, P.W., et al, (1988, p.255-271, eng) 43-820
Hydrophysical research in the melioration of lands with water surplus. Kaliuzhnyĭ, I.L., et al, (1988, 260p., rus) 43-837
Water balance of the Sary-Tor mountain glacier basin. Diurgerov, M.B., et al, (1988, p.203-207, rus) 43-963
Seasonal pH depressions in Wisconsin lakes caused by pCO2 increases. Kratz, T.K., et al, (1987, p.1082-1088, eng) 43-1198
Meltwater percolation through an alpine snowpack. Martinec, J., (1987, p.255-264, eng) 43-1235
Energy-budget snowmelt model for the Canadian Prairies. Gray, D.M., et al, (1988, p.1292-1303, eng) 43-1316
Reservoir site selection in glaciated terrain Davis, E., et al. (1988, p.123-142, eng) 43-1326
Aluminum in meltwater, Chalk River and Turkey Lakes watersheds. Chew, H., et al, (1988, p.66-71, eng) 43-1359
Erosion and diagnostics of eroded soils in Siberia. Panfilov, V.P., ed, (1988, 117p., rus) 43-1561
Recycled marine microfossils from basal debris-ice in ice-free valleys. Harwood, D.M., et al, (1988, p.87-88, eng) 43-1618
Recent diatom distributions in the Amundsen Sea. Kellogg, D.E., et al, (1988, p.161-162, eng) 43-1634
Using mathematical models for analysis of flooding-data reliability. Kochelaba, E.I., et al, (1988, p.13-21, rus) 43-1769
Stochastic concept of flooding data. Sosedko, M.N., et al, (1988, p.21-29, rus) 43-1770
Spring-runoff features according to meteorological data. Manukalo, V.A., et al, (1988, p.30-36, rus) 43-1771
Highest water levels in Dniester River and its tributaries. Vishnevskiĭ, P.F., (1988, p.36-48, rus) 43-1772
Soil bacterial changes upon snowmelt. Thompson, I.P., et al, (1987, p.269-274, eng) 43-1867
Isotope analysis of basal ice near the margins of two glaciers. Gordon, J.E., et al, (1988, p.265-2[illegible] 43-1919
Isotopic composition of glacier-river water du[illegible] summer. Theakstone, W.H., (1988, p.309-317, eng) 43-1987
Measurement of outflow from a snowbank with basal ice. Young, K.L., et al, (1988, p.358-362, eng) 43-1994
Movement of meltwater in small basins Bengtsson, L., (1988, p 237-244, eng) 43-2017
Glacial mass balance and water yield, Western and Eastern Suek in 1983-1984. Bakov, E.A., (1988, p.13-18, rus) 43-2384
Variations in stream water constituents during snowmelt season. Suzuki, K., (1984, p.137-148, eng) 43-2400
Glacier run out and melt water deposits of Russell Glacier, Greenland Scholz, H., et al, (1988, p.55-74, eng) 43-2597
Meteorological conditions in the formation of water and snow flows. Perov, V.F., et al, (1988, p.41-47, rus) 43-3254
Using maps to calculate glacial runoff. Zverkova, N.M., et al, (1988, p.129-134, rus) 43-3270
As pure as the driven snow?. Davies, T., (1989, p.45-49, eng) 43-3287
Chemical discharge from rivers into the basin of Issyk-Kul' Lake. Gokhman, V.V., et al, (1988, p.142-145, rus) 43-3320
Hydrogeochemistry of surface waters in Kunlun Mountains. Sheng, W.K., (1989, p.119-122, eng) 43-3450
Chemistry of pond waters in the Labyrinth. Torii, T., et al, (1989, p.255-264, eng) 43-3700
Flow fingers and ice columns in a cold snowcover. Marsh, P., (1988, p.105-112, eng) 43-4002
Stream chemistry during snowmelt runoff. Wels, C., et al, (1988, p 60-73, eng) 43-4117
Snowmelt lysimeters: design and use. Kattelmann, R.C., (1984, p.68-79, eng) 43-4317
Prediction of runoff of meltwater in south of central region of Nonchernozem zone of RSFSR. Barabanov, A.T., (1986, p.23-27, eng) 43-4427
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Streamwater chemistry during snow-melt in a Scottish upland catchment. Abrahams, P.W., et al, (1989, p.231-248, eng) 43-4618
See also: Snowmelt

Metal ice friction

Ice resistance to ship motion. Ionov, B.P., (1987, 13p. + appends., eng) 43-718
IAHR Symposium on Ice, 9th, 1988. (1988, 3 vols., eng) 43-2906
Model tests of an icebreaker in snow-covered ice. Narita, S., et al, (1988, p.216-226, eng) 43-2924
Kinetic energy analysis of friction coefficient between sea ice and materials. Li, Z.J., et al, (1988, p.263-270, eng) 43-2927
Numerical modeling of pack ice interaction with ships. Hamza, H., et al, (1988, p.735-745, eng) 43-2969
Some model experiments on performance of a ship in simplified ridges. Kitagawa, H., et al, (1988, p.762-771, eng) 43-2971
Full-scale and model tests performed with a nozzle and an open propeller simultaneously. Kannari, P., (1988, p.772-781, eng) 43-2972
Tests of ships in ice. Ryvlin, A.IA., et al, (1980, 269p., eng) 43-3159
Results of full-scale trials of an ice class river dry cargo ship. Sandakov, IU.A., et al, (1982, 5p., eng) 43-3170
Modeling the main fixed bearing operation during ice-propeller interaction. Basalygin, G.M., (1988, p 66-73, rus) 43-3630
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About physical modelling of kinetic friction between ice and ship Liukkonen, S., (1989, p 736-749, eng) 43-3773
Model tests on an icebreaker at two friction factors. Tatinclaux, J.C., (1989, p.774-784, eng) 43-3776
Ice loads on propeller blade of small car ferry. Jussila, M., et al, (1989, p 862-872, eng) 43-3784
M.V. *Arctic* ice transiting performance, continuous mode. Final report. Albery, A.C.R., et al, (1984, var. p., eng) 43-4154
Dynamic friction of a metal runner on ice. I Model sled test. Itagaki, K., et al, (1989, 17p., eng) 43-4609

Metal snow friction

Steel sheet roofs for snow sliding. Ueno, M., et al, (1988, p.207-215, jpn) 43-2701
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Metals

Occurrence of toxic metals in antarctic ice, last 40 millennia. Batifol, F., et al, (1989, p.544-546, eng) 43-1775
Content of heavy metals in glaciers of the Central Caucasus (Adylsu, Ullukol) and Central Pamirs (the Pamir firn field). Kerimov, A.M., et al, (1988, p.76-92, rus) 43-2567
Trace analysis of iron in water and snow. Golimowski, J., (1989, p 481-492, eng) 43-3247
Metal buildings for Air Force facilities in Alaska: a report. (1989, 66p., eng) 43-3529
Study of ice adhesion and sintering. Shen, W., et al, (1989, p.373-382, eng) 43-3582
See also: Aluminum; Gold; Steels

Metamorphism (snow)

Application of a continuum theory of multiphase mixtures to snow on the ground. Adams, E.E., (1988, 205p., eng) 43-342
Transformation in polar firn. Alley, R.B., (1987, 413p., eng) 43-474
Snow metamorphism. Zhang, Z., et al, (1987, p.27-33, chi) 43-479
Temperature gradient driven vapor transport in snow. Sommerfeld, R.A., (1987, p.231-234, eng) 43-584
Thermal microwave emission of the soil-snow-atmosphere system. Gershenzon, V.E., et al, (1988, p.84-89, rus) 43-817
Snow properties and processes. Colbeck, S.C., (1987, p.145-150, eng) 43-852
Metamorphism and classification of seasonal snow crystals. Colbeck, S.C., (1987, p.3-34, eng) 43-1215
On the objective analysis of snow microstructure. Dozier, J., et al, (1987, p.49-59, eng) 43-1217
Structure and chemistry of snow samples. Page, Y., (1987, p 85-86, eng) 43-1221
Climatology of melt-freeze metamorphic snow in central Europe. Essenwanger, O.M., et al, (1989, p.273-282, eng) 43-3212
Radar backscatter characteristics of snow covered terrain at 94 gigahertz. Green, A.H., Jr., et al, (1984, p.115-119, eng) 43-3478
See also: Snow recrystallization

Meteorological charts

Dynamics of supercooled fog dispersal from lidar data. Alekseev, A.P., et al, (1987, p.190-195, rus) 43-604
Comments on "Comparison of Northern Hemisphere snow cover datasets" Robinson, D.A., et al, (1988, p.435-442, eng) 43-3468
Hydrological yearbook 1981-1983 Leppäjärvi, R., ed, (1987, 238p., eng) 43-3492
Station climatic summaries, Antarctica, Australia and Oceania. Sjoberg, W.F., (1987, 48p., eng) 43-3520
SNOW IV field experiment data report. Wright, E.A., ed, (1989, 250p., eng) 43-4296
Synoptic meteorology during the SNOW IV Field Experiment. Bilello, M.A., et al, (1989, p.5-12, eng) 43-4298
Climatic atlas of Alaskan coastal regions and shelf waters. Brower, W.A., Jr., et al, (1988, 3 vols., eng) 43-4476

Meteorological data

Winter data resources of the Swedish Meteorological and Hydrological Institute. Lindkvist, T., (1985, p.30-34, swe) 43-357
Resources and ambitions regarding winter knowledge at the University of Luleå. Fransson, L., (1985, p 35-40, swe) 43-358
Trafficability in snow and ice in Sweden. Wangel, G., (1985, p.72-74, swe) 43-362
Meteorological and oceanographic data from the Weddell Sea, 1986. Kottmeier, C., et al, (1988, 115p., eng) 43-438
Twelfth Northern Libraries Colloquy, 5-9 June 1988. (1988, 331p., eng) 43-792
JARE-24 meteorological observations at Showa Station, 1983. Tsukamura, K., et al, (1988, p.187-210, jpn) 43-842
Monitoring of the Arctic climate. Voskresenskiĭ, A.I., ed, (1988, 205p., rus) 43-1174
Monitoring of the Arctic climate. Voskresenskiĭ, A.I., (1988, p 6-23, rus) 43-1175
Use of radar and automatic weather stations in avalanche forecasting. Kappenberger, G., et al, (1987, p.305-310, eng) 43-1239
Snow survey of Great Britain, 1987-88. (1988, 22p., eng) 43-1730
Methods of supplying climatic data for railroad transportation. Ziabrikov, V.IA., et al, (1988, p.137-149, rus) 43-1778
Arctic cloudiness in spring from satellite imagery: some comments. Curry, J.A., (1988, p.533-538, eng) 43-2035
Arctic cloudiness in spring from satellite imagery: a response. Barry, R.G., et al, (1988, p.539-540, eng) 43-2036
Periodicity of avalanche hazard in the Chukotskiy Peninsula. Sargaev, E.M., (1987, p.391-398, rus) 43-2547

Meteorological data *(cont.)*
Precipitation measurements at the source of the Urumqi River. Yang, D.Q., et al, (1988, p.384-399, chi) 43-2853
Data on snow cover in Nagaoka (11) (November 1986-April 1987) Kumagai, M., et al, (1987, 13p., jpn) 43-3465
Profile observational data of snow cover in Nagaoka City (1986-1987). Ikarashi, T., (1987, 72p., jpn) 43-3466
Comments on "Comparison of Northern Hemisphere snow cover datasets". Robinson, D.A., et al, (1988, p.435-442, eng) 43-3468
Hydrological yearbook 1981-1983. Leppäjärvi, R., ed, (1987, 238p., eng) 43-3492
Ice navigation conditions during summer 1976/77 Grigor'ev, IU.A., et al, (1988, p.83-93, rus) 43-3840
Alaska climate summaries, 2nd edition Leslie, L.D., comp, (1989, 478p., eng) 43-3846
Creating a new global snow depth climatology. Davy, R.D., (1989, p.3-4, eng) 43-3872
Construction of a United States historical snow data base. Robinson, D.A., (1988, p.50-59, eng) 43-4116
Snow hydrology in the upper Yamuna basin, India. Malhotra, R.V., et al, (1988, p.84-93, eng) 43-4119
Rainfall and snowmelt frequency in an alpine watershed. Payton, E.A., et al, (1985, p.25-36, eng) 43-4265
SNOW IV field experiment data report. Wright, E.A., ed, (1989, 250p., eng) 43-4296
Site-specific meteorology. Bates, R.E., et al, (1989, p.13-15, eng) 43-4299
Hourly meteorological data for SNOW IV. Bates, R.E., et al, (1989, p.159-250, eng) 43-4308
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Evaluating trafficability. McKim, H.L., (1986, p 237-239, eng) 43-4637

Meteorological factors
Seasonal road closures and highway meteorology. Livet, J., (1988, p.60-65, fre) 43-836
Climatic and meteorological characteristics of glaciated areas of the Akshiyrak Range. Voloshina, A.P., (1988, p.184-193, rus) 43-960
Atmospheric and sea spray icing. Andersson, A., (1987, 6p., eng) 43-1115
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Causative factors leading to the formation of ice jams. Mattke, T.W., et al, (1989, p.170-178, eng) 43-2100
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Weather effect on Weddell Sea pack ice and the sea-ice budget. Limbert, D.W.S., et al, (1989, p.104-112, eng) 43-3343
Radiative energy budget in the cloudy and hazy Arctic. Tsay, S.C., et al, (1989, p.1002-1018, eng) 43-4402
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Cosmic neutron measurements linked to automatic weather stations. Vorob'ev, A.A., et al, (1987, p.49-51, rus) 43-1043
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Remote sensing of an alpine snow cover Davis, R., et al, (1984, p.161-164, eng) 43-4326
Portable ten-meter instrument mast. Jairell, R.L., et al, (1984, p.168-171, eng) 43-4328
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Sea ice and meteorology of the Bering Sea, 1985 Pease, C.H., et al, (1985, 120p., eng) 43-424
Agrometeorology, (1988, 498p., eng) 43-2248
Modeling Laurentian Great Lakes evaporation, heat storage, and energy fluxes. Croley, T.E., II, (1989, 48p., eng) 43-3473
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Microanalysis
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Recent diatom distributions in the Amundsen Sea. Kellogg, D.E., et al, (1988, p.161-162, eng) 43-1634
Carbon fixed by nitrifying bacteria during ice cover in McMurdo Sound. Priscu, J.C., et al, (1988, p.171-172, eng) 43-1638
Sea-ice pressure ridge microbial communities. Ackley, S.F., (1988, p.172-174, eng) 43-1639
Antarctic benthic and sea-ice microalgal interactions. Smith, G.A., et al, (1988, p.174-175, eng) 43-1640
Changes in photosynthetic metabolism of sea-ice microalgae. Palmisano, A.C., et al, (1988, p.176-177, eng) 43-1641
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Physical control of arctic ice algal production. Cota, G.F., et al, (1989, p.111-121, eng) 43-2403
Expedition Antarktis VII/1 and 2 (EPOS) of RV *Polarstern* in 1988/1989. Hempel, I., ed, (1989, 185p., eng) 43-3092
Sediment fluxes beneath fast ice: October 1986 through February 1987. Dunbar, R.B., et al, (1989, p.112-115, eng) 43-4437
Microbiological studies of ice cores from deep holes of Central Antarctica. Abyzov, S.S., et al, (1989, p.86-91, rus) 43-4546
Early Martian environments: the antarctic and other terrestrial analogs. Wharton, R.A., et al, (1989, p.147-153, eng) 43-4580
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Cities designed for winter. Mänty, J., ed, (1988, 384p., eng) 43-4235
Winter policies, plans and designs: the Canadian experience. Pressman, N., (1988, p.35-64, eng) 43-4237
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Microelement content in soils of south taiga. Vorotiukhina, I.I., (1987, p.342-350, rus) 43-29
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Content of heavy metals in glaciers of the Central Caucasus (Adylsu, Ullukol) and Central Pamirs (the Pamir firn field). Kerimov, A.M., et al, (1988, p.76-92, rus) 43-2567

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Evaluation of new thermomechanical constitutive theory for snow, final report. Brown, R.L., (1989, 43p., eng) 43-2135
Mechanics of the multidirectional microcracking of ice. Santaoja, K., (1989, p.55-65, eng) 43-2610
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KRMS GEOSAT-LIMEX '87 quick look report. Farmer, L.D., et al, (1988, 47p., eng) 43-707
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IGARSS '88 remote sensing: moving towards the 21st century; Vol.3. (1988, p.1231-1858, eng) 43-1889
Radar observations of Arctic sea ice during winter MIZEX '87 Shuchman, R.A., et al, (1988, p.1419-1422, eng) 43-1890
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Sea-ice analysis software—ICEMAN. Lee, M., (1988, p.1717-1720, eng) 43-1903
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Petrographic characteristics of recent shore deposits of the Laptev Sea. Slagoda, E.A., (1988, p.11-21, rus) 43-520

Regularities governing the formation of composition and properties of loess in southern East Siberia and northern Mongolia. Riashchenko, T.G., (1988, p.98-106, rus) 43-596

Mineral components in the active layer of Spitsbergen glaciers. Arkhipov, S.M., et al, (1988, p.62-71, rus) 43-3257

Hypergene corundum in quaternary perennially frozen rocks in Yakutia. Zigert, Kh., et al, (1989, p.944-948, rus) 43-4188

See also: Clay minerals

Mines (excavations)

Investigations of the frost heave of colliery spoil. Porębska, M., et al, (1988, p.107-114, eng) 43-67

Study to model the effects of uranium mine tailings on a permafrost environment. Woo, M.K., et al, (1988, 41p, eng) 43-1970

Regulation of the thermal regime in northern mines and pits; resource-saving systems. Shuvalov, IU.V., (1988, 192p, rus) 43-2152

Heat and mass transfer during thermal mine drilling. Fomin, S.A., et al, (1987, p.30-33, rus) 43-2266

Hydraulic well drilling of frozen rocks. IAkovlev, A.V., et al, (1987, p.38-40, rus) 43-2268

Problem of protecting ventilator facilities of mines in the North against freezing. Afanas'ev, V.P., et al, (1987, p.50-54, rus) 43-2290

Radio communication system for mines. Korennov, B.I., (1988, p 85-86, rus) 43-2785

Red Dog Mine. Hargrave, W.R., (1989, p 34-36, eng) 43-3699

Cyanide effluent control by freeze/thaw processing. Meech, J.A., (1985, p.80-84, eng) 43-3896

Mines (ordnance)

Land mines in winter. Richmond, P.W., (1989, 10p., eng) 43-4041

Mining

Artificial thawing of permafrost designed by the Magadan Research Institute. Savenko, L., (1988, p.17, rus) 43-22

Scientific and technological progress and economic development in the Murmansk region. Sakharina, L.A., ed, (1987, 113p, rus) 43-104

Scientific and technological progress and the quality of the environment in the Kola Peninsula. Kriuchkov, V.V., et al, (1987, p.71-79, rus) 43-107

Physical and mechanical aspects of working capacity of equipment designed for the North. Larionov, V.P., ed, (1987, 91p, rus) 43-112

Probability of smooth operation of excavation systems at low temperatures. Zudov, G.IU., et al, (1987, p.50-55, rus) 43-115

Scientific and technical progress in mines of polar regions. Gorbunov, G.I., ed, (1988, 239p, rus) 43-311

Geological and economic problems in the development of apatite deposits in southern Yakutia Entin, A.R., et al, (1987, 126p., rus) 43-313

Intensification of placer exploration on the Arctic shelf and plains. Tarakanov, L.V., et al, (1988, p.103-107, rus) 43-689

Performance of quarry excavators, with variable drive loading regimes in the North. Makhno, D.E., (1988, p.70-72, rus) 43-690

Changes in geocryological conditions caused by technical operations. Trofimov, V.T., et al, (1988, p.37-61, rus) 43-735

Forecasting changes in geological media caused by technical operations Mironenko, V.A., et al, (1988, p.84-102, rus) 43-736

Working capacity of hydraulic props under permafrost conditions. Rozenbaum, M.A., et al, (1987, 105p., rus) 43-1088

Problems in safety technology in the management of underground mining explorations under permafrost conditions, with regard to the temperature factor Voronov, E.T., (1987, p.44-48, rus) 43-2288

Applying physical and chemical methods to operating a coal mine in disturbed zones under permafrost conditions. Vasiuchkov, IU.F., et al, (1987, p.54-57, rus) 43-2291

Thermo-physical aspects of developing mineral resources. Arens, V.Zh., et al, (1988, 336p, rus) 43-3066

Shattering permafrost with the percussion power device of a stripping machine. Labutin, V.N., et al, (1988, p.87-92, rus) 43-3632

Ice layer formation in underground cryolithozone mining. Mikhailov, IU.V., et al, (1988, p 89-93, rus) 43-3866

Parameters for torpedoing frozen rocks in pillarless mining. Sleptsov, A.E., et al, (1989, p.255-259, eng) 43-4468

Mining *(cont.)*
Optimizing ice stowing in underground mining in permafrost. Mikhailov, IU V., et al, [1989, p.260-263, eng] 43-4469
Forecasting thermo-mechanical conditions of perennially frozen massif. Izakson, V.IU., et al, [1989, 103p., rus] 43-4490
See also. Mine shafts, Placer mining, Quarries, Shaft sinking
Mobility
Vehicle mobility over snow. Blaisdell, G.L., [1987, p.265-266, eng] 43-859
Arctic mobility problems. Abele, G., [1987, p.267-269, eng] 43-860
Mobility: working group report. Blaisdell, G.L., et al, [1987, p 273-274, eng] 43-862
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Mesoscale circulations forced by melting snow Szeto, K.K., et al, [1988, p.1629-1650, eng] 43-36
Capacity of ice-covered canals. Gladkov, E.G., et al, [1987, p.539-542, eng] 43-137
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Snowmelt-runoff forecast model with remote sensing input Rango, A., [1988, p 65-76, eng] 43-301
Basic characteristics and the elements of adaptive simulation of transportation processes on the Northern Sea Route. Arikainen, A I , et al, [1987, p.29-33, rus] 43-314
Clarification of criteria of WMO intercomparison of snowmelt runoff models. Cavadias, G., et al, [1988, p.369-377, eng] 43-454
Brittle fracture of thin solids under compression. Gol'dshtein, R.V., et al, [1987, p.150-159, eng] 43-605
Numerical simulation of first-year sea ice. Cox, G.F.N., et al, [1988, p.12,449-12,460, eng] 43-721
Mesoscale ocean eddy interactions with a marginal ice zone. Smith, D.C., IV, et al, [1988, p.12,461-12,473, eng] 43-722
Interactions between ice sheets and climate in the Northern Hemisphere. Neeman, B.U., et al, [1988, p.11,175-11,191, eng] 43-724
Scientifically based method of rapid information for ice navigation. Buzuev, A.IA., et al, [1988, p.130-141, rus] 43-811
Comparison of freezing cells used in the determination of soil frost susceptibility. Hasson, P.F.X., et al, [1988, p 218-220, eng] 43-824
Viscous resistance to creeping glacier movement, allowing for ice fracturing. Ivanov, A.I., [1988, p.110-112, rus] 43-945
Ice model basin at Nagasaki Research and Development Center. Takekuma, K., et al, [1988, p.44-49, eng] 43-971
Class A prediction of Arctic caisson performance. Hicks, M.A., et al, [1988, p.589-612, eng] 43-1469
Meridional heat transport by the ice and ocean in the western Arctic. Pease, C.H., [1988, p.16-19, eng] 43-1493
Model of the atmospheric boundary layer over sea ice during winter. Overland, J.E., [1988, p 69-72, eng] 43-1496
Regional Ice Model (RIM) for operational applications. Neralla, V.R., et al, [1988, p.135-153, eng] 43-1565
Lloyd's mirror at 250 megahertz: footnote on antarctic telemetry. Bering, E.A., III, et al, [1988, p.270-273, eng] 43-1646
Interactions between air, water, and sea ice in polar regions. Augstein, E , [1988, p.535-543, ger] 43-1668
Preliminary results from simulation of retaining wall displacement by frost action. Li, Y., et al, [1989, p.389-396, eng] 43-2119
Heat, carbon and water fluxes in a 12-box model of the world ocean. Garcon, V.C., et al, [1988, p.161-177, eng] 43-2243
Melting layer of frozen precipitation. Klaassen, W., [1988, p.3741-3753, eng] 43-2360
Effect of longwave radiation and ice microphysics on convection. Chen, S., et al, [1988, p.3897-3910, eng] 43-2361
Algorithm for computers for estimating rheological properties of perennially frozen coarse detrital rock. Gostiushkin, V.V., et al, [1988, p.41-47, rus] 43-2381
Pangaean climates: megamonsoons of the megacontinent. Kutzbach, J.E., et al, [1989, p.3341-3357, eng] 43-2397
Coupled energy balance climate-sea ice model. Ledley, T.S., [1988, p.15,919-15,932, eng] 43-2490
Friction characteristics of an icebreaker's model. Pozniak, I.I., [1981, 11p., eng] 43-2694
Origin of drift mounds in Miers Valley, Antarctica. Clayton-Greene, J.M., et al, [1987, p.59-61, eng] 43-2732
Numerical study of the west antarctic ice sheet formation. Lindstrom, D.R., et al, [1987, p.71-73, eng] 43-2739
Modeling of ice class shafting and propeller systems. Final report Cowper, D.N.B., et al, [1988, 38p., eng] 43-2801
Marine icing. Lozowski, E.P., [1988, p 43-66, eng] 43-2909
Research of ice-going qualities of river icebreakers. Tronin, V.A., et al, [1988, p.686-696, eng] 43-2965
Adaptive simulation of transportation marine system along the Northern Sea Route. Arikainen, A., et al, [1988, p.706-718, eng] 43-2967
Computer modeling of ship icing. Zakrzewski, W.P., et al, [1988, p.446-457, eng] 43-3016
Recent approaches in the modeling of ship icing. Zakrzewski, W.P., et al, [1988, p.458-476, eng] 43-3017
Modeling of atmospheric icing on small scale. Anno, Y., [1988, p 498-503, eng] 43-3020
Semianalytic energy balance climate model with explicit sea ice and snow physics. Harvey, L.D.D., [1988, p.1065-1085, eng] 43-3074
Ice flow and blockage investigation of shrouded propellers. Laskow, V., [1988, var.p., eng] 43-3204
Models and simulations related to snow Beghin, P., et al, [1988, p.29-36, fre] 43-3207
Proceedings of the Symposium on Ice Dynamics, 1988. [1989, 226p., eng] 43-3326
Dynamics of the antarctic ice sheet. Budd, W.F., et al, [1989, p.16-22, eng] 43-3329
Thermo-mechanically coupled ice sheets. Hindmarsh, R.C.A., et al, [1989, p.57-69, eng] 43-3335
Model studies on ice-stream surging. Radok, U., et al, [1989, p.132-137, eng] 43-3348
Interpretation of the temperature profile, Vostok ice core. Ritz, C., [1989, p.138-144, eng] 43-3349
Model tests on an icebreaker at two friction factors. Tatinclaux, J.C., [1989, p.774-784, eng] 43-3776
Microcomputer-based watershed-modeling and data-management system. Leavesley, G.H., et al, [1987, p.108-117, eng] 43-3933
Methods of estimating liquid water storage in snow. Kattelmann, R., [1987, p.158-161, eng] 43-3941
Constructing scaled models for snowdrift tests outdoors. Jairell, R.L., et al, [1987, p.166-169, eng] 43-3943
Results of the snowmelt-runoff model in an international test. Rango, A., [1985, p.99-106, eng] 43-4273
Five snowmelt models: a comparison of prediction accuracy. McGurk, B.J., [1985, p.171-174, eng] 43-4284
Models of groundwater level fluctuations. Lemmela, R., et al, [1988, p.35-46, eng] 43-4381
Computer-aided structural modeling (CASM). Pace, M.E., et al, [1989, p.526-540, eng] 43-4409
Ice formation in frequently transited navigation channels. Huang, H.P., [1989, 227p., eng] 43-4574
Facies models to delineate spatial trends in glacial sediments. Anderson, M.P., [1989, p.501-511, eng] 43-4619
See also: Avalanche modeling; Ice models; Lattice models; Mathematical models; Simulation
Modular construction
Modular construction in northern West Siberia. Golotsvan, A.G., et al, [1988, p.32-35, rus] 43-560
Ways of decreasing construction terms and man-hours for electrical substations. Gaft, S.IA., et al, [1988, p.43-44, rus] 43-562
Russian joint venture in western Siberia. Pokonov, N.Z., et al, [1988, p.19-21, rus] 43-696
Moisture
Thermal performance degradation of wet insulations in cold regions. McFadden, T., [1988, p.25-34, eng] 43-152
Vents and vapor retarders for roofs. Tobiasson, W., [1987, p.80-90, eng] 43-545
Effect of moisture content on temperature at the bottom of dams. Proskuriakov, A.B., et al, [1987, p.73-75, rus] 43-1195
Thermal conductivity of wet porous media. Azizi, S., et al, [1988, p.2305-2317, fre] 43-1380
Theory of the thermal conductivity of wet porous materials. Moyne, C., et al, [1988, p.2319-2330, fre] 43-1381
Freeze thaw cycles of asphalt concrete mixtures. Scherocman, J.A., et al, [1986, p.213-236, eng] 43-1860
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Method for conducting airborne infrared roof moisture surveys. Tobiasson, W., [1988, p.50-61, eng] 43-1212
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Snowfall in high southern latitude. Bromwich, D.H., [1988, p.149-168, eng] 43-1406
Prognosis and regulation of heat and moisture regime of frozen soils. Permiakov, P.P., et al, [1989, p.371-377, eng] 43-3113
Moisture migration characteristics of frozen, dispersed soils. Lebedenko, IU.P., et al, [1987, p.150-157, rus] 43-3380
Moisture transfer in building structures: numerical methods. Ojanen, T., et al, [1989, 102p., fin] 43-3964
Thermal and size evolution of sea spray droplets. Andreas, E.L., [1989, 37p., eng] 43-4042
Role of snow cover in the moisture redistribution between the oceans. Kotliakov, V.M., et al, [1989, p.1221-1225, rus] 43-4287
Moisture transfer in thawed and freezing ground. Fel'dman, G.M., [1988, 257p., rus] 43-4492
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Chemical irradiation effects in ices. Benit, J., et al, [1988, p.349-353, eng] 43-52
Molecular dynamics simulation of ice at constant volume. Kerr, J.A., et al, [1988, p.4313-4314, eng] 43-1028
Ice molecular reorientation by proton and deuterium magnetic resonance. Wittebort, R.J., et al, [1988, p.5668-5671, eng] 43-1133
Octanol-water partition coefficients for organophosphonates. Britton, K.B., et al, [1988, 24p., eng] 43-1338
Ice/water interface: a molecular dynamics simulation study. Karim, O.A., et al, [1988, p 6889-6896, eng] 43-1366
Stacking faults in ice crystals. Oguro, M., et al, [1988, p 49-67, eng] 43-1416
Molecular theory of dendritic crystal growth. Schofield, S.A., et al, [1988, p.11-12, eng] 43-1743
FT-IR spectroscopic study of proton transport and trapping in cubic ice. Wooldridge, P.J., [1988, 166p., eng] 43-1915
MNDO study of linear-chain ice crystal. Choe, M.S., et al, [1988, p.7379-7384, eng] 43-2026
Ice ionization from vibrational excitation. Devlin, J.P., [1988, p 6867-6868, eng] 43-2846
Thermalization distances and times for subexcitation electrons in solid water. Goulet, T., et al, [1988, p.6871-6874, eng] 43-2847
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Monitors
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Time variations of the pollutant concentration background in different natural objects. Evseev, A.V., [1988, p.72-78, rus] 43-686
Cartographic and aerospace monitoring of the Elbrus glaciation system. Knizhnikov, IU.F., et al, [1988, p.153-157, rus] 43-955
Monitoring of the Arctic climate. Voskresenskiĭ, A.I , ed, [1988, 205p., rus] 43-1174
Monitoring of the Arctic climate. Voskresenskiĭ, A.I., [1988, p.6-23, rus] 43-1175
City, two states adopt pavement precip system. Leicht, N., [1988, p.133-135, eng] 43-1854
Synthetic aperture radar capabilities for snow and glacier monitoring Rott, H., [1984, p 241-246, eng] 43-1933
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Dynamic ice breakup control for the Connecticut River near Windsor, Vermont. Ferrick, M.G., et al, [1988, p 245-258, eng] 43-2018
Assemble the frost indicator. Frund, D., [1988, p.35-40, eng] 43-2489
Remote sensing of road surface condition. Haavasoja, T., [1986, 8p , eng] 43-2758
Weather monitoring equipment and highway maintenance. Chorlton, E , et al, [1986, 6p , eng] 43-2764
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Maintenance aspects of floating moorings in Greenland. Lindahl, J., et al, [1989, p.991-1000, eng] 43-3796
Beaufort Sea current measurements, Mar.-Aug. 1987. McCullough, D., et al, [1988, 42p , eng] 43-4035
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Formation of moraines on Tien Shan glaciers. Serebriannyĭ, L.R., et al, (1988, p.215-223, rus) 43-965
Morphology of forest soils on the Kola Peninsula. Nikonov, V.V., et al, (1988, p.68-76, eng) 43-1119
Studies of the regularities governing swelling of morainal loam. Petrova, V.M., et al, (1987, p.72-78, rus) 43-1183
Glacier snout dynamics and moraine formation, Turtmann Glacier, Switzerland. Eybergen, F.A., (1987, p.217-231, eng) 43-1764
Till and moraine formation at some Heard I. glaciers. Lundqvist, J., (1988, p.225-234, eng) 43-1872
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Formation and dispersion of surface moraines in the Koylyu River basin. Osmonov, K., (1988, p.78-92, rus) 43-2388
Living ice: understanding glaciers and glaciation. Sharp, R.P., (1988, 225p , eng) 43-2408
Mudflows; collected articles, No.10. Stepanov, B.S., ed, (1988, 172p , rus) 43-2417
Mudflow formation in the Sarkand River basin. Khaĭdarov, A.Kh., et al, (1988, p.155-161, rus) 43-2424
Snow physics, avalanches, mudflows. Bolov, V.R., ed, (1988, 132p , rus) 43-2557
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Medial moraines of glacier in Italian Alps. Smiraglia, C., (1989, p.81-84, eng) 43-4144
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Glacial transport processes at glacier margins. Clinch, J.M., (1988, 486p., eng) 43-4525
Pleistocene glaciation in southern Tibet. Kuhle, M., (1988, p.457-511, eng) 43-4564
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Pleistocene glaciation of Tibet and the onset of ice ages—an autocycle hypothesis. Kuhle, M., (1988, p.581-595, eng) 43-4570
Glacial geology of western Hudson Strait, Canada, with reference to Laurentide Ice Sheet dynamics. Laymon, C.A., (1989, 345p., eng) 43-4572

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Photosynthetic response of *Sphagnum* mosses, Philip Smith Mountains, AK. Murray, K.J., et al, (1989, p.244-250, eng) 43-4073
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Studying certain characteristics of the surface layer of air above glaciers. Arapov, P.P., et al, (1987, p.137-139, rus) 43-245
Natural and man-induced snow-ice phenomena in Spitsbergen. Il'ina, E.A., et al, (1987, p.157-161, rus) 43-250
Comments on Della Ventura's paper on Alpine glaciers. Rott, H., (1988, p.1167-1174, eng) 43-337
Frost mounds and Pleistocene ice-dammed lakes in Altai. Rudoĭ, A.N., (1988, p.344-348, rus) 43-569
Stone avalanche in the Bartuytsete glacier area (Central Caucasus). Dokukin, M.D., (1988, p.348-353, rus) 43-570
Classification of glaciological maps. Petrova, T.M., (1988, p.90-93, rus) 43-688
Thickness and volume of the Dzhungarskiy Alatau glaciers from airborne radar-echo soundings. Macheret, IU.IA , et al, (1988, p.59-71, rus) 43-937
Glacier dynamics on the Terskey-Alatau Range from lichenometric data. Glazovskiĭ, A.F., et al, (1988, p.113-119, rus) 43-946
Mass balance reconstruction for the Golubin Glacier. Aizin, V.B., (1988, p.119-126, rus) 43-947
Glaciers of the Iskaten Range. Sedov, R.V., (1988, p.129-133, rus) 43-949
Cartographic and aerospace monitoring of the Elbrus glaciation system. Knizhnikov, IU.F., et al, (1988, p.153-157, rus) 43-955
Climatic and meteorological characteristics of glaciated areas of the Akshiyrak Range. Voloshina, A.P., (1988, p.184-193, rus) 43-960
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Mass balance of the Sary-Tor glacier. Diurgerov, M.B , et al, (1988, p.199-203, rus) 43-962
Water balance of the Sary-Tor mountain glacier basin. Diurgerov, M.B., et al, (1988, p.203-207, rus) 43-963
Formation of moraines on Tien Shan glaciers. Serebriannyĭ, L.R., et al, (1988, p.215-223, rus) 43-965
Marukh Glacier—water and heat balance. Kotliakov, V.M., ed, (1988, 252p , rus) 43-1455
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Monitoring of seasonal snow cover on glaciers. Haefner, H., et al, (1988, p 443-445, eng) 43-1526
Mountain glacier basins of the USSR, 1969-1974. Bochin, N.A., ed, (1987, 300p., rus) 43-1774
Morphometry and balance of surging and nonsurging glaciers. Wilbur, S., (1988, 113p , eng) 43-1888
Mass balance of Polar Ural glaciers. Voloshina, A.P., (1988, p.200-211, eng) 43-2580
Upper limit of glacier zone in the Himalayas. Kuhle, M., (1986, p.185-206, ger) 43-2833
Snow and ice chemistry of mountain glaciers in China. Wang, P., (1988, p.269-272, chi) 43-2867
Glacier changes following the little ice age. Haeberli, W., et al, (1989, p.77-101, eng) 43-3177
Decline of last little ice age in Asia and the Alps. Kick, W., (1989, p.129-142, eng) 43-3180
Variations of Rio Plomo glaciers, Andes Centrales Argentinos. Leiva, J.C., et al, (1989, p.143-151, eng) 43-3181
Mass balance history of Blue Glacier, Washington, USA. Armstrong, R.L., (1989, p.183-192, eng) 43-3183
Mass balance and volume of South Cascade Glacier, Washington 1958-1985. Krimmel, R.M., (1989, p.193-206, eng) 43-3184
Hydrometeorological conditions, mass balance and runoff from alpine glaciers. Collins, D.N., (1989, p.235-260, eng) 43-3187
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On the response of valley glaciers to climatic change. Oerlemans, J., (1989, p.353-371, eng) 43-3194
Numerical modeling of Argentière Glacier. Huybrechts, P., et al, (1989, p.373-389, eng) 43-3195
Model of historic front variations of Rhône Glacier. Stroeven, A., et al, (1989, p.391-405, eng) 43-3196
Ablation of mountain glaciers in non-polar regions. Davidovich, N.V., (1988, p.134-145, rus) 43-3271
Radio echo surveys of the Abramov Glacier by low-frequency radar. Vasilenko, E.V., et al, (1988, p.174-182, rus) 43-3275
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Environmental records in alpine glaciers. Wagenbach, D., (1989, p.69-83, eng) 43-3681
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Glacial hazards in Glacier National Park, Montana. Butler, D.R., (1989, p.53-71, eng) 43-3963
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Variations of existing glaciers in the southwestern mountain region of Xizang (Tibet). Wang, W., (1988, p.513-516, eng) 43-4565

Mountain soils
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Mountains
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Mapping of avalanche areas in mountains. Brukhanda, V.I., et al, (1987, p.202-214, rus) 43-2520
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Mudflow passages in high mountains. Haeberli, W., et al, (1988, p.331-343, ger) 43-2062
Mudflows; collected articles, No.10. Stepanov, B.S., ed, (1988, 172p., rus) 43-2417
Calculating the characteristics of mudflows. Stepanova, T.S., et al, (1988, p.3-10, rus) 43-2418
Predicting the mud shear process. Gavrishina, L.N., (1988, p.35-39, rus) 43-2419
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Snow physics, avalanches, mudflows. Bolov, V.R., ed, (1988, 132p., rus) 43-2557
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Glacial mud flows and outburst floods from icebound lakes in China. Xu, D.M., et al, (1988, p 284-289, chi) 43-2870
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Computer modeling of avalanches, mudflows and floods. Mironova, E.M., et al, (1988, p.161-165, rus) 43-3324

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Land-based industrial and civil engineering in Charskaya Basin. Nistratova, T.A., (1987, p.117-124, rus) 43-3376

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Naleds
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New data on the mineral well of Sytygan-Sylba (Yakut ASSR). Cherepanova, A.P., (1988, p.90-97, rus) 43-531
Aerial and spaceborne monitoring of natural naled geosystems. Topchiev, A.G., (1988, p.50-57, rus) 43-589
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Arctic pipeline river crossings—design trends and lessons learned Veldman, W.M., (1983, p.70-83, eng) 43-3414
Glaciological investigations in Siberia, Vol.2. Antipov, A.N., ed, (1987, 162p., rus) 43-3652
Liquid precipitation in the thermal and water balance of melting naleds. Delkin, B.N., (1987, p.5-14, rus) 43-3653
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Natural gas
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Natural resources
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Proceedings of the Alaska Forest Soil Productivity Workshop, 1987. (1988, 120p., eng) 43-1142
Development of geological surveys in the northern zone of the Timan-Pechora Province. Khudiaev, V.M., (1988, p.5-11, rus) 43-1535
Grazing land in tundra petroleum fields. Voskobol'nikova, N.N., et al, (1988, p 68-76, rus) 43-1541
Water level calculation for northeast European rivers. Kokovkin, A.V., (1988, p.99-112, rus) 43-1544
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Hydrology: an introduction for wetland managers. Kusler, J., (1988, p.4-24, eng) 43-2236
CRS workshop on antarctic environmental protection. Fletcher, S.R., (1989, 57p. + 20p. appends., eng) 43-2568
Disruption of tundra from recovery of stray logs on river banks Alekseenko, L.N., et al, (1988, p.181-190, eng) 43-2579
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Conference proceedings. (1989, 257p., eng) 43-3487
Cold ocean hydrocarbon resources. Clark, J.I., (1989, p.119-139, eng) 43-3489

Navigation
Data acquisition for refrigerated physical model. Zufelt, J.E., (1987, p.338-341, eng) 43-8
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Slope stability and erosion in Nepal. Kienholz, H., (1986, p.127-141, eng) 43-2830
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Netherlands
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Neutron activation analysis
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Calculating the neutron field of cosmic radiation near the surface of snow-covered soil. Altbaev, F.B., et al, (1987, p.18-36, rus) 43-1041
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Measurement of snow water reserves by neutron measurements at automatic stations. Avdiushin, S.I., et al, (1987, p.57-68, rus) 43-1045
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Simultaneous measurement of water reserves in snow and the soil moisture content from the neutron component of cosmic radiation. Altbaev, F.B., et al, (1987, p.76-79, rus) 43-1048
Measurement of water reserves by ionizing cosmic radiation. Pegoev, A.N., et al, (1987, p.79-82, rus) 43-1049
Correlation of tephra layers in antarctic ice by trace element abundances and refractive indices of glass shards. Fukuoka, T., et al, (1987, p.103-118, eng) 43-3409

Neutrons
Remote sensing of water in soil and snow cover from natural penetrating radiations. Fridman, Sh.D., ed, (1987, 86p., rus) 43-1038

New Zealand
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Mass movements, nivation processes and climatic fluctuations in northern Scandinavian mountains. Rapp, A., et al, (1988, p.245-253, eng) 43-927
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Nivation and glaciation in Scania and Lappland, Sweden. Rapp, A., et al, (1985, p.2-7, swe) 43-1009
Suspected glacial cirque form in central Sweden. Agrell, H., (1985, p.26-27, swe) 43-1012
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Noise (sound)
Higher frequency ambient noise in the Arctic Ocean. Lewis, J.K., et al, (1988, p.1444-1455, eng) 43-1209
SPRI participation in the winter Marginal Ice Zone Experiment, MIZEX-87. Rottier, P., (1989, p.33-36, eng) 43-2218
Acoustic emission from the Arctic ice sheet. Langley, A.J., (1989, p.692-701, eng) 43-2401
Blast noise propagation research. Raspet, R., (1987, p.251-252, eng) 43-3297
Polar Floats Program. Manley, T.O., et al, (1989, p.186-194, eng) 43-3514

Nomenclature
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Nomographs
Energy-efficient regimes for thermal treatment of concrete in extended constructions under winter conditions. Zasedatelev, I.B., et al, (1988, p.75-79, rus) 43-2434
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North Atlantic Ocean
Scientific cruise reports of Arctic Expeditions ARK IV/1, 2 & 3. Krause, G., comp., (1989, 1 [illegible]) 43-4191

North Sea
Iceberg scouring marks high North Sea areas. (1988, p.40-41, eng) 43-4094

Northern Sea Route
Basic characteristics and the elements of adaptive simulation of transportation processes on the Northern Sea Route. Arikainen, A.I., et al, (1987, p.20-33, rus) 43-314
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Norway
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Arctic air pollution and large scale atmospheric flows. Iversen, T., et al, (1985, p.2099-2108, eng) 43-992
Transport and chemical composition of the summer aerosol in the Norwegian Arctic. Pacyna, J.M., et al, (1985, p.2109-2120, eng) 43-993
Character of pollution aerosols over the Norwegian Arctic, 1983. Raatz, W.E., et al, (1985, p.2135-2142, eng) 43-996
Norwegian arctic research in perspective: a report. Jörgensen-Dahl, A., (1988, p.4-7, eng) 43-1026
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Mass balance measurements on Norwegian glaciers in 1985, 1986, and 1987. Laumann, T., et al, (1988, 46p, nor) 43-1698
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Slope processes in periglacial environments of northern Scandinavia. Jonasson, C., (1988, p.247-253, eng) 43-1874
Ice core drilling during the JAGE, 1987. Kawamura, T., (1988, p.151-154, jpn) 43-2402
Historic glacier variations in Scandinavia. Bogen, J., et al, (1989, p.109-128, eng) 43-3179
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—Bödalsbreen
Formation of saw-toothed moraines in front of the Bödalsbreen glacier, western Norway. Lien, R., et al, (1988, p.21-30, eng) 43-2239

—Briksdal
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—Hammerfest
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—Nordaustlandet
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—Spitsbergen
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of accretion variability in arctic glaciers for the 1656-1980. Tarusov, A.V., (1988, p 85-89, rus) 43-2574
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Annual variation of soil temperature in Spitsbergen. Mietus, M., (1988, p.87-94, eng) 43-2768
Soil temperature and advective changes in air temperature. Mietus, M., (1988, p.95-103, eng) 43-2769
Debris in icebergs: observations from Spitsbergen. Dowdeswell, J.A., et al, (1989, p.221-231, eng) 43-2776
Mineral components in the active layer of Spitsbergen glaciers. Arkhipov, S.M., et al, (1988, p.62-71, rus) 43-3257
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Icing in alimentation area of glacier in Spitsbergen. Izumi, K., (1988, p.121-129, jpn) 43-3525
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—Storbreen
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—Supphellebre
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—Svalbard
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Tunnelling in permafrost. Myrvang, A., et al, (1988, p.319-328, eng) 43-631
Performance monitoring of onshore structures at Svalbard. Gregersen, O., et al, (1988, p.329-342, eng) 43-632
Glacier surge in Svalbard with examples from Usherbreen. Haven, J.O., (1988, p.203-213, eng) 43-923
Distribution patterns of loess materials and landforms—some distinctive features. Solhd, J.L., et al, (1988, p.265-270, nor) 43-929
Effect of climate on permafrost, Svalbard Archipelago. Kristensen, M., (1988, p.24-26, eng) 43-1720
Glacier mass balance investigations in the balance year 1986-87. Hagen, J.O., (1988, p.205-209, eng) 43-2010
Ice/bed interface of Svalbard ice masses. Bamber, J.L., (1989, p.30-37, eng) 43-4137

—Varanger Peninsula
Occurrence of permafrost on the Varanger Peninsula, northeasternmost Norway. Malmström, B., (1988, p.239-244, eng) 43-926

Nuclear magnetic resonance
Analysis of frozen ground composition and phases by NMR. Podenko, L.S., et al, (1988, p.71-76, rus) 43-1603
Relationship between freezing and water content in sandy loam Black, P.B., et al, (1988, 37p, eng) 43-1843
Unfrozen water content of soils. Smith, M.W., et al, (1988, 11p., eng) 43-1844
Unfrozen water content of undisturbed frozen silt. Tice, A.R., et al, (1988, 17p., eng) 43-1998

Nuclear power
Temperature and ice in Mississippi River near a nuclear power station. Schwarz, J., et al, (1973, 17p. + tables, eng) 43-420

Nuclear wastes
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Nucleating agents
Space-time distribution of atmospheric ice nucleating agents above Ukraine. Silaev, A.V., et al, (1988, p.142-153, rus) 43-1084
Ice crystal formation by aerosols in a convective cloud. Klingo, V.V., et al, (1988, p.18-27, rus) 43-1429
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Ice crystal formation on AgI particles. Klingo, V.V., (1988, p.34-42, rus) 43-1431
Water adsorption on thin films of ice nucleating agents. Vlasov, S.A., et al, (1988, p.124-132, rus) 43-1432
Determination of the ice-forming activity of amorphous and crystalline silver particles. Bubnov, A.V., et al, (1988, p.295-298, eng) 43-2486
Ice nucleating bacteria and water nucleation temperature. Stewart, W.E., Jr., et al, (1988, p.147-149, eng) 43-3818
Ice-forming activity of AgI and PbI2 pyrotechnic nucleants. Aksenov, M.IA., et al, (1988, p.41-47, rus) 43-4585
See also. Dry ice (trademark); Lead iodide; Silver iodide

Nucleation
Expression of ice nuclei in bacteria and the nature of the ice nucleation site. Phelps, P.A., (1988, 253p., eng) 43-1471
Solvent freezing point depression in swollen rubber gels. Honiball, D., et al, (1988, p.2413-2431, eng) 43-1693
Laboratory device for studying the effectiveness of coolant nucleants Aksenov, M.IA., et al, (1988, p.105-113, rus) 43-2719
Nucleation of frost on cold surfaces. Sahin, A.Z., (1989, 225p., eng) 43-2887
Strain energy failure criterion for S2 freshwater ice in flexure. Cole, D.M., (1988, p.206-215, eng) 43-2923
On the supercooling during freezing of water saturated porous media. Chellaiah, S., et al, (1989, p.163-172, eng) 43-3283
Formation of a solid nucleus in supercooled liquid, Pt.2. Alexiades, V, et al, (1980, p.99-109, eng) 43-4533
See also. Artificial nucleation, Heterogeneous nucleation; Homogeneous nucleation; Two dimensional nucleation

Nucleation rate
Rate determining process of snow crystal growth. Yokoyama, E., et al, (1988, p.927-936, eng) 43-2357
Nucleation process and solidification rate of supercooled water. Bertolini, D., et al, (1988, p.404-407, eng) 43-4378

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See also Condensation nuclei, Freezing nuclei; Hygroscopic nuclei; Ice crystal nuclei; Ice nuclei; Organic nuclei; Snow crystal nuclei

Numerical analysis
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Nutrient cycle
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Impact of urban wastewater reuse in cold regions on land treatment systems. Jakandar, I.K., (1976, 32p., eng) 43-1830
Productivity and nutrient cycling of Alaskan tundra. Chapin, F.S., III, et al, (1988, p 693-702, eng) 43-1926
Nitrogen uptake in antarctic lakes. Priscu, J.C., et a, (1989, p.335-351, eng) 43-2404
Nutrient capacity for vegetation in swamps. Ivanov, K.E., (1988, p.3-22, rus) 43-2462
Microbial biomass and activity in a subarctic soil ten years after crude oil spills. Sparrow, S.D., et al, (1988, p.304-309, eng) 43-4375

Ocean atmosphere interactions
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Ocean bottom
Application of the freezing method to the undersea connection of a large diameter shield tunnel. Numazawa, K., et al, (1988, p.383-388, eng) 43-100
Beaufort Sea coastal erosion, sediment flux and shoreline evolution. Reimnitz, E., et al, (1988, 22p. + map, eng) 43-103
Under-ice topography in the Arctic Basin. McLaren, A S., (1988, p.117-126, eng) 43-178
Ice scour surveys, statistics and forces. Chari, T.R., et al, (1987, p.99-118, eng) 43-445
Geotechnical aspects of seabed pits in the Grand Banks area. Clark, J.I., et al, (1988, p 448-454, eng) 43-1051
Seafloor temperature and thermal conductivity. Sellmann, V., et al, (1989, 19p, eng) 43-2123
Proceedings. (1988, Var. p., eng) 43-2556
Observed strength distributions in some arctic clays. Jefferies, M.G., (1989, p.125-132, eng) 43-2618
Small scale modelling of iceberg scouring of the seabed. Poorooshasb, F., et al, (1989, p 133-145, eng) 43-3719
Engineering geological investigations of the oceanic cryolithozone. Zhigarev, L.A., (1988, p.43-49, eng) 43-4260
See also: Bottom sediment

Ocean currents
Meteorological and oceanographic data from the Weddell Sea, 1986. Kottmeier, C., et al, (1988, 115p., eng) 43-438
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Transversal jets detected on satellite images in marginal ice zones. Ginzburg, A.I., (1988, p.3-10, rus) 43-588
Mesoscale ocean eddy interactions with a marginal ice zone. Smith, D.C., IV, et al, (1988, p.12,461-12,473, eng) 43-722
Polynyas in the southern ocean. Gordon, A.L., et al, (1988, p.90-97, eng) 43-784
Prospects for modeling and predicting the large-scale ocean circulation and its mesoscale variability in the Arctic Ocean and Greenland Sea. Semtner, A.J., Jr., (1987, p.119-121, eng) 43-849
Coupled air-ice-ocean models. Hibler, W.D., III, (1987, p.131-137, eng) 43-850
Origin of the permanent transarctic current in the Arctic Ocean. Beliakov, L.N., (1988, p.441-443, rus) 43-1092
Notes on southern ocean hydrography, sea-ice and bottom water formation. Foldvik, A., et al, (1988, p.3-17, eng) 43-1094
Beaufort Sea Mesoscale Circulation Study—preliminary results. Aagaard, K., et al, (1988, 171p, eng) 43-1284
Some thoughts on the large-scale circulation of the Arctic Ocean. Aagaard, K., (1988, p.1-3, eng) 43-1492
Comparison of iceberg scour marks with trajectories on the Labrador Shelf Todd, B.J., et al, (1988, p.1374-1383, eng) 43-1499
Sea currents and ice drift in the southeastern Barents Sea. Denisov, V.V., et al, (1987, p.105-112, rus) 43-1881
Ice-ocean circulation and floe movement model. Bruno, M.S., et al, (1989, p.2065-2077, eng) 43-2004
Physical oceanography. Johnson, W.R., (1988, p.29-38, eng) 43-2428
Second Icebreaking Technology Expedition with R.V. *Polarstern.* Final report, Vol.I. Schwarz, J., et al, (1987, 354 leaves, ger) 43-2430
Environmental loads on structures NPD—guidelines for loads and load effects. Kvitrud, A., et al, (1989, p.133-138, eng) 43-2619
Offshore development in Cook Inlet, Alaska. Visser, R.C., (1989, p.435-442, eng) 43-2655
Mathematical modeling of ocean circulation. Marchuk, G.I., et al, (1988, 302p., rus) 43-2837
Vertical stratification model for the upper Arctic Ocean. Björk, G., (1989, p.52-67, eng) 43-2840
Circulation in the Arctic Ocean. Lewis, E.L., (1989, p.5-7, eng) 43-2901
Steady-state coupled ice-ocean model. Willmott, A.J., et al, (1989, p.501-518, eng) 43-3293
Ice drift and under ice currents in the Barents Sea. Johansen, O., et al, (1989, p.65-76, eng) 43-3713
Thermohaline circulation under Ronne Ice Shelf. Hellmer, H.H., (1989, 67p., ger) 43-4075
Picocyanobacteria in the high Arctic. Gradinger, R., et al, (1989, p.99-101, eng) 43-4254
Engineering geological investigations of the oceanic cryolithozone. Zhigarev, L.A., (1988, p.43-49, eng) 43-4260
Role of snow cover in the moisture redistribution between the oceans. Kotliakov, V.M., et al, (1989, p.1221-1225, rus) 43-4287
Climatic atlas of Alaskan coastal regions and shelf waters. Brower, W.A., Jr., et al, (1988, 3 vols., eng) 43-4476
Sea ice motion and concentration in the Canada Basin. Serreze, M.C., et al, (1989, p.10,955-10,970, eng) 43-4530

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Ocean environments
Barents Sea environment. (1988, p.40-45, eng) 43-417
Environmental assessment of the Alaskan continental shelf. (1979, 107p, eng) 43-440
Beaufort Environmental Monitoring Project 1986-1987, final report. McKnight, B., (1987, 175p, eng) 43-664
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Bering Sea Monitoring Program. Houghton, J.P, et al, (1987, var.p., eng) 43-754
Prospects and ways of developing oil and gas deposits in the arctic waters of the U.S.A. and Canada. Moskovich, E.F., (1988, 39p., rus) 43-759
Outer Continental Shelf Environmental Assessment Program; comprehensive bibliography. (1988, 746p., eng) 43-1833
Hazardous meteorological events in the Arctic seas and Kola Peninsula. Polkhov, A.P., (1989, p.62-69, eng) 43-3230
Cold ocean hydrocarbon resources. Clark, J.I., (1989, p.119-139, eng) 43-3489
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Estimating the extent of the spraying zone on a sea-going ship. Zakrzewski, W.P., et al, (1988, p.413-429, eng) 43-1341
SAR-seen multi-mode waves in ice. evidence of imaging non-linearities. Raney, R.K., et al, (1988, p.141-144, eng) 43-1505
SAR imaging of ocean waves in the Marginal Ice Zone. Lyden, J., et al, (1988, p 1435-1437, eng) 43-1894
Forecasting of ocean waves and wind. Hodgins, S.L.M., et al, (1988, 356p, eng) 43-2258
Generation of internal waves by sea ice. McPhee, M.G., et al, (1989, p.3287-3302, eng) 43-2396
Adelie land airport Regrettier, J.F, et al, (1989, p 91-96, eng) 43-2614
Environmental loads on structures NPD—guidelines for loads and load effects. Kvitrud, A, et al, (1989, p.133-138, eng) 43-2619
Navy applications of Geosat altimetry Cummings, T.K., (1988, p.39-43, eng) 43-2664
Tidal entrances in the Okhotsk coast, Japan. Kondo, H., et al, (1988, p.103-111, eng) 43-2984
Sea level and tidal- and wave-dominated coastal sequences Davis, R.A., Jr., et al, (1987, p.167-178, eng) 43-3404
Spectral evolution of wind-generated surface gravity waves in a dispersed ice field. Masson, D., et al, (1989, p.43-81, eng) 43-4535
Oceanographic surveys
Ocean heat flux in northern seas. Häkkinen, S., et al, (1989, p 6145-6157, eng) 43-3199
Scientific cruise reports of Arctic Expeditions ARK IV/1, 2 & 3. Krause, G., comp., (1989, 146p., eng) 43-4191
Oceanography
Beaufort Sea geophysical survey, scoping study. Harper, J.R., et al, (1985, 68p. + append's., eng) 43-282
Oceanography of the Baffin Bay and Nares Strait, Sep 1986. Bourke, R.H, et al, (1988, 32p. + append's, eng) 43-421
Oceanographic conditions on the northern Bering Sea shelf. 1984-1985. Salo, S., et al, (1988, 55p., eng) 43-516
Physical oceanography of the northern Baffin Bay-Nares region. Addison, V.G., Jr., (1987, 108p., eng) 43-517
Oceanographic data from 28th JARE, Nov 1986 to Apr 1987. Michida, Y., et al, (1988, 75p, eng) 43-590
Deep-sea research by the R/V *Polarstern* Expedition, 1987. (1988, p.665, 676-678, eng) 43-782
Arctic and Arctic-related environmental sciences, Proceedings, Vol.1. (1987, 371p, eng) 43-847
Environment and biological resources of Chukchi Sea. Hameedi, M.J., ed. (1988, 103p., eng) 43-2426
Physical oceanography. Johnson, W.R., (1988, p.29-38, eng) 43-2428
Quaternary paleoceanography of the Atlantic Ocean. Barash, M.S., (1988, 270p., rus) 43-2811
Autonomous ocean profiler- a current-driven oceanographic sensor platform. Echert, D.C., et al, (1989, p.195-202, eng) 43-3515
Underwater appearance of the Arctic. Korotaev, K., et al, (1988, p.74-76, rus) 43-4096
Role of snow cover in the moisture redistribution between the oceans. Kotliakov, V.M., et al, (1989, p.1221-1225, rus) 43-4287
Winter Weddell Sea Project 1986—Physical oceanography during leg V/2. Huber, B A., et al, (1989, p.97-98, eng) 43-4435
Drifter/modeling program of the Winter Weddell Sea Project 1986. Martinson, D.G., (1989, p.100-102, eng) 43-4436
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Offshore research in the Barents Sea. (1988, p.35-39, eng) 43-416
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Beaufort Environmental Monitoring Project 1986-1987, final report. McKnight, B., (1987, 175p., eng) 43-664
Offshore Technology Conference, 20th, 1988. (1988, 4 vols, eng) 43-708
Experience with drillship operations in the U.S. Beaufort Sea. Hinkel, R.M., et al, (1988, p.35-48, eng) 43-710
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Subsea wellhead system for an Arctic caisson rig, Beaufort Sea. Fardy, K.J., et al, (1988, p.403-408, eng) 43-713
Impact of external factors on marine hydraulic structures. Smirnov, G.N., ed, (1986, 178p., rus) 43-728
Sea ice effect on oscillations of cylindrical drilling-platform supports. Khrapatyi, N.G., et al, (1986, p.34-41, rus) 43-729
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Operational response to hazardous ice features. Pilkington, G R, (1987, p.349-358, eng) 43-912
Exploration status and future perspectives in the Barents Sea. Johansen, B., (1987, 7p + maps + charts, eng) 43-1100
Zee-star 120 an offshore drilling platform designed for arctic seas. Valenchon, C., (1987, p.95-101, fre) 43-2071
Air cushion vehicles in Arctic offshore oil development. Dickins, D.F., (1989, p 261-277, eng) 43-2440
Proceedings. (1988, Var p., eng) 43-2556
Installation of automatic well temperature measuring system. Judge, A., et al, (1989, p.89-94, eng) 43-2591
Thermal analysis of automatic well temperature measuring system Taylor, A, et al, (1989, p.95-101, eng) 43-2592
Conference on offshore mechanics and Arctic engineering, 8th, 1989. (1989, 476p, eng) 43-2601
Emergency preparedness in arctic areas. Sandberg, L., (1989, p.155-159, eng) 43-2622
Application of decision analysis to arctic exploration structures. Nessim, M.A., et al, (1989, p.161-168, eng) 43-2623
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Meteorological factors in construction of ice platforms Szilder, K., et al, (1988, p.410-424, eng) 43-3013
Proceedings, Vol.1 (1989, 742p, eng) 43-3219
Some meteorological service problems in the exploitation of the northern seas. Dement'ev, A A., (1989, p 80-87, eng) 43-3232
Offshore minerals operations, 1988 Gregory, J B, comp, (1988, 177p., eng) 43-3642
Offshore oil platforms in the Arctic. Huard, G., et al, (1989, 17p., fre) 43-4027
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Ice loads on Adams Island, Canada. Wessels, E., et al, (1988, p.679-690, eng) 43-654
Canadian Arctic islands, program and abstracts. (1988, 110p., eng) 43-1452
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IAHR Symposium on Ice, 8th, 1986. (1986, 599p., eng) 43-258
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International Conference on Technology for Polar Areas, Trondheim, 1988. (1988, 782p. (2 Vols.), eng) 43-610
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Gravity modular concrete structure for Arctic environment. Chateau, G., (1988, p.593-604, eng) 43-648
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Experimental study on abrasion of concrete due to sea ice. Itoh, Y., et al, (1988, p.61-68, eng) 43-712
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Methods of risk analysis. Bercha, F.G., (1987, p.305-333, eng) 43-910
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Ice pressures during the impact of an ice mass. Kivisild, H.R., (1987, p.359-368, eng) 43-913
Ice loads on structures. Määttänen, M., (1987, 15p., eng) 43-1103
Material modelling of ice—failure surfaces and plasticity theories. Horrigmoe, G., (1987, 18p. + graphs, eng) 43-1104
Atmospheric and sea spray icing. Andersson, A., (1987, 6p., eng) 43-1115
Development of high-strength steel plates for low-temperature use. Nakano, Y., et al, (1988, p.171-176, eng) 43-1276
Analysis of a caisson retained island. Evgin, E., et al, (1988, p.68-76, eng) 43-1277
Growth thermodynamics of artificial floating ice platforms. Szilder, K., et al, (1989, p.99-115, eng) 43-1441
Class A prediction of Arctic caisson performance. Hicks, M.A., et al, (1988, p.589-612, eng) 43-1469
Impressed current cathodic protection of a caisson structure for arctic conditions. Willis, A.D., et al, (1988, p.25-29, eng) 43-1671
Process design for offshore oil and gas production in cold ocean environment. Sen, D.C., (1988, p 864-869, eng) 43-1709
Canada readying platform codes as development nears. Adams, P.F., (1988, p.42-43, eng) 43-1738
Hibernia construction program gets underway. (1988, p.44-45, eng) 43-1739
Elements of floating-debris control systems. Perham, R.E., (1988, 54p. + appends., eng) 43-1808
Deterioration of concrete solidified heavy metal wastes by freeze-thaw action. El-Korchi, T., (1988, 213p., eng) 43-1923
Remarks on the Arctic Ocean and ice-drifting in Beaufort Sea. Jarlan, [illegible] (1987, p.25-35, fre) 43-2066
Zapostar 120: an offshore drilling platform designed for arctic seas. Valembon, C., (1987, p.95-101, fre) 43-2071
Snow control on floating ice sheets. Nelson, W.G., et al, (1989, p.161-169, eng) 43-2099
Rebuilding infrastructure for pleasure boating. Wortley, C.A., et al, (1989, p.188-201, eng) 43-2102
Development of hybrid subsea wellhead system for arctic application. Singeetham, S.P., et al, (1988, p.105-110, eng) 43-2127
Strength and stability of framing for ice strengthening. Daley, C., et al, (1988, 37p., eng) 43-2147
Ice pack conditions drive production, transport design. LeBlanc, L., (1989, p.26-28, eng) 43-2185
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Installation of automatic well temperature measuring system. Judge, A., et al, (1989, p 89-94, eng) 43-2591
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Conference on offshore mechanics and Arctic engineering, 8th, 1989. (1989, 476p., eng) 43-2601
Uncertainties and difficulties in codified design for ice loading. Maes, M.A., (1989, p.97-103. eng) 43-2615
Probability of winter environmental forces on arctic offshore structures. Tunik, A.L., et al, (1989, p.105-112, eng) 43-2616
Performance assessment in geotechnical design of arctic offshore structures. Been, K., et al, (1989, p.113-123, eng) 43-2617
Observed strength distributions in some arctic clays. Jefferies, M.G., (1989, p.125-132, eng) 43-2618
Environmental loads on structures NPD—guidelines for loads and load effects. Kvitrud, A., et al, (1989, p.133-138, eng) 43-2619
Gamma Tower for Northern Norway. Des Déserts, L., et al, (1989, p.147-154, eng) 43-2621
Emergency preparedness in arctic areas. Sandberg, L., (1989, p.155-159, eng) 43-2622
Application of decision analysis to arctic exploration structures. Nessim, M.A., et al, (1989, p.161-168, eng) 43-2623
Structure and strength of first-year ice ridges in the Baltic Sea. Leppäranta, M., et al, (1989, p.169-174, eng) 43-2624
Theory of equilibrium configurations of buoyantly unstable icebergs. Jessup, R.G., (1989, p.187-195, eng) 43-2627
Spray ice construction and simulation. Allyn, N., et al, (1989, p.253-262, eng) 43-2634
Model tests of load transmission through grounded ice rubble. Timco, G.W., et al, (1989, p.269-274, eng) 43-2636
Failure analysis of impacting ice floes. Bhat, S.U., et al, (1989, p.275-285, eng) 43-2637
Dynamic ride up and crushing of short ice ridges on conical structures. Nordgren, R.P., et al, (1989, p.287-291, eng) 43-2638
Iceberg collision reliability model. Isaacson, M., et al, (1989, p.293-299, eng) 43-2639
Impact of icebergs with a semi-submersible platform. Lever, J.H., et al, (1989, p.393-403, eng) 43-2650
Offshore development in Cook Inlet, Alaska. Visser, R.C., (1989, p.435-442, eng) 43-2655
Floating and bottom founded unit for arctic drilling operations. Jolles, W.H., et al, (1989, p.443-450, eng) 43-2656
Beaufort Sea cased gloryhole drilling. Gilbert, D., et al, (1989, p.451-458, eng) 43-2657
Model study of a cable-moored platform in sheet ice. Nixon, W.A., et al, (1989, p 459-468, eng) 43-2658
Local ice loads and design of offshore structures. Iyer, S.H., (1989, p.1-57, eng) 43-2813
Large scale ice-structure interaction data base. Metge, M., et al, (1989, p.59-76, eng) 43-2814
Transmission of loads through grounded ice rubble. Sayed, M., (1989, p.259-275, eng) 43-2821
Formation of spray ice on offshore structures. Makkonen, L., (1989, p.277-309, eng) 43-2822
IAHR Symposium on Ice, 9th, 1988. (1988, 3 vols., eng) 43-2906
Earthquake response characteristics of offshore structures in the presence of ice floes. Adachi, H., et al, (1988, p.314-323, eng) 43-2932
Iceberg-structure interaction: force, energy and probability. Duthinh, D., et al, (1988, p.324-340, eng) 43-2933
Global design load selection for arctic mobile drilling platform. Kamesaki, K., et al, (1988, p.371-384, eng) 43-2937
Ice forces on framed structure. Tatsuta, M., et al, (1988, p.385-394, eng) 43-2938
Design procedures for detachable platforms located in iceberg infested areas. Waegter, J., et al, (1988, p 451-462, eng) 43-2944
Conceptual design of multipurpose structure in ice covered sea. Inoue, K., et al, (1988, p.580-590, eng) 43-2956
Meteorological factors in construction of ice platforms. Szilder, K., et al, (1988, p.410-424, eng) 43-3013
Icing of petroleum industry offshore structures and ships. Romagnoli, R., (1988, p 486-497, eng) 43-3019
Beaufort environmental monitoring project, 1987-1988 final report. (1989, 136p., eng) 43-3052
Ice-induced dynamic loads on offshore structures. Daoud, N., et al, (1986, p.35-41, eng) 43-3217
Proceedings, Vol.1. (1989, 742p., eng) 43-3219
Finite element analysis of porous soil under asymmetric loading. Prasad, K.S.R., et al, (1989, p.699-706, eng) 43-3221
Technology for offshore development: strengths and weaknesses. Hayley, D.W., (1989, p.140-148, eng) 43-3490
Ice stress measurements around offshore structures. Johnson, J.B., (1988, p.55-59, eng) 43-3504
Total ice force measurements on an instrumented structure, an overview of ice islands, and spray ice bonding to offshore structure costings. Sackinger, W.M., (1988, p 61-64, eng) 43-3505
Offshore minerals operations, 1988. Gregory, J.B., comp, (1988, 177p., eng) 43-3642
Mukluk ice stress measurement program. Cox, G.F.N., (1988, p.11-15, eng) 43-3643
Ice-structure interaction. Sunder, S.S., et al, (1988, p.38-44, eng) 43-3644
Punching shear resistance of concrete offshore structures. Lew, H.S., (1988, p.62-63, eng) 43-3647
Proceedings. POAC 89. Vols.1 and 2. (1989, 1187p. (2 vols.), eng) 43-3708
Study of the behaviour of ice masses in marine environments. Romagnoli, R., et al, (1989, p.156-167, eng) 43-3721
Constitutive laws for sea ice at Adam's Montemurro, M.P., et al, (1989, p.367-376, eng) 43-3741
Structure subjected to ice crushing. Timco, G.W., et al, (1989, p.420-430, eng) 43-3745
Global crushing forces on wide structures. Dorris, J.F., (1989, p 467-480, eng) 43-3749
On the Relationship between global and local ice crushing loads. Dorris, J.F., et al, (1989, p.481-491, eng) 43-3750
Parametric study of iceberg impact loads. Duthinh, D., (1989, p.492-503, eng) 43-3751
Ice-structure interaction model based on observations in the Gulf of Bothnia. Engelbrektson, A., (1989, p.504-517, eng) 43-3752
Ice load on piles of fixed offshore structures. Gladkov, M.G., (1989, p.518-526, eng) 43-3753
Response of concrete platforms to iceberg impact. Holthe, K., (1989, p.527-536, eng) 43-3754
Primary study of ice forces on the structures in Bohai Sea. Ji, X.H., et al, (1989, p.537-545, eng) 43-3755
Calculation of iceberg impact forces. Johnson, R.C., et al, (1989, p.546-556, eng) 43-3756
Ice loads on offshore structures of various waterline geometry. Kaldjian, M.J., (1989, p.557-567, eng) 43-3757
Measurements of load transmission through grounded ice rubble. Marshall, A.R., et al, (1989, p.575-585, eng) 43-3759
Iceberg structure collision model. Pintur, D.A., et al, (1989, p.586-595, eng) 43-3760
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Cyclic loading on lateral load capacity of an ice-resisting wall system. Stephens, M.J., et al, (1989, p.873-883, eng) 43-3785
Marine operations of a detachable production platform. Bergdahl, L., et al, (1989, p.885-895, eng) 43-3786
Environmental conditions and platform design criteria for the Barents Sea. Eriksen, K., et al, (1989, p 896-907, eng) 43-3787
Technical and economic feasibility of platform systems in iceberg infested areas. Olsen, K.B., et al, (1989, p.918-929, eng) 43-3789
Offshore development in Cook Inlet, Alaska. Visser, R.C., (1989, p.1012-1022, eng) 43-3798
DIPOL actions in the French polar technology. Huard, G., et al, (1989, p.1164-1179, eng) 43-3812
MCEI laboratory as a centre of offshore oil and gas producing structures research. Lobanov, V.A., et al, (1989, p.1180-1187, eng) 43-3813
Arctic cast steels look good in tests. (1988, p.54, eng) 43-3867
Composite icewall design and analysis. Bangs, A.S., et al, (1989, p.1-22, eng) 43-4015
Efficiency of detachable platforms in the Arctic. Christensen, F.T., (1989, p.37-53, eng) 43-4016
International Colloquium: Arctic Technology and Economy; Present Situation, Problems, and Future Issues, Paris, Feb. 15-17, 1989. (Proceedings). (1989, Var. p., fre) 43-4017
Offshore oil platforms in the Arctic Huard, G., et al, (1989, 17p., fre) 43-4027
Model and full-scale tests in ice. Schwarz, J., (1989, 6p., eng) 43-4031
Frost resistance of concrete exposed to sea water. Ayuta, K., et al, (1988, p.37-65, eng) 43-4047
Frost damage to concrete in splash zone. Saeki, N., et al, (1988, p.289-302, eng) 43-4058
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Effects of oil spills on plant communities in northeast Greenland. Holt, S., (1987, p.490-497, eng) 43-197
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Barents Sea environment. (1988, p.40-45, eng) 43-417
Environmental assessment of the Alaskan continental shelf (1979, 107p., eng) 43-440
Evaluation of hovercraft for dispersant application. (1988, 57p. + appends., eng) 43-1704
Transformation of petroleum films in the ocean-ice-atmosphere system. Izmailov, V.V., (1988, 144p., rus) 43-2282

Oil spills *(cont.)*
Oil spill study—10 years later. Sparrow, E.B., et al, (1989, p 5-8, eng) 43-2485
Beaufort environmental monitoring project, 1987-1988 final report. (1989, 136p., eng) 43-3062
Laser ignition of Arctic oil spills. Frish, M.B., et al, (1987, p.355-365, eng) 43-3242
Laser ignition of oil spills. Phase 1. concept development. Final report. Frish, M.B., et al, (1985, 89p. + appends, eng) 43-3243
Laser ignition of oil spills. Phase 2: outdoor demonstration experiments Nawwar, A.M., et al, (1985, 36p. + appends, eng) 43-3244
Laser ignition of oil spills engineering design. Kung, W.L., et al, (1986, 51p , eng) 43-3245
Laser ignition of oil spills: telescope assembly and testing. Frish, M., et al, (1988, 23p , eng) 43-3246
Oil spill under multi-year ice. (1983, 34p., eng) 43-3621
Helicopter-borne laser ignition of oil spills. Frish, M., (1988, p.137-143, eng) 43-3649
Evaluation of a water jet barrier in ice conditions. Laperriere, F., (1988, p.157-159, eng) 43-3650
Oil spill in ice simulation model development. Johansen, O., (1989, p.1131-1142, eng) 43-3809
Problems of the Arctic and the Antarctic: collection of articles. Krutskikh, B.A., ed, (1989, 152p., eng) 43-4367
Principles of calculating the temperature and melting of polluted snow-covered ice. Izmailov, V V., (1989, p.44-53, eng) 43-4369
Special features of the methods of analysis of hydrochemical elements and pollutants in the waters of the polar regions. Mel'nikov, S.A., et al, (1989, p.103-114, eng) 43-4371
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New technique developed in Tyumen'. Branzburg, I.P., (1988, p.59-61, rus) 43-693
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Geophysical surveys of oil and gas wells in permafrost. Solov'ev, I.G., et al, (1988, p.76-83, rus) 43-1604
Allowable shut-in is estimated for wells in permafrost. Kutasov, I.M., et al, (1988, p.55-60, eng) 43-1969
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Expression of ice nuclei in bacteria and the nature of the ice nucleation site. Phelps, P.A., (1988, 253p., eng) 43-1471
Ice nucleating bacteria and water nucleation temperature Stewart, W.E., Jr., et al, (1988, p.147-149, eng) 43-3818
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Organic soils
Solution of non-linear heat conductivity problems for thermal deformations of materials. Brovka, G.P., (1988, p.120-122, rus) 43-555
Coefficient of thermal conductivity of peat in frozen and thawed states. Aleksandrov, B.M., (1988, p.23-25, rus) 43-691
Phase composition of moisture in frozen peat. Gamaiunov, N.I., et al, (1988, p.29-34, rus) 43-692
New achievements in foundation construction on peat and weak ground (according to materials of the Baltic International Conference). Svetinskii, B.V., (1988, p.28-30, rus) 43-815
Calculating moisture transfer in frozen peat. Gamaiunov, N.I., et al, (1987, p.17-19, rus) 43-1022
High-humus illuvial-metamorphic soils of western Chukotka. Bystriakov, G.M., (1988, p.1-12, eng) 43-2022
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Organizations
Twelfth Northern Libraries Colloquy, 5-9 June 1988. (1988, 331p., eng) 43-792
Comparison of EPA and USATHAMA detection capability estimators. Grant, C.L., et al, (1988, p.405-418, eng) 43-1812
Education and research opportunities in cold regions engineering. Hodek, R.J., ed, (1986, 63p., eng) 43-2213
Strategy for British research in the Arctic. (1989, 28p., eng) 43-3215
Alaska geothermal bibliography. Liss, S.A., et al, (1989, 44p., eng) 43-3234
Development and cooperation in the Arctic. Theutenberg, B.J., (1988, p.303-316, eng) 43-3290
Report of the Arctic Environmental Data Workshop. Laughlin, T.L., comp, (1988, var. p , eng) 43-3363
Snow Survey and Water Supply Forecast Activity. Barton, M., (1983, p.151-154, eng) 43-4365
Arctic research in the United States, Vol.3. (1989, 72p , eng) 43-4482
Information systems planning study. Atkins, R.T., et al, (1987, 48p., eng) 43-4591

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Accumulation and ice-core studies on Filchner-Ronne Ice Shelf, Antarctica. Graf, W., et al, (1988, p.23-31, eng) 43-1939
D and O-18 in falling snow in Japan. Sugimoto, A., et al, (1988, p.205-213, eng) 43-2244
Isotope studies of ice cores from Komsomolskaya Station, Antarctica. Kotliakov, V.M., et al, (1988, p.97-102, rus) 43-3309
Relation of deep sea oxygen isotopic record to global ice volume history. Prentice, M.L., (1989, 567p., eng) 43-4575

Pack ice
Phytoplankton within an antarctic ice edge. Sullivan, C.W., et al, (1988, p.12,487-12,498, eng) 43-723
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Characteristics of pack-ice distribution in the East Siberian Sea during the summer period. Kovalev, E.G., (1988, p.23-27, rus) 43-799
Analyzing the probability and statistical characteristics of sea ice compaction. Borodachev, V.E., (1988, p.103-120, rus) 43-809
Wave propagation in a solid ice pack. Liu, A.K., et al, (1988, p.1702-1712, eng) 43-1482
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SAR imaging of ocean waves in the Marginal Ice Zone. Lyden, J., et al, (1988, p.1435-1437, eng) 43-1854
Method to forecast open pack ice speed of motion using remotely-sensed data. Feldman, U., (1988, p.1695-1702, eng) 43-1899
Bacteria in pack-ice north of Elephant Island (BIOMASS III, October 1986). Zdanowski, M.K., (1988, p.203-216, eng) 43-2770
Numerical modeling of pack ice interaction with ships. Hamza, H., et al, (1988, p.735-745, eng) 43-2969
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Weather effect on Weddell Sea pack ice and the sea-ice budget. Limbert, D.W.S , et al, (1989, p.104-112, eng) 43-3343
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Sea ice characteristics, motion and interactions. Coon, M., (1988, p.41-44, eng) 43-3502
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Recent and Pleistocene local glaciation in Spain—a review. Nyberg, R., (1985, p.49-55, swe) 43-1016
12,000 year palynological record of meteorological trends in British Columbia. Mathewes, R.W., et al, (1981, p.707-710, eng) 43-1141
Mineralogy of insoluble particles in ice over the last climatic cycle. Gaudichet, A., et al, (1988, p.1471-1474, eng) 43-1483
Paleoclimatic ice core program at Siple Station. Mosley-Thompson, E., et al, (1988, p.115-117, eng) 43-1626
Frozen assets of the ice cores. Fifield, R., (1988, p 28-29, eng) 43-1805
Ice-core analysis of the Siple Coast of West Antarctica. Alley, R.B., et al, (1988, p.1-7, eng) 43-1935
Three-dimensional model of the antarctic ice sheet. Herterich, K., (1988, p.32-35, eng) 43-1940
Rock glaciers of the Dalton Range, Kluane Ranges, southwest Yukon Territory, Canada. Johnson, P.G., et al, (1988, p.327-332, eng) 43-1989
Chemical composition of ice containing tephra layers. Palais, J.M., et al, (1988, p.315-330, eng) 43-2006
Wandering Gondwanaland's impact on summer temperatures. Ledley, T.S., (1988, p.1397-1400, eng) 43-2033
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Implications of Mackenzie Delta permafrost regime for climatic history. Allen, D.M., et al, (1988, p.3-13, eng) 43-2321
Climatic change in the Canadian Arctic. Maxwell, B., (1987, p.2-6, eng) 43-2377
Arctic ice cores: putting present climate into perspective. Koerner, R.M., (1987, p.10-12, eng) 43-2379
Pangaean climates: megamonsoons of the megacontinent. Kutzbach, J.E., et al, (1989, p.3341-3357, eng) 43-2397
Living ice: understanding glaciers and glaciation Sharp, R.P., (1988, 225p., eng) 43-2408
Late Pleistocene and Holocene sea-level change in the Australian region and mantle rheology. Nakada, M., et al, (1989, p 497-517, eng) 43-2441

Comment on "Implications of snowpack/paleo-ELA relation in western U.S.A." Locke, W.W., (1989, p.97-101, eng) 43-2479
Our frail planet in cold, clear view: the South Pole as global laboratory. Lopez, B., (1989, p.43-49, eng) 43-2729
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Arctic and Arctic-related environmental sciences; Proceedings, Vol.I. (1987, 371p, eng) 43-847
Corps of Engineers research in the Arctic. Smallidge, P.D., et al, (1987, p 81-87, eng) 43-848
Seismic and acoustic wave propagation: working group report. Albert, D.G., et al, (1987, p.253-255, eng) 43-858
Remote sensing of ice and snow (review). Jezek, K.C., (1987, p.51, eng) 43-919
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Conference of the CSCE, Calgary, Alberta, May 25-27, 1988. (1988, 833p., eng) 43-1325
Construction of the Pangnirtung water reservoir. Notenboom, W.G., et al, (1988, p.613-632, eng) 43-1329
Pangnirtung water reservoir geotechnical aspects. Smith, L.B., et al, (1988, p 633-658, eng) 43-1330
Map of snow, ice and frozen ground in China—explanation. (1988, c50p., eng) 43-1356
Design for construction on permafrost. Gavril'ev, P.P., (1988, 128p., rus) 43-1438
Development of geological surveys in the northern zone of the Timan-Pechora Province. Khudiaev, V.M., (1988, p 5-11, rus) 43-1535
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Development of the Arctic tundra in Yamal. Mel'nikov, V.P., (1988, p.56-58, eng) 43-1725
Bibliography of engineering-geologic literature of northern Alaska. Galloway, J.P., (1988, 34p., eng) 43-1866
Cold regions engineering conference, Feb. 6-8, 1989. (1989, 399p., eng) 43-2083
Pressure buildup in permafrost pile supports induced by freezeback. Ayorinde, O.A., (1989, p.236-251, eng) 43-2106
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Effects of climatic change on northern permafrost. Harris, S.A., [1987, p.7-9, eng] 43-2378
Arctic lowlands. Carter, L.D., et al, [1987, p.583-628, eng] 43-2415
Problems of swamp hydrology Novikov, S.M., ed, [1988, 152p., rus] 43-2461
Evaporation from swamp lakes in permafrost zones. Novikov, S.M., et al, [1988, p 38-54, rus] 43-2465
Significance of climate change for the permafrost environment. Smith, M., [1986, p.67-81, eng] 43-2584
Periglacial phenomena in Sikkim. Chattopadhyay, G.P., [1986, p.145-[illegible] + 6 plates, eng] 43-2831
State of the art and prospects of geocryology in China. Cheng, G.D., et al, [1988, p.221-227, chi] 43-2861
Permafrost problems in road engineering. Huang, X.M., [1988, p.344-351, chi] 43-2880
Geophysical prospecting of glaciers and permafrost in China. Huang, Y.Z., [1988, p.364-368, chi] 43-2884
Problem of the ice-cored rock glacier Barsch, D., [1987, p.45-53, eng] 43-3045
Mackenzie environmetal monitoring project—Phase II, 1987 activities. [1988, 254p. (Pertinent p.132-133), eng] 43-3061
Technique of drilling blastholes in frozen rocks. Strabykin, N.N., [1989, 171p., rus] 43-3064
Geocryology of the European USSR. Ershov, E.D., ed, [1988, 357p., rus] 43-3067
Climate of Yukon. Wahl, H.E., et al, [1987, 323p., eng] 43-3081
Experimental underground placer mining on Wilbur Creek. Skudrzyk, F.J., et al, [1987, p.89-119, eng] 43-3082
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[illegible] value problems of crust freezing. Mikhallov, [illegible]9, p.365-370, eng] 43-3112
[illegible]of the plastic pipes operational reliability in [illegible]areas. Riabets, IU.S., [1989, p.691-697, 43-3139
[illegible]otection of gas systems in West Siberia. [illegible]U' [illegible]1989, p.[illegible]55-861, eng] 43-3154
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Geocryology of the USSR: Central Siberia. Ershov, E.D., ed, [1989, 413p., rus] 43-3615
Electrical grounding in cold regions. Henry, K., [1987, 17p., eng] 43-3639
Geocryology of the USSR: Western Siberia. Ershov, E.D., ed, [1989, 453p., rus] 43-3815
Natural gas generation in permafrost. Mel'nikov, P.I., et al, [1989, p.317-326, eng] 43-3989
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See also: Subsea permafrost

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Geotechnical thermal analysis. Zarling, J.P., et al, [1988, p.35-92, eng] 43-768
Metallic enclosures (for buildings erected under severe climatic conditions). Tamplon, F.F., [1988, 248p., rus] 43-838
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Quasistationary model of thermal interaction between a pipeline and frozen ground. Bronfenbrener, L.E., et al, [1987, p.68-73, rus] 43-1019
Changes caused by heat liberation of grout injected into permafrost. Shugaeva, R.T., et al, [1987, p.106-109, rus] 43-1165
Energy considerations in the design of northern housing. Larsson, N.K., [1985, 32p., eng] 43-1311
Burntwood Trailer Court case study of construction in permafrost. Feilden, R.E.K., et al, [1988, p.659-672, eng] 43-1331
Land development in Yellowknife—a case history. King, G.D.S., [1988, p 689-699, eng] 43-1333
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Maintenance of unheated warehouses on frost-heaving soils in Chita. Makarov, A.P., et al, [1985, p.43-47, rus] 43-1655
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Arctic Science Conference, 39th, Fairbanks, AK, 1988: Abstracts. (1988, 264p., eng) 43-1373
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International Specialty Conference on Cold Regions Engineering, 1984. [1984, p.1021-1201, eng] 43-667

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Supercooling and superheating effects in phase transitions. Visintin, A., [1985, p.233-256, eng] 43-3480
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Phase-change tracking using surface temperature. Choi, H.O., [1988, p.691-696, eng] 43-4457
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Examination of the terminal velocity of falling snowflakes. Suzuki, M., et al, [1988, p.63-71, jpn] 43-1907
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Photointerpretation
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Estimating snowpack distribution by pattern recognition. Leu, C.H., [1989, 220p., eng] 43-3611
Photointerpreting naled features on the northern Central Siberian plateau. Gienko, A.IA., et al, [1987, p.152-161, rus] 43-3663
Remote sensing of the cryolithozone in Yakutia. Petropavlovskaia, M.S., [1988, 71p., rus] 43-3705
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Biosynthesis and photosynthates in sea ice algae. Smith, R.E.H., et al, [1989, p.591-605, eng] 43-3696
Effect of freezing on photosynthesis of intertidal macroalgae. Dudgeon, S.R., et al, [1989, p.107-114, eng] 43-3823
Photosynthetic response of *Sphagnum* mosses, Philip Smith Mountains, AK. Murray, K.J., et al, [1989, p 244-250, eng] 43-4073
Temperature influence on nitrogen physiology in sea-ice microalgae. Priscu, J.C., et al, [1989, p 443-446, eng] 43-4189
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Piers
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Measurements of ice impact forces on a vertically-faced bridge pier. Frederking, R., et al, [1989, p.319-323, eng] 43-2642
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Plant colonization of a volcanic island, Surtsey, Iceland. Fridriksson, S., [1987, p 425-431, eng] 43-191
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Plant colonizers on tundra of northwestern Canada. Kershaw, G.P., et al, [1987, p.451-460, eng] 43-193
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Road dust and its environmental impact on Alaskan taiga and tundra. Walker, D.A., et al, [1987, p.479-489, eng] 43-196
Effects of oil spills on plant communities in northeast Greenland. Holt, S., [1987, p.490-497, eng] 43-197
Potential for soil erosion in sheep farming area of South Greenland. Jacobsen, N.K., [1987, p.498-507, eng] 43-198
Ecosystem disturbance in Iceland. Arnalds, A., [1987, p.508-513, eng] 43-199
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Two species of *Draba* in a Venezuelan paramo. Pfitsch, W.A., [1988, p.333-341, eng] 43-290
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Vegetation of the Soviet polar deserts. Aleksandrova, V.D., [1988, 228p., eng] 43-3627
Comparison of two high Arctic grasses. Grulke, N.E., et al, [1988, p 484-496, eng] 43-3672
See also: Forest ecosystems
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At what stage of freezing-thawing does extracellular ice injure cells. Samygin, G.A., [1988, p.268-274, eng] 43-1139
Effects of temperature and species on TNT injury to plants. Palazzo, A.J., et al, [1988, 7p., eng] 43-1149
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Visco-plasticity of soils and design of structures. Zaretskiĭ, IU.K., [1988, 349p., rus] 43-2281
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'Ice Hill': an example of 'retarded deglaciation' in Siberia. Astakhov, V.I., et al, [1988, p.29-40, eng] 43-433
Moraine features and ice ages of the Quaternary in the Taibai Mountain. Ma, Q., et al, [1988, p.66-75, chi] 43-469
Glacial geologic history of the Salmon Lake area, Seward Peninsula. Kaufman, D.S., et al, [1988, p.91-94, eng] 43-512
Nivation and glaciation in Scania and Lappland, Sweden. Rapp, A., et al, [1985, p.2-7, swe] 43-1009
Recent and Pleistocene local glaciation in Spain—a review. Nyberg, R., [1985, p.49-55, swe] 43-1016
Late pleistocene periglacial wedge sites in Wyoming: an illustrated compendium. Mears, B., Jr., [1987, 77p, eng] 43-1968
Implications of Mackenzie Delta permafrost regime for climatic history. Allen, D.M., et al, [1988, p.3-13, eng] 43-2321
Constraint to the Wisconsinan glacial history, Canadian Arctic Archipelago. Taylor, A., [1988, p.15-18, eng] 43-2322
Maximum boundary of the spread of Upper Pleistocene glaciation in the Sary Dzhaz River basin. Bakov, E.K., [1988, p.93-103, rus] 43-2389
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Resonance tide in the World Ocean and problems of geodynamics. Zimov, S.A., [1989, 120p. (pertinent p.56-66), rus] 43-4511
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Yearbook of the Norwegian Polar Research Institute, 1987. [1988, 46p., eng] 43-346
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Norwegian arctic research in perspective: a report. Jörgensen-Dahl, A., [1988, p.4-7, eng] 43-1026
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Antarctic aerosols: a review. Shaw, G.E., [1988, p 89-112, eng] 43-1405
Polar regions: research in a changing world. Wilkniss, P.E, [1989, p.160-164, eng] 43-2230
From the Barents to the Bering. Coming to grips with a circumpolar giant. Armstrong, T., [1988, p.4-5, eng] 43-2374
Report of the U.S. Arctic Research Commission, 1988. [1989, 39p, eng] 43-2765
Polar ecology. Stonehouse, B., [1989, 222p., eng] 43-2896
Annual report 1988 and future plans. [1989, 52p, eng] 43-2898
Science and politics in polar areas. Gjelsvik, T., [1988, p.87-94, eng] 43-2900
U.S. National Science Foundation polar research programs. Wilkniss, P.E., et al, [1989, p.29-32, eng] 43-3220
Report of the Arctic Environmental Data Workshop. Laughlin, T.L., comp, [1988, var. p., eng] 43-3363
The Arctic. King, H.G.R., comp, [1989, 275p, eng] 43-3605
International Colloquium: Arctic Technology and Economy; Present Situation, Problems, and Future Issues, Paris, Feb. 15-17, 1989. (Proceedings). [1989, Var. p., fre] 43-4017
See also: Arctic landscapes

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Environmental Quality R&D Symposium, 13th, Nov. 1988. (1988, 575p, eng) 43-1809
Comparison of EPA and USATHAMA detection capability estimators. Grant, C.L., et al, (1988, p.405-418, eng) 43-1812
Lead records in antarctic ice: changes in global atmospheric concentrations. Patterson, C., et al, (1987, p.85-87, eng) 43-2748
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Analysis of overhead transmission structures by probabilistic methods. Krishnasamy, S.G., (1987, p.417-425, eng) 43-3482
Power lines
Possibility of using overland air cushion vehicles in the construction of electrical networks. Butylkin, I.P., et al, (1988, p.24-28, rus) 43-558
Construction of 35 kv overhead power lines on permafrost. Chernetskii, V.I., et al, (1988, p.28-31, rus) 43-559
Selecting rural 0.38-10 kv overhead power lines in northern conditions. Marfin, N.I., (1989, p.61-64, rus) 43-3669
See also: Transmission lines
Power supply
See also: Electric power; Nuclear power; Wind power generation
Precipitation gages
Solid precipitation measurement at Sleepers River, VT. Bates, R.E., et al, (1987, p.1-7, eng) 43-384
Remote monitoring of depth of snow on ground with a micrologger. Edey, S.N., et al, (1987, p.297-214, eng) 43-1297
Measurements of the concentration of falling snow. Stallabrass, J.R., (1987, p.389-410, eng 43-1304
Snow gages on the Canadian prairies. [illegible], K.H., (1987, p.455-469, eng) 43-1307
Impact of automation on winter precipitation measurement. Goodison, B.E., (1987, p.471-490, eng) 43-1308
Blowing snow particle detector. Brown, T., et al, (1989, p.167-174, eng) 43-2365
Precipitation measurements at the source of the Urumqi River. Yang, D.Q., et al, (1988, p.384-399, chi) 43-2853
Magnetic net-type blowing-snow collector. Abe, O., (1989, p.73-80, jpn) 43-3543
Optical technique for characterizing precipitation. Koh, G., (1989, p.71-76, eng) 43-3877
Polar nephelometer for measuring snowflake phase functions. Saint-Germain, D., (1989, p.77-85, eng) 43-3878
Precipitation and snow water equivalent sensors: an evaluation. McGurk, B.J., (1986, p.71-80, eng) 43-3905
Diurnal fluctuations in remote precipitation gage readings. Cooley, K.R., et al, (1987, p.10-19, eng) 43-3923
Wyoming windshield—an evaluation after 12 years of use in Alaska. Clagett, G.P., (1988, p.113-123, eng) 43-4003
Precipitation measured by protected gages and dual-gage system. Hanson, C.L., (1988, p.174-177, eng) 43-4012
Snow concentration and precipitation rate measurements during SNOW IV. Lacombe, J., (1989, p.25-29, eng) 43-4301
Hydrometeorological instrumentation and automation. Strauss, F.A., (1984, p.43-47, eng) 43-4314
Evaluation of the isotopic snow measurement gage. Wheeler, P.A., et al, (1984, p.48-56, eng) 43-4315
Precipitation gages protected by shields and trees. Sturges, D.L., (1984, p.57-67, eng) 43-4316
Impact of automated hydrometeorological instrumentation upon data quality. Buer, S.M., et al, (1984, p.139-148, eng) 43-4324
Transition from manual to automated systems for acquiring snow data. Crook, A.G., et al, (1984, p.165-167, eng) 43-4327
Laser discrimination between rain and snow. Strachan, J.W., et al, (1984, p.180-183, eng) 43-4331
Precipitation (meteorology)
Mesoscale circulations forced by melting snow. Szeto, K.K., et al, (1988, p.1629-1650, eng) 43-36
Modeling studies on the formation, growth, dissipation, and acidification of cumulus clouds. Nair, S.K., (1988, 271p., eng) 43-308
Techniques suitable for forecasting precipitation types using NWP model output. Koclas, P., (1987, p.8-18, eng) 43-385
Glacier lakes ecosystem experiments site: an "experimental" wilderness. Fox, D.G., et al, (1987, p.161-166, eng) 43-580
Monitoring atmospheric precipitation and the length of snow persistence in the Arctic. Brinzgin, N.N., et al, (1988, p.96-105, rus) 43-1176
Orographic precipitation model for hydrometeorological use. Rhea, J.O., (1978, 198p, eng) 43-1363
Rain-snow boundaries during winter storms on the Canadian East Coast. Stewart, R.E., et al, (1988, p.377-398, eng) 43-1428
Disturbance of the homogeneity of horizontal visibility series. Kashevar, V.V., (1988, p.176-180, rus) 43-1781
Air temperature and precipitation in a mountain-glacial area. Barashkova, N.K., et al, (1988, p.74-81, rus) 43-2352
Melting layer of frozen precipitation. Klaassen, W., (1988, p.3741-3753, eng) 43-2360
Estimate of the critical amount of precipitation and short range forecasting of avalanches of newly fallen snow. Brusnov, A.M., et al, (1988, p.45-49, rus) 43-2676
Snow retention in soil-conserving cultivation in Western Siberia. Cherepanov, M.E., (1988, 159p., rus) 43-2708
Summer field season weather observations, West Gulkana Glacier and environs: 1986, 1987. Brazel, A.J., et al, (1988, p.123-142, eng) 43-2799
Air temperature and precipitation in Tian Shan. Liu, C.H., et al, (1988, p.151-159, chi) 43-2850
Precipitation measurements at the source of the Urumqi River. Yang, D.Q., et al, (1988, p 384-399, chi) 43-2853
Ice crystal and water drop velocities. Nisbet, J.S., (1989, p.11-29, eng) 43-2902
Growth and precipitation of ice crystals in supercooled fog. Pashchenko, A.E., et al, (1988, p.75-77, eng) 43-2905
Hydrological cycle as simulated by an atmospheric general circulation model. Mitchell, J.F.B., (1983, p.429-446, eng) 43-3039
Climate of Yukon. Wahl, H.E., et al, (1987, 323p, eng) 43-3081
Impact of wet snow on visible, infrared and millimeter wave attenuation. Bates, R.E., et al, (1988, p.523-535, eng) 43-3432
Cold room studies for sliding snow. Sack, R.L., et al, (1989, p.199-209, eng) 43-3565
Remote sensor observations of supercooled liquid water. Viswanathan, R., (1989, 63p., eng) 43-3607
Liquid precipitation in the thermal and water balance of melting naleds. Defkin, B.N., (1987, p.5-14, rus) 43-3653
Variability of Southwest precipitation and seasonal snowpacks. Jones, R., et al, (1986, p.12-17, eng) 43-3899
Precipitation and hail formation mechanisms in a Colorado storm. Heymsfield, A.J., (1980, p.469-476, eng) 43-3956
Use of new SSARR model automatic updating procedure. Orwig, C.E., et al, (1988, p.52-57, eng) 43-3996
Construction of a United States historical snow data base. Robinson, D.A., (1988, p.50-59, eng) 43-4116
Probability distributions of rain on snow for northcentral Oregon. Zuzel, J.F., et al, (1985, p.37-43, eng) 43-4266
Analysis of water supply forecast accuracy. Schaake, J.C., Jr., et al, (1985, p.44-53, eng) 43-4267
Precipitation types in winter storms. Stewart, R.E., (1985, p.597-609, eng) 43-4415
Experimental study of the scavenging of aerosol particles by natural snow crystals. Sauter, D.P., et al, (1989, p.1650-1655, eng) 43-4418
Winter storm structure and melting-induced circulations. Stewart, R.E., et al, (1989, p.5-23, eng) 43-4459
On the precipitation regions within two storms affecting Atlantic Canada. Donaldson, N.R., et al, (1989, p.108-129, eng) 43-4462
Climatic atlas of Alaskan coastal regions and shelf waters. Brower, W.A., Jr., et al, (1988, 3 vols., eng) 43-4476
Tritium in Vostok precipitation. Hebert, D., (1988, p.15-32, eng) 43-4514
Supercooled warm rain process and the specification of freezing precipitation. Huffman, G.H., et al, (1988, p 2172-2182, eng) 43-4578
Efficiencies of the ASCME and PMS aspirator hydrometeor instruments. Norment, H.G., (1986, p.57-75, eng) 43-4627
See also: Hail; Rain; Snowfall
Prefabrication
Prefabricated metal buildings. Nash, S.E., (1989, p.994-1004, eng) 43-4411
Preserving
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Pressure
Effects of cold weather on a natural gas pipeline. Ney, S.C., et al, (1988, p.749-763, eng) 43-1356
On the pressure drop through a uniform snow layer. Yen, Y.C., (1988, 10p., eng) 43-1401
Pressure buildup in permafrost pile supports induced by freezeback. Ayorinde, O.A., (1989, p.236-251, eng) 43-2106
Crack nucleation in polycrystalline ice under compressive stress states. Kalifa, P., et al, (1989, p.13-21, eng) 43-2604
Thermal effect on high-rise buildings in cold regions. Lee, Y., et al, (1989, p.117-122, eng) 43-4208
See also: Atmospheric pressure; Ice pressure; Soil pressure; Vapor pressure; Water pressure; Wind pressure
Pressure ridges
Ice forces associated with pressure ridges. Abdelnour, R., et al, (1986, p.227-245, eng) 43-271
Impact of external factors on marine hydraulic structures. Smirnov, G.N., ed, (1986, 178p., rus) 43-728
Pressure ridge effect on structures erected on the shelf. Vardanian, S.S., et al, (1986, p.148-158, rus) 43-731
Morphometric characteristics of ice pressure ridges in the Arctic Basin. Grishchenko, V.D., (1988, p.46-55, rus) 43-803
Confined compressive strength of multi-year pressure ridge sea ice samples. Cox, G.F.N., et al, (1988, p.295-301, eng) 43-921
Air cushion vehicles for Arctic operation. Koleser, J., et al, (1988, p.59-71, eng) 43-1425
Model simulation of ramming tests conducted with the USCGC *Polar Star*. Comfort, G., (1988, 146p. + appends., eng) 43-1879
Surface scattering of acoustic waves by the Arctic Ocean ice cover. McClanahan, T.P., (1988, 117p., eng) 43-1922
Structure and strength of first-year ice ridges in the Baltic Sea. Leppäranta, M., et al, (1989, p.169-174, eng) 43-2624
On modeling the energetics of the ridging process. Hopkins, M.A., et al, (1989, p.175-178, eng) 43-2625
Dynamic ride up and crushing of short ice ridges on conical structures. Nordgren, R.P., et al, (1989, p.287-291, eng) 43-2638
Measurements of ridge sails in the Beaufort Sea. Sayed, M., et al, (1989, p.16-21, eng) 43-2706
Sea ice ridging in the Ross Sea, Antarctica, as compared with sites in the Arctic. Weeks, W.F., et al, (1989, p.4984-4988, eng) 43-2725
Global design load selection for arctic mobile drilling platform. Kamesaki, K., et al, (1988, p.371-384, eng) 43-2937
Assessment of the effect of length and orientation of a multi-year ridge on the force acting on conical structures. Abdelnour, R., (1988, p.59-75, eng) 43-3024
Mechanical properties of multi-year sea ice. Richter-Menge, J.A., (1988, p.54-61, eng) 43-3646
Observations of ice floe stress in the Eastern Arctic. Coon, M.D., et al, (1989, p.44-53, eng) 43-3711
Structure of first year pressure ridges in the Baltic Sea. Kankaanpää, P., (1989, p.87-102, eng) 43-3715
Multiyear ridge force variability. Schreiber, R.W., et al, (1989, p.146-155, eng) 43-3720
Morphology of a Baltic Sea ice pressure ridge. Kankaanpää, P., (1988, p.15-33, eng) 43-4380
Prevention
See also: Countermeasures
Primary productivity
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Probes
Electromagnetic pulse sounding for geological surveying. Moffatt, D.L., et al, (1973, 169p., eng) 43-4164
Analyzing vessel performance in snow-covered fast ice and pack ice. Gill, R.J., (1988, p 21-36, eng) 43-4167
Production
See also: Manufacturing
Profiles
Longitudinal profile of Storglaciären, Sweden and climatic factors. Holmlund, P., (1988, p.269-273, eng) 43-1980
Piezocone penetrometer profiles of bottom sediment. Moran, K., et al, (1989, p 88-97, eng) 43-2203
Radar profiling of ice thickness. Arcone, S.A., (1985, 11p, eng) 43-3945
See also: Soil profiles; Stratigraphy
Projectile penetration
Penetration of earth penetrating weapons into frozen soil. Miller, C.W., et al, (1989, 78p., eng) 43-4477
Projects
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Propagation
Millimeter wavelength radar propagation measurements at SNOW IV. Statton, S.R., (1989, p.103-153, eng) 43-4306
See also: Wave propagation
Propellers
Tests of propeller ice loads in laboratory and full scale. Jussila, M., (1988, p.105-122, eng) 43-2008
Ice loads on propellers of small ferry. Jussila, M., et al, (1989, p.351-358, eng) 43-2645
Particularities of ship propulsion in broken ice. Derevianchenko, M.T., et al, (1984, 7p, eng) 43-2693
Modeling of ice class shafting and propeller systems. Final report. Cowper, D.N.B., et al, (1988, 38p., eng) 43-2801
Full-scale and model tests performed with a nozzle and an open propeller simultaneously. Kannari, P., (1988, p.772-781, eng) 43-2972
Ice flow and blockage investigation of shrouded propellers. Laskow, V., (1988, var.p, eng) 43-3204
Instrumentation and analysis of an Arctic Class IV vessel propulsion system. Cowper, D.N.B., (1989, 34p., eng) 43-3364
Modeling the main fixed bearing operation during ice-propeller interaction. Basalygin, G.M., (1988, p.66-73, rus) 43-3630
Model tests on an icebreaker at two friction factors. Tatinclaux, J.C., (1989, p.774-784, eng) 43-3776
Ice loads on propeller blade of small car ferry. Jussila, M., et al, (1989, p 862-872, eng) 43-3784
Icebreakers. (1986, var. p., eng) 43-3854
Prospecting
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Protection
Operational response to hazardous ice features. Pilkington, G.R., (1987, p.349-358, eng) 43-912

All-Union Conference on Avalanches, 2nd, Yangiabad, USSR, May 1985. Proceedings. [1987, 439p., rus] 43-2493
Computer-controlled avalanche protection. Rzhevskiĭ, B.N., et al, [1987, p.154-163, rus] 43-2514
Current status of research on engineering protection from avalanches. Diunin, A.K., et al, [1987, p.283-294, rus] 43-2531
Protection of roads from snow cover, drifts and avalanches. Tsomaia, V.Sh., [1987, p.376-384, rus] 43-2545
Protecting working surfaces from adfreezing rock mass. Berezhnoĭ, IU.I., et al, [1988, p.136-140, rus] 43-2810
See also: Bank protection (waterways); Countermeasures; Environmental protection; Frost protection; Slope protection; Soil stabilization

Protective coatings
Durability of concrete structures. Coating protection against atmospheric acid attack. Orantie, K., et al, [1988, 41p. + appends., eng] 43-1706
Thin coatings in boundary lubrication. Valli, J., et al, [1988, 28p. + appends., fin] 43-1868
Adfreeze strength of sea ice to steel pipe piles. Ohtsuki, F., et al, [1988, p.281-293, eng] 43-2929
Study on hull corrosion and coatings. Levelton, B.H., et al, [1988, Var. p., eng] 43-4474
Bibliography on roofing materials and coatings. [1989, 63p., eng] 43-4608
See also: Surfactants

Protective vegetation
Snow survey data for central taiga of western Yakutia. Konstantinov, P.IA., [1988, p.70-77, rus] 43-528
Effects of caterpillar-tracked transportation on permafrost thawing. Gladkov, V.P., [1988, p.36-48, rus] 43-1538
Problems in protecting railroad stations from snow drifts. Kvon, IA.D., [1988, p.199-202, rus] 43-3279
See also: Forest strips; Snow hedges

Protons
Ice molecular reorientation by proton and deuterium magnetic resonance. Wittebort, R.J., et al, [1988, p.5668-5671, eng] 43-1133
Soliton dynamics of hydrogen-bonded networks. Pnevmatikos, S., [1988, p.1534-1537, eng] 43-1489
One-dimensional ice made clear. Maddox, J., [1988, p.677, eng] 43-1490

Pumps
Using ice to blast off crud. Oguchi, T., [1989, p.49-50, eng] 43-2487
Windy Gap Project streamflow forecasting. Eckhardt, J.R., et al, [1985, p.54-62, eng] 43-4268

Quarries
Performance of quarry excavators, with variable drive loading regimes in the North. Makhno, D.E., [1988, p.70-72, rus] 43-690
Thermo-physical aspects of developing mineral resources. Arens, V.Zh., et al, [1988, 336p., rus] 43-3066

Quaternary deposits
Moraine features and ice ages of the Quaternary in the Taibai Mountain. Ma, Q., et al, [1988, p.66-75, chi] 43-469
Glacially crushed quartz by mountain and continental ice. Mahaney, W.C., et al, [1988, p 810-826, eng] 43-665
Ice-sampling programme in the Thule area, North Greenland. Reeh, N., et al, [1987, p.81-84, eng] 43-748
Fossil glacial cirques at low altitudes in Sweden. Rudberg, S., [1985, p.19-25, swe] 43-1011
Advantages of hornblende etching data in dating glacial deposits. Hall, R.D., et al, [1988, p 458-467, eng] 43-1473
Late glacial history of Copper River Basin, Alaska. Connor, C.L., [1984, 135p., eng] 43-1814
Quaternary paleoceanography of the Atlantic Ocean. Barash, M.S., [1988, 270p., rus] 43-2811
Rock glacier stratigraphy in Colorado. Morris, S., [1987, p.107-125, eng] 43-3049
Stratigraphic record of Quaternary sea levels. Demarest, J.M., II, et al, [1987, p.223-239, eng] 43-3407
Glacial geomorphology of Kunlun Mountains. Ma, Q.H., et al, [1989, p.139-144, eng] 43-3453
Soils and quaternary geology: a handbook for field scientists. Catt, J.A., [1986, 267p., eng] 43-3530
Quaternary history and ice dynamics of the late Wisconsin Rainy and Superior lobes, central Minnesota. Mooers, H.D., [1989, 262p., eng] 43-3613
Pleistocene frost fissures in Poland. French, H.M., et al, [1988, p 2017-2027, eng] 43-3674
Hypergene corundum in quaternary perennially frozen rocks in Yakutia. Zigert, Kh., et al, [1989, p.944-948, rus] 43-4188
Late Cenozoic history of the interior basins of Alaska and the Yukon. Carter, L.D., ed, [1989, 114p., eng] 43-4478
Structural features of the northern Pleistocene in relation to the stratigraphy problem. Astakhov, V.I., [1984, p.3-11, rus] 43-4501
Quaternary glaciation of Mt. Qomolangma-Xixabangma region. Zheng, B., [1988, p.525-543, eng] 43-4567

Radar
Cross-polar radar measurements in ice and rain. Goddard, J.F.W., et al, [1988, p.235-236, eng] 43-1510
Analysis of Seasat SAR sea-ice data from the Beaufort Sea. Partington, K.C., [1988, p.413-416, eng] 43-1516
Swath altimetry of oceans and terrain. Rapley, C.G., et al, [1987, p.319-322, eng] 43-1793
Quantitative use of satellite SAR imagery of sea ice. Fily, M., et al, [1987, p.323-326, eng] 43-1794
Development of a Canadian Arctic bridge navigation simulator. Menon, B., et al, [1988, 53p. + appends., eng] 43-1807
Synthetic aperture radar capabilities for snow and glacier monitoring. Rott, H., [1984, p.241-246, eng] 43-1933
Hail research and hail suppression. Waldvogel, A., [1987, p.87-109, eng] 43-2250
Melting layer of frozen precipitation. Klaassen, W., [1988, p.3741-3753, eng] 43-2360
Precise radar integrated navigation system (NAVFIX) for coastal and inshore navigation. Lyall, R.G., et al, [1988, var.p., eng] 43-3210
Radar profiling of ice thickness. Arcone, S.A., [1985, 11p., eng] 43-3945
Design and operation of a portable, digital impulse radar. Jones, F.H.M., et al, [1989, p.143-148, eng] 43-4151
Final report on continued development of an ice thickness radar system. Iizuka, K., et al, [1986, var. p., eng] 43-4159
Step frequency radar for determining the thickness of saline ice. Iizuka, K., [1984, var. p., eng] 43-4160
Millimeter wavelength radar propagation measurements at SNOW IV. Statton, S.R., [1989, p.103-153, eng] 43-4306
See also: Airborne radar; Side looking radar

Radar echoes
Estimating sea ice motion in SAR imagery by matched filtering. Collins, M.J., et al, [1988, p.9241-9251, eng] 43-17
Microwave radiances from horizontally finite, vertically structured precipitating clouds. Kummerow, C.D., [1988, 162p., eng] 43-306
Airborne lidar studies of Arctic polar stratospheric clouds. Poole, L.R., [1988, 237p., eng] 43-341
Dynamics of supercooled fog dispersal from lidar data. Alekseev, A.P., et al, [1987, p.190-195, rus] 43-604
Results of radar sounding of drifting sea ice from its surface. Bogatyrev, E.F., et al, [1988, p.148-151, rus] 43-813
Radar measurements of sea ice thickness from an icebreaker. Kraĭniukov, A.V., et al, [1988, p.152-156, rus] 43-814
Influence of agrometeorological conditions on space photographs of agricultural regions in winter. Pichugin, A.P., et al, [1988, p.58-65, rus] 43-816
Structure of the Davydov glacier from data of radar echo sounding and thermal drilling. Vasilenko, E.V., et al, [1988, p.208-215, rus] 43-964
Radar characteristics of wet and dry hailstones. Vorob'ev, B.M., [1988, p.133-141, rus] 43-1433
Radar backscatter from sea ice. Gogineni, S.P., [1986, p.107-114, eng] 43-1479
IGARSS '88 remote sensing: moving towards the 21st century Vol.1. [1988, 632p., eng] 43-1504
Some advantages of using polarisation diversity illustrated through the analysis of radar data from a storm in Central Alberta. Holt, A.R., et al, [1988, p 237-240, eng] 43-1511
Dual linear polarisation time series as an aid to hydrometeor identification. Caylor, I.J., et al, [1988, p.241-242, eng] 43-1512
Processing and interpretation of alternately polarised weather radar echoes. Zrnic, D.S., et al, [1988, p.243-246, eng] 43-1513
STAR-VUE/MARINE-VUE upgrades. McAvoy, J.G., [1987, 81p., eng] 43-1708
IGARSS '88 remote sensing: moving towards the 21st century; Vol.3. [1988, p.1231-1858, eng] 43-1889
Step frequency radar experiments on the antarctic sea ice. Uratsuka, S., et al, [1988, p.1703-1706, eng] 43-1900
Over-the-horizon target detection from a floating platform. Khan, R.H., et al, [1989, p.221-228, eng] 43-2630
Automation of radar measurements of the thickness of sea ice. Bogorodskiĭ, V.V., et al, [1987, p.982-985, eng] 43-2844
Air-sea observation system of Hokkaido University. Aota, M., et al, [1988, p.651-660, eng] 43-2963
Development of UHF band step frequency radar for the measurement of sea ice thickness. Mineno, H., et al, [1987, p.275-283, jpn] 43-3161
Fenetrating radar sensing of oceanic and freshwater ice. Bogorodskiĭ, V.V., et al, [1987, 314p., eng] 43-4183
Millimeter wave snow data collection program description: Snowman I. Green, A.H., et al, [1986, p.273-290, eng] 43-4641
Mm wave tower snow data collection program. Trostel, J.M., et al, [1986, p.291-300, eng] 43-4642
Analysis of snow ground truth data. Gimmestad, G.G., [1986, p.301-310, eng] 43-4643
Observations of the backscatter from snow at millimeter wavelengths. Berger, R.H., et al, [1986, p.311-316, eng] 43-4644
Comments on the characteristics of *in situ* snow at millimeter wavelengths. Walsh, J., et al, [1986, p.317-320, eng] 43-4645
Radar backscattering from snow-covered ice. Lin, F.C., et al, [1986, p.321-328, eng] 43-4646
Forward reflection coefficient of snow at 35 GHz. Snieder, J., et al, [1986, p.353-369, eng] 43-4649

Radar photography
Studying discontinuities of sea ice cover from radar data. Brestkin, S.V., et al, [1988, p.94-103, rus] 43-808
Use of radar and automatic weather stations in avalanche forecasting. Kappenberger, G., et al, [1987, p.305-310, eng] 43-1239
SAR imagery of the Grand Banks pack ice pack and its relationship to surface features. Argus, S.D., et al, [1988, p.1425-1428, eng] 43-1892
Investigation of large-scale flows of sea ice from satellite television photographs. Karelin, I.D., [1989, p.115-124, eng] 43-4372

Radar tracking
Radar detection of ice masses. Klein, K., et al, [1988, 240p. + appends., eng] 43-2257

Radiance
Nimbus 7 SMMR radiance and Landsat derived sea ice concentrations. Steffen, K., et al, [1988, p.10,769-10,781, eng] 43-508
Photosynthesis of tundra mosses, Philip Smith Mountains, Alaska. Harley, P.C., et al, [1989, p.251-259, eng] 43-4074

Radiation
Gamma exposure measurements in subantarctic and continental Chile. Stuardo B, E., [1988, p.9-22, spa] 43-1117
Radiative properties of antarctic atmosphere and snow. Yamanouchi, T., [1988, p.248-249, eng] 43-1645
Phase function of two dimensional snow crystals. Winchester, L.W., Jr., [1986, p.101-109, eng] 43-4630
See also: Gamma irradiation; Infrared radiation; Light (visible radiation); Microwaves; Neutron irradiation; Radio waves; Solar radiation; Thermal radiation; Ultraviolet radiation

Radiation absorption
Radiative effects of Arctic haze during pollution episode, spring 1983. Wendling, P., et al, [1985, p.2181-2193, eng] 43-1002
Effect of the microstructure of supercooled clouds on albedo and radiation. Kondrat'ev, K.IA., et al, [1988, p.583-587, rus] 43-1905
Correlation of rates of absorbed radiation and radiation balance on glacial surfaces. Dikikh, L.L., [1988, p.49-56, rus] 43-2387
Solar penetrating radiation in snow layers. Xie, Y.Q., et al, [1988, p.135-142, chi] 43-2848
Carbon dioxide in the arctic environment. Kelley, J.J., [1987, p.341-354, eng] 43-4290
Comments on the characteristics of *in situ* snow at millimeter wavelengths. Walsh, J., et al, [1986, p.317-320, eng] 43-4645

Radiation balance
Radiation balance of melting snow, Sierra Nevada, CA. Aguado, E., [1985, p.1649-1654, eng] 43-180
Antarctic oases, Davis Station and the Vestfold Hills. Pickard, J., [1986, p.1-19, eng] 43-1189
Climate of the Vestfold Hills. Streten, N.A., [1986, p.141-164, eng] 43-1190
Albedo of underlying surfaces of the USSR. Morozova, I.V., et al, [1988, p.69-81, rus] 43-1776
Correlation of rates of absorbed radiation and radiation balance on glacial surfaces. Dikikh, L.L., [1988, p.49-56, rus] 43-2387
Summer radiation balance, West Gulkana Glacier. Miller, T.A., [1988, p.47-61, eng] 43-2793
Valley wall longwave flux contributions, West Gulkana Glacier, Alaska. Henderson, J.P., et al, [1988, p.63-80, eng] 43-2794
Glacier radiation balance in Kunlun Mountains. Xie, Y.Q., et al, [1989, p.83-87, eng] 43-3445
Arctic haze: air pollution in polar regions. Heintzenberg, J., [1989, p.50-55, eng] 43-3832
Radiation balance of alpine tundra in Canadian Rockies. Bailey, W.G., et al, [1989, p.126-134, eng] 43-4086
Summer energy balance of alpine tundra in Canadian Rockies. Bowers, J.D., et al, [1989, p.135-143, eng] 43-4087
Radiative energy budget in the cloudy and hazy Arctic. Tsay, S.C., et al, [1989, p.1002-1018, eng] 43-4288
Radiative energy budget in the cloudy and hazy Arctic. Tsay, S.C., et al, [1989, p.1002-1018, eng] 43-4402
On the geoecology of southern Tibet. Kuhle, M., et al, [1988, p.597-613, eng] 43-4571

Radiation measurement
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Radiation measuring instruments
Measuring radiation flux in snow cover of the Vavilov glacier. Nazarov, V.D., [1989, p.55-63, eng] 43-2047
Radiative measurement of snow surface temperature. Zachek, S.I., et al, [1987, p.235-240, rus] 43-2524

Radiation measuring instruments *(cont.)*
Final report on continued development of an ice thickness radar system. Iizuka, K., et al, [1986, var. p., eng] 43-4159
Radio beacons
Using ice beacons to study ice drift tracks off Labrador. Prinsenberg, S.J., et al, [1988, p.61-70, eng] 43-4170
Radio communication
Polar orbiting sstellites improve polar communications. Hathaway, R.G., [1986, p.372-375, eng] 43-2330
Improving placer and ore mining technology. Kirzhner, F.M., ed, [1987, 106p., rus] 43-2779
Radio communication system for mines. Korennov, B.I., [1988, p.85-86, rus] 43-2785
Radio echo soundings
Estimation of water equivalent in snow with radar. Ulriksen, C.P.F., [1985, p.140-150, eng] 43-370
Radio scattering of antarctic ice sheet. Uratsuka, S., et al, [1988, p.157-160, eng] 43-1506
Radio echo-sounding as a glaciological technique—a bibliography. Macqueen, A.D., [1988, 37p., eng] 43-1806
Dielectric variability of a 130 m antarctic ice core: implications for radar sounding. Moore, J.C., [1988, p.95-99, eng] 43-1951
Enhanced radar scattering from water inclusions in ice. Bamber, J.L., [1988, p.293-296, eng] 43-1984
Portable digital data-acquisition system for surface-based ice-radar studies. Jacobel, R.W., et al, [1988, p.349-354, eng] 43-1992
Some morphometric characteristics of the Novolazarevskaya Ice Shelf. Eskin, L.I., et al, [1989, p.71-76, eng] 43-2049
Investigating variations in the gravitational constant. Cooper, A.P.R., et al, [1989, p.55-58, eng] 43-2219
Bedrock topography beneath Greenland ice sheet. Fisher, E., et al, [1989, p.2874-2882, eng] 43-2394
Data report for the Siple Coast Project. Bindschadler, R.A., et al, [1988, 102p., eng] 43-3235
Radio echo surveys of the Abramov Glacier by low-frequency radar. Vasilenko, E.V., et al, [1988, p.174-182, rus] 43-3275
Radio echo sounding of Nordaustlandet glaciers. Macheret, IU.IA., et al, [1988, p.44-56, rus] 43-3302
Mathematical processing of radio echo surveys of glaciers. Kuz'michenok, V.A., et al, [1988, p.151-155, rus] 43-3322
Bed reflection from radio echo sounding of Shirase Glacier. Ohmae, H., et al, [1989, p.124-126, eng] 43-3346
Radar reflectivity of snow at millimeter wave frequencies. Greneker, E.F., III, et al, [1989, p.123-132, eng] 43-3882
Radar backscatter in snow at millimeter wave frequencies. Berger, R.H., et al, [1989, p.133-136, eng] 43-3883
Radio echo-sounding of Erebus Glacier Tongue. DeLisle, G., et al, [1989, p.15-30, eng] 43-3884
Synthetic-aperture radio-echo experiment at Storglaciären, Sweden. Walford, M.E.R., et al, [1989, p.43-47, eng] 43-4139
Radio waves
Experimental study of propagation characteristics on roads on a snowy mountain. Ohtaki, Y., et al, [1988, p.137-144, eng] 43-18
Thermal microwave emission of the soil-snow-atmosphere system. Gershenzon, V.E., et al, [1988, p.84-89, rus] 43-817
Radar characteristics of wet and dry hailstones. Vorob'ev, B.M., [1988, p.133-141, rus] 43-1433
Depolarization of radio waves due to ice particles. Maekawa, Y., et al, [1988, p.1272-1275, eng] 43-2279
Radiometric analysis of the level of tropospheric refraction of radio waves in polar regions. Mikhallov, N.F., et al, [1988, p.90-95, rus] 43-2726
Experimental studies of tropospheric refraction in the littoral zone of Antarctica. Mikhallov, N.F., [1988, p.96-103, rus] 43-2727
Investigations of dielectric properties of some frozen materials. Arcone, S.A., et al, [1989, 18p., eng] 43-3476
Omega navigation in the shadow of Antarctica. Barr, R., et al, [1989, p.236-247, eng] 43-3822
See also: Microwaves
Radioactive age determination
Changes in glacial and climatic conditions of Spitsbergen in the Subboreal period. Surova, T.G., et al, [1987, p.108-112, rus] 43-239
Radiocarbon data on ice-enclosing deposits and age of bedded ice. Karpov, E.G., [1985, p.44-49, eng] 43-663
Tandem-accelerator mass-spectrometry measurements of Cl-36, I-129 and osmium isotopes in diverse natural samples. Gove, H.E., [1987, p.103-119, eng] 43-773
Interpreting the production of 26Al in antarctic meteorites. Heydegger, H.R., [1987, 14p., eng] 43-1676
Radio-carbon dated gelifluction lobe in Labrador. Evans, D.J.A., et al, [1988, p.657-662, eng] 43-2000
Radioactive ice. Davidson, C.I., [1988, p.98-99, eng] 43-2587
Radiocarbon date list 3: Labrador and northern Quebec, Canada. Andrews, J.T., comp, [1989, p.1-12, eng] 43-3426
Radiocarbon date list 5: Baffin Island, N.W.T., Canada. Andrews, J.T., comp, [1989, p.13-85, eng] 43-3427
Distribution and ages of volcanoes in Kunlun Mountains. Liu, J.Q., et al, [1989, p.187-190, eng] 43-3459
Dating of ice by radioactive isotopes. Stauffer, B., [1989, p.123-139, eng] 43-3684
Radioactive fallout
See also: Fallout
Radioactive isotopes
Gravitational separation of gases and isotopes in polar ice caps. Craig, H., et al, [1988, p.1675-1678, eng] 43-1202
Dating of ice by radioactive isotopes. Stauffer, B., [1989, p.123-139, eng] 43-3684
Radioactive labeling
See also: Isotopic labeling
Radioactive wastes
Contamination of sea by radioactive wastes. Vakulovskiĭ, S.M., et al, [1989, p.620-622, eng] 43-2235
Radioactivity
Chernobyl reactor accident; contamination of snow cover on Alpine glaciers. Ambach, W., et al, [1987, p.276-281, ger] 43-1280
Radioactive deposits in glacier firn following the Chernobyl reactor accident. Eisner, H., et al, [1988, p.12-13, ger] 43-1281
Chernobyl fallout on Alpine glaciers. Ambach, W., et al, [1989, p.27-31, eng] 43-1791
Radiocarbon dating
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Radiometers
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Radiometry
Sea-ice analysis software—ICEMAN. Lee, M., [1988, p.1717-1720, eng] 43-1903
Dynamics of supercooled water in wintertime storms over the Sierra Nevada. Heggli, M.F., et al, [1988, p.989-1015, eng] 43-2398
Radiophysical determination of snow cover parameters. Erastova, N.B., et al, [1987, p.228-235, rus] 43-2523
Optical test methods for buildings and structures. Testing the quality of thermal insulation. IAlyshev, F.Kh., [1988, 80p., rus] 43-2575
Radiometric analysis of the level of tropospheric refraction of radio waves in polar regions. Mikhallov, N.F., et al, [1988, p.90-95, rus] 43-2726
Radiothermal detection studies of ice cover properties. Gordeichik, D.E., et al, [1988, p.126-131, rus] 43-2728
Algorithm for snow and ice detection using AVHRR data. Gesell, G., [1989, p.897-905, eng] 43-4104
Multi-spectral classification of snow. Harrison, A.R., et al, [1989, p.907-916, eng] 43-4105
Identification of ancient glacier marks using AVHRR imagery. Johnston, A.C., et al, [1989, p.917-929, eng] 43-4106
Polar microwave brightness temperatures from Nimbus-7 SMMR. Comiso, J.C., et al, [1989, 82p., eng] 43-4155
Reducing dew and frost on the domes of net pyrradiometers. McGinn, S.M., et al, [1989, p.528-531, eng] 43-4405
Passive microwave *in situ* observations of winter Weddell Sea ice. Camiso, J.C., et al, [1989, p.10,891-10,905, eng] 43-4526
Blending radiometer and buoy data into a sea ice model. Thomas, D.R., et al, [1989, p.10,907-10,920, eng] 43-4527
Processing satellite data for sea ice research in the marginal ice zone. Kergomard, C., [1989, p.321-326, eng] 43-4579
Scattering, turbulence, and refractive effects at SNOW III West. Crow, S.B., et al, [1986, p.113-127, eng] 43-4631
Rafting
See also: Ice rafting
Railroad cars
Transport of freezing cargoes: a handbook. Noskov, IU.A., ed, [1988, 206p., rus] 43-2895
Railroad equipment
BR goes electric in switch heating. [1988, p.18-20, eng] 43-1847
Taming winter weather. [1988, p.24-28, eng] 43-1849
Heating of railway switches by CFF during snowstorms. Stalder, O., et al, [1988, p.33-35, fre] 43-1877
Transport of freezing cargoes: a handbook. Noskov, IU.A., ed, [1988, 206p., rus] 43-2895
Railroad tracks
BR goes electric in switch heating. [1988, p.18-20, eng] 43-1847
Problems in protecting railroad stations from snow drifts. Kvon, IA.D., [1988, p.199-202, rus] 43-3279
Railroad track snow-melting system. Sawase, K., et al, [1988, p.343-348, eng] 43-3820
Railroad tunnels
Icicle prevention in railway tunnels by adiabatic treatment. Okada, K., [1987, p.5-9, eng] 43-450
Dynamic state of air temperature in railroad tunnels in cold regions. Nie, F.M., [1988, p.450-453, chi] 43-2856
Thermo-physical aspects of developing mineral resources. Arens, V.Zh., et al, [1988, 336p., rus] 43-3066
Insulation against ice in railroad tunnels. Sandegren, E., [1987, p.43-48, eng] 43-3816
Railroads
Self-cooling filling dams. Guletskiĭ, V.V., et al, [1988, p.7-8, rus] 43-23
Snow-storm control for protecting railroad stations from drifts. Al'tshuler, Z.E., et al, [1987, p.161-165, rus] 43-251
Damage action of ground ice on railway in the district of Yitulihe and its prevention. Yuan, F., [1987, p.103-104, chi] 43-493
Use of cellular plastic in Swedish railways to insulate the track against frost. Sandegren, E., [1987, p.28-32, eng] 43-1389
Maintenance of a railway grade over permafrost in Canada. Hayley, D.W., [1988, p.43-48, eng] 43-1723
Methods of supplying climatic data for railroad transportation. Ziabrikov, V.IA., et al, [1988, p.137-149, rus] 43-1778
RER keeps out snow. [1988, p.23, eng] 43-1848
Rail pull-aparts: old problem, new solution. [1988, p.26, eng] 43-2406
Protecting the Novokuznetsk-Abakan railroad from snow avalanches. Kvon, IA.D., et al, [1987, p.328-333, rus] 43-2536
Preventive avalanche triggering along railroads of the USSR. Gerber, A.R., [1987, p.337-339, rus] 43-2538
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Rain
Cross-polar radar measurements in ice and rain. Goddard, J.F.W., et al, [1988, p.235-236, eng] 43-1510
Estimation of rainfall rates from passive microwave remote sensing. Sharma, A.K., [1988, 220p., eng] 43-1916
Azonal factors in rain runoff formation in the Kolyma water balance station. Boiarintsev, E.L., [1988, p.67-94, rus] 43-3637
Rainfall and snowmelt frequency in an alpine watershed. Payton, E.A., et al, [1985, p.25-36, eng] 43-4265
Probability distributions of rain on snow for northcentral Oregon. Zuzel, J.F., et al, [1985, p.37-43, eng] 43-4266
Temperature indices of snowmelt during rainfall. Kattelmann, R., [1985, p.152-155, eng] 43-4279
Snow accumulation and melt during rainfall in forests. Harr, R.D., et al, [1983, p.38-45, eng] 43-4351
Snowmelt during rain on snow in coastal British Columbia. Beaudry, P., et al, [1983, p.55-66, eng] 43-4353
Rain on snow: shallow, transient snowpacks with frozen soils. Zuzel, J.F., et al, [1983, p.67-75, eng] 43-4354
Rain-on-snow flood event in central Arizona. Ffolliott, P.F., et al, [1983, p.130-138, eng] 43-4360
Hydrologic response of central Sierra Nevada snowpacks to rainfall. Bergman, J.A., [1983, p.141-144, eng] 43-4362
Snow water equivalent model during rain-on-snow events. Berg, N.H., et al, [1983, p.155-158, eng] 43-4366
Supercooled warm rain process and the specification of freezing precipitation. Huffman, G.H., et al, [1988, p.2172-2182, eng] 43-4578
Raindrops
Features of supercooled raindrops during mid-winter in Arctic Canada. Kajikawa, M., et al, [1988, p.393-398, eng] 43-1170
Processing and interpretation of alternately polarised weather radar echoes. Zrnic, D.S., et al, [1988, p.243-246, eng] 43-1513
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Recording
Possibility of effectively controlling avalanches by means of remote recording of the electromagnetic emission. Kardanov, IU.B., et al, [1988, p.42-46, rus] 43-2564
Recording instruments
Study of noise characteristics of antarctic ice sheets in radiowave decimeter range. Bogorodskiĭ, V.V., et al, [1988, p.92-99, rus] 43-2228
Progress in the study of instruments for glaciology and geocryology. Wang, L.W., [1988, p.362-363, chi] 43-2883
Records (extremes)
Great Arctic outbreak and East Coast blizzard of February 1989. Kocin, P.J., et al, [1988, p.305-318, eng] 43-4433
Climatic atlas of Alaskan coastal regions and shelf waters. Brower, W.A., Jr., et al, [1988, 3 vols., eng] 43-4476
Recrystallization
Fish antifreeze proteins and the creep of polycrystalline ice. Glen, J.W., et al, [1988, p.291-292, eng] 43-1983

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Measurement of snowpack properties by multi-channel IR-spectroscopy Hyvärinen, T, (1988, 68p. + append., fin) 43-789
Precise radar integrated navigation system (NAVFIX) for coastal and inshore navigation. Lyall, R.G., et al, (1988, var.p., eng) 43-3210
Precise radar integrated navigation system (NAVFIX) for coastal and inshore navigation. Lyall, R.G., et al, (1988, var.p, eng) 43-3210
Effects of water and ice on the scattering of diffuse reflectors. Jezek, K.C., et al, (1986, p.259-269, eng) 43-4640
Snow as an acoustically porous material. Lee, S.M., et al, (1986, p.343-352, eng) 43-4648
Forward reflection coefficient of snow at 35 GHz. Snieder, J., et al, (1986, p.353-369, eng) 43-4649
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Snow reflectivity data using a microcomputer. Trostel, J.M., (1988, p 453-454, eng) 43-1529
Spectral reflectance of snow-covered/snow-free terrain. Rott, H., et al, (1987, p.115-121, eng) 43-1677
Radar backscatter characteristics of snow covered terrain at 94 gigahertz. Green, A.H., Jr., et al, (1984, p.115-119, eng) 43-3478
Millimeter wave snow data collection program description: Snowman I. Green, A.H, et al, (1986, p.273-290, eng) 43-4641
Mm wave tower snow data collection program. Trostel, J.M., et al, (1986, p.291-300, eng) 43-4642
Analysis of snow ground truth data. Gimmestad, G.G., (1986, p.301-310, eng) 43-4643
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Estimating Cn square over snow and sea ice from meteorological quantities. Andreas, E.L., (1988, p.258-267, eng) 43-2025
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Refrigeration
Heat transfer and observed values of a refrigerated LPG underground tank. Goto, S., et al, (1988, p.331-337, eng) 43-94
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Implications of warm weather during Canadian Arctic winter. Gilbert, R., et al, (1988, p.395-403, eng) 43-2480
Reinforced concretes
Composite ice-resisting walls. O'Flynn, B., (1988, 7p, eng) 43-118
Behaviour of transversely loaded continuous steel-concrete composite plates. Kennedy, S.J., (1988, 7p, eng) 43-120
Repair of winter damage. Grunau, E.B., (1988, p.21-26, ger) 43-124
Reinforced concretes for the containment of cryogenic liquids offshore. Berner, D.E., (1988, p.173-178, eng) 43-709
Impact of external factors on marine hydraulic structures. Smirnov, G.N., ed, (1986, 178p., rus) 43-728
Nonlinear method of designing foundation platforms for elevators. Vysokovskiĭ, V.L., et al, (1985, p.88-97, rus) 43-1663
Service life of concrete structures with regard to corrosion of reinforcement. Vesikari, E., (1988, 53p., eng) 43-1707
High-strength concrete-steel bond behavior at low temperature. Shih, T.S., et al, (1988, p.157-168, eng) 43-2064
Mechanical properties of high-strength concrete at low temperature. Lee, G.C., et al, (1988, p.169-178, eng) 43-2065
Effect of deicing chemicals on reinforced concrete. Nadezhdin, A., et al, (1988, p.31-37, eng) 43-2210
Holographic study of frost damage. Rastogi, P.K., et al, (1988, p.142-143, eng) 43-2588
Gamma Tower for Northern Norway. Des Déserts, L, et al, (1989, p.147-154, eng) 43-2621
Concrete and reinforced concrete studies. Sovalov, I.G., et al, (1988, 335p. (Pertinent p.261-281), rus) 43-2806
Using reinforced concrete foundations in industrial structures as grounding. Kariakin, R.N., et al, (1988, 127p, rus) 43-2807
Bond behaviour of reinforced concrete at low temperature. Van der Veen, C., et al, (1989, p.852-861, eng) 43-3783
Frost damage to concrete in splash zone. Saeki, N., et al, (1988, p 289-302, eng) 43-4058
Evaluation of deterioration for frost damaged concrete structure. Sakurai, H., et al, (1988, p.303-330, eng) 43-4059
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Applications of microwaves to remote sensing Schanda, E., (1987, p.399-403, eng) 43-20
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Geographic interpretation of remote sensing data on river estuaries and shelf zones. Krasnozhon, G.F., (1988, p.41-58, rus) 43-109
Snowmelt-runoff forecast model with remote sensing input. Rango, A., (1988, p.65-76, eng) 43-301
Comments on Della Ventura's paper on Alpine glaciers. Rott, H., (1988, p.1167-1174, eng) 43-337
Ice conditions along the Allegheny and Monongahela Rivers. Gatto, L.W., (1988, 106p, eng) 43-431
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Electrical properties of rocks from remote sensing data. Batuev, B-Sh.Ch., et al, (1988, p.123-130, rus) 43-536
Reflectances of glaciers as calculated using Landsat-5 thematic mapper data. Hall, D.K., et al, (1988, p.311-321, eng) 43-544
Ice reconnaissance and forecasts in Storfjorden, Svalbard. Håkansson, B., (1988, p 447-454, eng) 43-639
Argos and the 1990's system efficiency in polar regions. Vassal, C., (1988, p.455-470, eng) 43-640
Acoustic remote sensing instruments for monitoring of polar drift ice. Kvinge, T., et al, (1988, p.485-493, eng) 43-642
Integrated remote sensing for Barents Sea ice. Olaussen, T., et al, (1988, p.495-506, eng) 43-643
KRMS GEOSAT-LIMEX '87 quick look report. Farmer, L.D., et al, (1988, 47p., eng) 43-707
Phytoplankton within an antarctic ice edge. Sullivan, C.W., et al, (1988, p.12,487-12,498, eng) 43-723
Ice budget of the Greenland Sea. Moritz, R.E., (1988, 117p., eng) 43-780
Alaska synthetic aperture radar (SAR) facility project. Carsey, F., et al, (1987, p.593-596, eng) 43-781
Detection and identification of Arctic landforms. Dean, K.G., et al, (1988, p.363-371, eng) 43-832
Atmospheric remote sensing in arctic regions. Felde, G.W., et al, (1987, p.319-326, eng) 43-867
Remote sensing of ice covered seas. Weeks, W.F., et al, (1987, p.327-332, eng) 43-868
Space remote sensing workshop: working group report. Breslau, L.R., et al, (1987, p.333-339, eng) 43-869
Remote sensing of extreme ice hazards. Leavitt, E., et al, (1987, p.335-347, eng) 43-911
Remote sensing of ice and snow (review). Jezek, K.C., (1987, p.51, eng) 43-919
Winter circulation in Lake Ontario. Simons, T.J., et al, (1985, p.423-43[illegible]) 43-1006
Manual interpretation of small forestlands on Landsat MSS data. Kateris, M.A., (1988, p.751-755, eng) 43-1125
Digitization of remote images of hydrological objects. Grumăzescu, H., et al, (1986, p.29-35, eng) 43-1206
Microwave sensors for measuring avalanche-critical snow parameters. Mätzler, C., (1987, p.149-160, eng) 43-1227
Remote monitoring of depth of snow on ground with a micrologger. Edey, S.N., et al, (1987, p.297-214, eng) 43-1297
Trends in snow surveying in Canada. Goodison, B.E., et al, (1987, p.231-253, eng) 43-1299
Physical properties of snow cover. Gordeĭchik, D.E., et al, (1988, p.83-97, rus) 43-1383
Monitoring snow-cover pollution. Vasilenko, V.N., et al, (1988, p.61-71, eng) 43-1454
IGARSS '88 remote sensing: moving towards the 21st century Vol.1. (1988, 632p., eng) 43-1504
SAR-seen multi-mode waves in ice: evidence of imaging non-linearities. Rancy, R.K., et al, (1988, p.141-144, eng) 43-1505
Seasonal and long-term changes in land cover. Yokota, T., et al, (1988, p.215-216, eng) 43-1509
Cross-polar radar measurements in ice and rain. Goddard, J.F.W., et al, (1988, p 235-236, eng) 43-1510
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Interpretation of Icelandic tundra features from Landsat MSS data. Vaughan, R.A., et al, (1988, p.375-376, eng) 43-1514
SAR image statistics related to atmospheric drag over sea ice. Burns, B A., et al, (1988, p.409-412, eng) 43-1515
Analysis of Seasat SAR sea-ice data from the Beaufort Sea. Partington, K.C., (1988, p 413-416, eng) 43-1516
Remote sensing of sea ice motion using floe edge and pressure ridge features in SAR images. Vesecky, J.F., et al, (1988, p 417-418, eng) 43-1517
Microwave dielectric properties of low-salinity sea ice. Hallikainen, M.T., et al, (1988, p.419-420, eng) 43-1518
Sea ice remote sensing of the Canadian East Coast. McNutt, L., et al, (1988, p.421-422, eng) 43-1519
35-GHz helicopter-borne polarimeter radar. Hallikainen, M.T., et al, (1988, p.423-424, eng) 43-1520
Sea ice type classification of SAR imagery. Wackerman, C.C., et al, (1988, p.425-428, eng) 43-1521
Improvement in NOAA-AVHRR snowcover determination for runoff prediction. Frank, C., et al, (1988, p 433-435, eng) 43-1522
Microwave emission behaviour of snow. Hallikainen, M.T., et al, (1988, p 437-438, eng) 43-1523
Snowmelt runoff estimation to control dam water level. Kawata, Y., et al, (1988, p.439-440, eng) 43-1524
Polarisation of passive microwave signals as indicator of snow water equivalent. Danes, Z.F., et al, (1988, p 441-442, eng) 43-1525
Monitoring of seasonal snow cover on glaciers. Haefner, H., et al, (1988, p.443-445, eng) 43-1526
Water equivalent of snow in mountains using microwaves and satellite data. Rango, A., et al, (1988, p.447-448, eng) 43-1527
Millimeter-wave backscatter measurements of various snow forms. Narayanan, R.M., et al, (1988, p.451-452, eng) 43-1528
Snow reflectivity data using a microcomputer. Trostel, J.M., (1988, p.453-454, eng) 43-1529
Snow cover to alter terrain signatures on radar images. Geile, W., (1988, p 455-457, eng) 43-1530
Microcomputers (PCs) for snow cover analyses using multisensor satellite data. Baumgartner, M.F., et al, (1988, p.459-460, eng) 43-1531
Checking the floe of ice: real-time processing of digital image data. Ramsay, B.R., et al, (1988, p.17-20, eng) 43-1573
Study on ice meltponds. Lapp, D., (1982, 62p. + appends, eng) 43-1666
Swath altimetry of oceans and terrain. Rapley, C.G., et al, (1987, p.319-322, eng) 43-1793
Quantitative use of satellite SAR imagery of sea ice. Fily, M., et al, (1987, p.323-326, eng) 43-1794
Report of the International Ice Patrol in the North Atlantic. Season of 1986. (1988, 71p, eng) 43-1817
Effects of ice structure on microwave signatures of sea ice. Bowline, C., (1986, p.64-67, eng) 43-1828
IGARSS '88 remote sensing: moving towards the 21st century; Vol.3. (1988, p.1231-1858, eng) 43-1889
Radar observations of Arctic sea ice during winter MIZEX '87. Shuchman, R.A., et al, (1988, p.1419-1422, eng) 43-1890
Mapping of seasonal sea ice off Labrador with C-band SAR imagery. Holt, B., et al, (1988, p.1423-1424, eng) 43-1891
SAR imagery of the Grand Banks pack ice pack and its relationship to surface features. Argus, S.D., et al, (1988, p.1425-1428, eng) 43-1892
Ice information during severe ice event, from SAR imagery. Carsey, F., et al, (1988, p.1431-1433, eng) 43-1893
SAR imaging of ocean waves in the Marginal Ice Zone. Lyden, J., et al, (1988, p.1435-1437, eng) 43-1894
Estimating sea ice concentration from satellite passive microwave data and a physical model. Rothrock, D.A., et al, (1988, p.1677-1683, eng) 43-1895
Shipborne passive microwave sea ice experiment in the East Greenland Sea: May-July 1987. Garrity, C., (1988, p.1691-1692, eng) 43-1897

Remote sensing *(cont.)*
Preliminary observations of polar sea ice with the special sensor microwave imager. Cavalieri, D.J., [1988, p.1693-1694, eng] 43-1898
Method to forecast open pack ice speed of motion using remotely-sensed data. Feldman, U., [1988, p.1695-1702, eng] 43-1899
Step frequency radar experiments on the antarctic sea ice. Uratsuka, S., et al, [1988, p.1703-1706, eng] 43-1900
Real-time analysis of digital sea ice image data. Ramsay, B., et al, [1988, p.1707-1711, eng] 43-1901
Toward the automated use of remote sensing data in operational ice forecasting McNutt, L., et al, [1988, p.1713-1715, eng] 43-1902
Sea-ice analysis software—ICEMAN Lee, M., [1988, p.1717-1720, eng] 43-1903
Snow cover-summer monsoon rainfall over parts of Sahel. Bhanu Kumar, O.S.R.U., [1988, p.1847-1848, eng] 43-1904
Constrained cluster analysis and image understanding Banfield, J.D., [1988, 105p., eng] 43-1912
Estimation of rainfall rates from passive microwave remote sensing. Sharma, A.K., [1988, 220p., eng] 43-1916
Bhaskara-II satellite capability to monitor soil moisture in India. Rao, K.S., et al, [1984, p.91-96, eng] 43-1928
Dielectric properties and microwave remote sensing. Singh, R.P., [1984, p.97-101, eng] 43-1929
Remote sensing based continuous hydrologic modeling. Engman, E.T., [1984, p.201-209, eng] 43-1930
Observation of snow melting process from remotely sensed data. Sakai, T., et al, [1984, p 231-234, eng] 43-1931
Use of satellite images in snowmelting runoff forecasts in Chile. Araya F., M., [1984, p 235-240, eng] 43-1932
Synthetic aperture radar capabilities for snow and glacier monitoring. Rott, H., [1984, p.241-246, eng] 43-1933
Dielectric and scattering properties of young snow-covered sea ice. Drinkwater, M.R., et al, [1988, p 274-282, eng] 43-1981
Technological limitations on satellite glaciology. Rees, W.G., et al, [1989, p.7-22, eng] 43-2002
Application of satellite data to monitoring snow cover and runoff in Greenland. Sögaard, H., et al, [1988, p.225-236, eng] 43-2016
Arctic cloudiness in spring from satellite imagery: some comments. Curry, J.A., [1988, p.533-538, eng] 43-2035
Arctic cloudiness in spring from satellite imagery: a response. Barry, R.G., et al, [1988, p.539-540, eng] 43-2036
Nimbus-7 data product summary. Oakes, A.G., et al, [1989, 106p., eng] 43-2247
Vegetation mapping in the Rocky Mountains with Landsat Thematic Mapper. Frank, T.D., [1988, p.1727-1734, eng] 43-2312
Radiophysical determination of snow cover parameters. Erastova, N.B., et al, [1987, p.228-235, rus] 43-2523
Method for estimating and remote sensing of the spatial distribution of annual glacier mass balance. Konovalov, V.G., [1988, p 65-75, rus] 43-2682
Remote sensing of road surface condition. Haavasoja, T., [1986, 8p., eng] 43-2758
Satellite and airborne infrared sensing of sea surface temperature. Bychkova, I.A., et al, [1988, 222p., rus] 43-2858
Review and prospect of snow and ice remote sensing in China. Zeng, Q.Z., [1988, p 352-355, chi] 43-2881
Pack ice drift off East Antarctica. Allison, I., [1989, p.1-8, eng] 43-3327
Arctic sea ice characteristics related to atmospheric processes. Barry, R.G., et al, [1989, p.9-15, eng] 43-3328
Periodic motions in Weddell Sea pack ice. Rowe, M.A., et al, [1989, p.145-151, eng] 43-3350
Ice motion and deformation in the Weddell Sea. Wadhams, P., et al, [1989, p.178-186, eng] 43-3355
Bibliography of remote sensing, mapping and characterization of sea ice. [1989, 114p., eng] 43-3467
Effect of snow cover on cloud analysis. McGuffie, K., et al, [1988, p.1124-1137, eng] 43-3470
Review and status of remote sensing of sea ice. Carsey, F., [1989, p.127-138, eng] 43-3508
GEOSAT altimeter sea-ice mapping. Hawkins, J.D., et al, [1989, p.139-148, eng] 43-3509
Sea-ice characterization measurements needed for remote sensing models. Winebrenner, D.P., et al, [1989, p.149-153, eng] 43-3510
Impact sound source useful for Arctic remote sensing. De Heering, P., [1989, p.166-172, eng] 43-3512
Remote sensor observations of supercooled liquid water. Viswanathan, R., [1989, 63p., eng] 43-3607
Remote sensing of the cryolithozone in Yakutia. Petropavlovskaia, M.S., [1988, 71p., rus] 43-3705
Airborne sea ice thickness sounding Kovacs, A., et al, [1989, p.1042-1052, eng] 43-3801
NOAA satellite observations of marginal ice zone in Fram Strait. [1988, 132p., eng] 43-3959
NASA Sea Ice and Snow Validation Program for the DMSP SSM/I. Cavalieri, D.J., [1988, 145p., eng] 43-3970
Satellite observations of sea ice. Voituriez, B., [1989, 22p, fre] 43-4020
Remote sensing methods for the analysis of ice integrity. Kirby, M.E., et al, [1986, p.38-48, eng] 43-4036
Activities at the Norwegian Hydrotechnical Laboratory. McClimans, T.A., [1989, p 617-623, eng] 43-4103
Determination of glacier mass balance change using thematic mapper data. Hall, D.K., et al, [1988, p.192-196, eng] 43-4130
Polar microwave brightness temperatures from Nimbus-7 SMMR. Comiso, J.C., et al, [1989, 82p., eng] 43-4155
Electromagnetic pulse sounding for geological surveying. Moffatt, D.L., et al, [1973, 169p., eng] 43-4164
Using ice beacons to study ice drift tracks off Labrador. Prinsenberg, S.J., et al, [1988, p.61-70, eng] 43-4170
Penetrating radar sensing of oceanic and freshwater ice. Bogorodskii, V.V., et al, [1987, 314p., eng] 43-4183
Water supply and snowmelt forecasting by remote sensing. Baird, G.H., [1985, p.136-147, eng] 43-4277
Remote sensing of an alpine snow cover. Davis, R., et al, [1984, p.161-164, eng] 43-4326
Laser discrimination between rain and snow. Strachan, J.W., et al, [1984, p.180-183, eng] 43-4331
Inexpensive remote snow-depth gauge: an assessment. Goodison, B.E., et al, [1984, p.188-191, eng] 43-4333
Theoretical models for polarimetric microwave remote sensing of earth terrain. Borgeaud, M., et al, [1989, p 61-81, eng] 43-4422
Blending radiometer and buoy data into a sea ice model. Thomas, D.R., et al, [1989, p.10,907-10,920, eng] 43-4527
Processing satellite data for sea ice research in the marginal ice zone. Kergomard, C., [1989, p 321-326, eng] 43-4579

Replicas
Some replica possibilities for electron-microscope investigations of ice crystal morphology. Stoianova, V., et al, [1988, p.1431-1436, eng] 43-2309
Microanalysis of thin sections of snow and firn in Antarctica. Han, J.K., et al, [1988, p.454-457 + 1 plate, chi] 43-2857
See also: Ice crystal replicas

Reporting
See also: Ice reporting

Rescue equipment
Offshore ship-based search and rescue experiment using radar. Dawe, B., et al, [1987, 20p. + appends., eng] 43-680

Rescue operations
First experience of using an icebreaker in the Soviet Antarctic Expedition. Likhomanov, V.A., et al, [1988, p.18-22, rus] 43-2221
Air cushion vehicles in Arctic offshore oil development. Dickins, D.F., [1989, p 261-277, eng] 43-2440

Research institutions
See also: Laboratories

Research projects
Navy Arctic research. Curtain, T.B., [1988, p.15-19, eng] 43-220
On the 50th anniversary of snow avalanche studies in Khibiny and the Alps. Akif'eva, K.V., et al, [1987, p.10-14, rus] 43-221
Yearbook of the Norwegian Polar Research Institute, 1987. [1988, 46p., eng] 43-346
Resources and ambitions regarding winter knowledge at the University of Luleå. Fransson, L., [1985, p.35-40, swe] 43-358
Offshore research in the Barents Sea. [1988, p.35-39, eng] 43-416
Arctic program annual report 1987. Curtin, T.B., [1987, 163p, eng] 43-515
Evolution of onshore facilities of the U.S. Antarctic Research Program. Splettstoesser, J.F., et al, [1988, p.287-295, eng] 43-628
Twelfth Northern Libraries Colloquy, 5-9 June 1988. [1988, 331p., eng] 43-792
JARE wintering party activities, 1986-1987. Naito, Y., [1988, p.163-186, jpn] 43-841
Norwegian arctic research in perspective: a report. Jörgensen-Dahl, A., [1988, p.4-7, eng] 43-1026
Trends in international arctic research. Lothe, L., [1988, p 8-11, eng] 43-1027
Polar Continental Shelf Project—a scientist's friend in the Arctic. Christie, R.L., [1988, p.13-16, eng] 43-1208
Light transport and general aviation aircraft icing research requirements. Breeze, R.K., et al, [1981, 142p. + appends, eng] 43-1571
Logistic support of Arctic research. [1988, 20p., eng] 43-1696
Commercial aviation icing research requirements. Koegeboehn, L.P., [1981, 59p., eng] 43-1728
U.S Geological Survey ground-water studies in Alaska. Zenone, C., [1988, 2p., eng] 43-1825
Arctic interactions: recommendations for an Arctic component in the International Geosphere-Biosphere Programme. [1988, 45p., eng] 43-1831
Finnish river ice research project. Huokuna, M., [1988, p.15-41, eng] 43-2163
SPRI participation in the winter Marginal Ice Zone Experiment, MIZEX-87 Rottier, P., [1989, p.33-36, eng] 43-2218
Polar regions: research in a changing world. Wilkniss, P.E., [1989, p.160-164, eng] 43-2230
Prospects for Soviet-Canadian cooperation in the development of northern regions. Cherkasov, A., [1988, p 6-8, eng] 43-2375
Operation Deep Freeze 89 end of season report. [1989, Var. p., eng] 43-2442
Snow avalanche research in the USSR. Bochin, N.A., et al, [1987, p.9-20, rus] 43-2494
Avalanche research in the USSR. Kanaev, L.A., et al, [1987, p.21-28, rus] 43-2495
CRS workshop on antarctic environmental protection. Fletcher, S.R., [1989, 57p. + 20p. appends., eng] 43-2568
Report of the U.S. Arctic Research Commission, 1988. [1989, 39p., eng] 43-2765
Prospects for glaciology in China in the year 2000. Xie, Z.C., [1988, p.215-220, chi] 43-2860
State of the art and prospects of geocryology in China. Cheng, G.D., et al, [1988, p.221-227, chi] 43-2861
Development of China's research on antarctic glaciology. Qin, D.H., [1988, p.250-255, chi] 43-2864
State of research on hydrology of glaciers in China in the last thirty years. Yang, Z.N., [1988, p.256-261, chi] 43-2865
Review and prospects of Tian Shan glaciological station. Kang, E.S., [1988, p.290-295, chi] 43-2871
Review and prospects of regional geocryology in China. Cheng, G.D., [1988, p.296-299, chi] 43-2872
Research on periglacial geomorphology in China. Cui, Z.J., et al, [1988, p.304-311, chi] 43-2873
Annual report 1988 and future plans. [1989, 52p., eng] 43-2898
Comparative study of sea ice research. Mawhinney, M., [1988, p.128-137, eng] 43-2916
Scientific ocean drilling in ice-laden regions. Foss, G.N., et al, [1988, p.674-685, eng] 43-2964
General view of ice mechanics in China. Shen, W., et al, [1988, p.378-389, eng] 43-3010
Strategy for British research in the Arctic. [1989, 28p., eng] 43-3215
U.S. National Science Foundation polar research programs. Wilkniss, P.E., et al, [1989, p.29-32, eng] 43-3220
Alaska geothermal bibliography. Liss, S.A., et al, [1989, 44p., eng] 43-3234
Sudden thaw in the Arctic. MacKenzie, D., et al, [1989, p.25-26, eng] 43-3286
Cold ocean hydrocarbon resources. Clark, J.I., [1989, p.119-139, eng] 43-3489
Current research in the geological sciences in Canada, May 1987-April 1988. Bolton, T.E., comp, [1988, 101p. (pertinent p.26-39), eng] 43-3528
JARE-28 ACR report. Yamanouchi, T., et al, [1989, p.53-72, jpn] 43-3703
NOAA data processing system. Takabe, H., et al, [1989, p.73-87, jpn] 43-3704
Scientific ocean drilling in the polar regions. O'Connell, S., et al, [1989, p.1001-1011, eng] 43-3797
DIPOL actions in the French polar technology. Huard, G., et al, [1989, p.1164-1179, eng] 43-3812
MCEI laboratory as a centre of offshore oil and gas producing structures research. Lobanov, V.A., et al, [1989, p.1180-1187, eng] 43-3813
Investigation of ice properties by cyclic testing. Vinogradov, O.G., [1988, p.121-122, eng] 43-4175
Cold regions heat transfer. Cheng, K.C., et al, [1989, p.1-25, eng] 43-4194
SNOW IV field experiment data report: overview. Redfield, R.K., [1989, p.1-3, eng] 43-4297
Arctic research in the United States, Vol.3. [1989, 72p., eng] 43-4482
See also: Military research

Research vessels
See also: Oceanographic ships

Reservoirs
Influence of small water-storage lakes on water resources of the North. Konstantinov, A.F., [1987, p.74-76, rus] 43-48
On the calculation of static pressure due to expansion of ice on a reservoir. Zhang, D., [1987, p.83-91, chi] 43-490
Reservoir site selection in glaciated terrain. Davis, E., et al, [1988, p.123-142, eng] 43-1326
Construction of the Pangnirtung water reservoir. Notenboom, W.G., et al, [1988, p 613-632, eng] 43-1329
Pangnirtung water reservoir geotechnical aspects. Smith, L.B., et al, [1988, p.633-658, eng] 43-1330
Shore erosion of reservoirs of Angara River in permafrost. Leshchikov, F.N., et al, [1988, p.59-64, rus] 43-2216
Annual and spring-summer water inflow into reservoir of the Novosibirsk HES. Chernov, I.M., et al, [1988, p.35-44, rus] 43-2346
Level, ice and thermal regime of Voronezh Reservoir. Bolotov, G.I., [1987, p 94-113, rus] 43-2436
Brittle destruction of reservoirs and improvement of their durability. Rozenshtein, I.M., et al, [1987, p.94-99, rus] 43-2457

Hydrological regime of the Krasnoyarsk and Sayan-Shushenskoye reservoirs. Kosmakov, I.V., et al, [1988, p.5-22, rus] 43-2808
Thermal ice thrust by expanding ice cover. Yamaoka, I., et al, [1988, p.473-482, eng] 43-2946
Study on ice static pressure on ice cover in reservoir. Sui, X.Z., [1988, p.483-492, eng] 43-2947
Frost destruction and its prevention of reservoir revetment in plain area. Sui, X.Z., [1988, p.493-501, eng] 43-2948
Hydraulic conditions in open channels with ice cover. Majewski, W., et al, [1988, p.112-121, eng] 43-2985
Determination of roughness coefficient of the underside of ice cover. Majewski, W., et al, [1988, p.122-130, eng] 43-2986
Frazil slush accumulation in a reservoir. Kajiyama, Y., et al, [1988, p.170-178, eng] 43-2990
Ice cover formation downstream of a reservoir. Ashton, G.D., [1988, p.189-198, eng] 43-2992
Growth of ice covers in reservoirs. Sado, K., et al, [1988, p.199-208, eng] 43-2993
Reservoirs and water-containing structures. Dotsenko, T.P., ed, [1989, 190p. (pertinent, p.140-149), rus] 43-3628
Physico-mechanical properties of ice in fresh water reservoirs. Truskov, P.A., et al, [1988, p.38-49, rus] 43-3634
Dynamics and thermal regimes of rivers. Rossinskiĭ, K.I., ed, [1987, 406p., eng] 43-3885
Dynamics and thermal conditions of rivers. Rossinskiĭ, K.I., [1987, p.3-16, eng] 43-3886
Ice regimes of reservoirs. Donchenko, R.V., [1987, p.17-22, eng] 43-3887
Thermal regime of water in power plant reservoir. Sokol'nikov, N.M., [1987, p.34-38, eng] 43-3889
Thermal regime of reservoirs in the Georgian SSR. Metreveli, G.S., [1987, p.56-62, eng] 43-3892
Effect of reservoirs on air temperature in contiguous areas. Denisov, P.P., [1987, p 63-76, eng] 43-3893

Residential buildings

Russian joint venture in western Siberia. Pokonov, N.Z., et al, [1988, p.19-21, rus] 43-696
Construction materials for low-storied housing in the North and Siberia. Khrulev, V.M., et al, [1989, 152p., rus] 43-3633

Resins

Repair of winter damage. Grunau, E.B., [1988, p.21-26, ger] 43-124
On the frozen force between snow and ethylene tetrafluoride resin. Kobayashi, S., et al, [1988, p.107-112, jpn] 43-3523

Resonance

Resonance tide in the World Ocean and problems of geodynamics. Zimov, S.A., [1989, 120p. (pertinent p.56-66), rus] 43-4511

Resources

See also: Natural resources

Retention

See also: Snow retention; Water retention

Revegetation

Man-induced activation of exogenic processes in taiga. Evseeva, N.S., [1987, p 292-299, eng] 43-133
Restoration and vegetation succession in circumpolar lands: the conference. Webber, P.J., et al, [1987, p.343-344, eng] 43-183
Application of successional theory to tundra restoration: a review. Cargill, S.M., et al, [1987, p.366-372, eng] 43-186
Succession in marginal Arctic environments. Svoboda, J., et al, [1987, p.373-384, eng] 43-187
Plant colonization of a volcanic island, Surtsey, Iceland. Fridriksson, S., [1987, p.425-431, eng] 43-191
Short-term vegetation recovery at an Alaskan Arctic Coastal Plain site. Ebersole, J.J., [1987, p.442-450, eng] 43-192
Plant colonizers on tundra of northwestern Canada. Kershaw, G.P., et al, [1987, p.451-460, eng] 43-193
Vegetation recovery after tundra fires in northwestern Alaska. Racine, C., et al, [1987, p.461-469, eng] 43-194
Land reclamation in Iceland. Runólfsson, S., [1987, p.514-517, eng] 43-200
Nature and restoration of denuded areas in Iceland. Arnalds, O., et al, [1987, p.518-525, eng] 43-201
Afforestation and reforestation in Iceland. Blöndal, S., [1987, p.526-529, eng] 43-202
Management of northern gravel sites for successful reclamation: a review. Johnson, L.A., [1987, p.530-536, eng] 43-203
Planting willow for moose habitat restoration on the North Slope of Alaska. Densmore, R.V., et al, [1987, p.537-543, eng] 43-204
Assisted revegetation in Denali National Park, Alaska, U.S.A. Densmore, R.V., et al, [1987, p.544-548, eng] 43-205
Revegetation experiments at Ny-Ålesund, Spitsbergen, Svalbard. Klokk, R., et al, [1987, p.549-553, eng] 43-206
Plant succession on disturbed sites, North Slope, Alaska, U.S.A. McKendrick, J.D., [1987, p.554-565, eng] 43-207
Seeded species success and influence at abandoned oil rig in Canada. Younkin, W.E., et al, [1987, p.566-571, eng] 43-208
Seeding for stripmine reclamation in Alaska. Elliott, C.L., et al, [1987, p.572-577, eng] 43-209
Renewal of forest resources in eastern Transbaikal. Bobrinev, V.P., et al, [1988, 113p., rus] 43-717
Technological damage to tundra vegetation during exploratory drilling. Chalysheva, L.V., [1988, p.49-56, rus] 43-1539
Assessment of waste containment sites in the Mackenzie Valley region. [1988, 30p. + append., eng] 43-1971
Northern environmental disturbances. Kershaw, P., ed, [1988, 70p., eng] 43-2303
Reclamation of the Norman Wells pipeline. Wishart, D.M., [1988, p.11-27, eng] 43-2305
Native grasses in northern Canadian revegetation. Vaartnou, M., [1988, p.31-41, eng] 43-2306
Revegetation in the Canadian Arctic. Bliss, L.C., et al, [1988, p.43-55, eng] 43-2307
Land reclamation in the Canadian Subarctic. Kershaw, G.P., [1988, p.59-70, eng] 43-2308
Natural regeneration of *Eriophorum* tussock tundra after a fire. Ignatenko, I.V., et al, [1988, p.169-180, eng] 43-2578
Seed bank as source of colonizers on tundra disturbance. Ebersole, J.J., [1989, p.466-471, eng] 43-3988
Artificial stimulation of plant growth in alpine tundra. Funk, D.W., et al, [1989, p.169-174, eng] 43-4091
Subarctic lichen colonization after fire. Filion, L., et al, [1989, p.175-184, eng] 43-4092
See also: Introduced plants

Rheology

Measuring the creep of ice in place. Shields, D., et al, [1988, p.703-713, eng] 43-656
Low-temperature properties of paving asphalt cements. Kandhal, P.S., et al, [1988, 24p., eng] 43-793
Viscous resistance to creeping glacier movement, allowing for ice fracturing. Ivanov, A.I., [1988, p.110-112, rus] 43-945
Field investigation of load-curvature characteristics of reinforced ice. Fransson, L., et al, [1987, 22p., eng] 43-1110
Rheological properties of ice with the addition of surfactants. Dediulia, I.V., et al, [1987, p.485-489, eng] 43-1138
Stress deformation of ground. Gorelik, L.V., et al, [1987, p.4-9, rus] 43-1179
Effect of a decrease in deformation characteristics of materials on the stress-strain state of earth dams. Burman, G.V., [1987, p.9-12, rus] 43-1180
Snow mechanics: laboratory tests of snow strength. Navarre, J.P., et al, [1987, p.129-137, fre] 43-1225
Nonlinear flow equation of temperate firn with deviatory and isotropic terms. Ambach, W., et al, [1988, p.315-322, ger] 43-1486
Surging potential of ice sheets. Radok, U., [1985, 26p., eng] 43-1713
Surging potential of ice sheets. Radok, U., [1984, 21p., eng] 43-1715
Lime treatment of asphalt, Parts 1 and 2. Final report. Petersen, J.C., et al, [1987, 70p., eng] 43-1745
Ice-shelf flow at the boundary of Crary Ice Rise, Antarctica. Bindschadler, R.A., et al, [1988, p.8-13, eng] 43-1936
Closure rate of a 700 m deep bore hole at Mizuho Station, East Antarctica. Naruse, R., et al, [1988, p.100-103, eng] 43-1952
Thinning and grounding-line retreat on Ross Ice Shelf, Antarctica. Thomas, R.H., et al, [1988, p.165-172, eng] 43-1961
Mass balance of Ice Stream B, West Antarctica. Whillans, I.M., et al, [1988, p.187-193, eng] 43-1965
Two-dimensional deformation patterns in sea ice. Erlingsson, B., [1988, p.301-308, eng] 43-1986
Factors affecting motion of a stationary dome-shaped glacier. Barkov, N.I., et al, [1989, p.37-46, eng] 43-2045
Echo sounding data on ice thickness and motion at Mirnyy Station. Sheremet'ev, A.N., et al, [1989, p.47-54, eng] 43-2046
Use of radar sounding method in the study of dynamics of the antarctic ice cover. Sheremet'ev, A.N., [1989, p.143-149, eng] 43-2060
Pile roughness and load capacity in frozen soils. Stelzer, D., et al, [1989, p.226-235, eng] 43-2105
Set of constitutive models for soils under slow movement. Vulliet, L., et al, [1988, p.1022-1041, eng] 43-2204
Determination of ice movement to the east of the Schirmacher Ponds (Queen Maud Land). Frei, R., [1988, p.69-73, rus] 43-2226
Thermal properties of mines in the North. Shurgin, B.V., ed, [1987, 81p., rus] 43-2259
Thermal deformation and stresses during rock mining. Kartoziia, B.A., et al, [1987, p.20-23, rus] 43-2263
Review of ice rheology for ice sheet modelling. Budd, W.F., et al, [1989, p.107-144, eng] 43-2362
Algorithm for computers for estimating rheological properties of perennially frozen coarse detrital rock. Gostiushkin, V.V., et al, [1988, p.41-47, rus] 43-2381
On modeling the energetics of the ridging process. Hopkins, M.A., et al, [1989, p.175-178, eng] 43-2625
Comparing the creep behaviour of spray ice and polycrystalline freshwater ice. Shields, D.H., et al, [1989, p.235-245, eng] 43-2632
BAS review of ice streams and ice shelves. Morris, E.M., [1989, p.17-36, eng] 43-2660
Japanese antarctic earth science programs: geomorphology. Yoshida, Y., [1989, p.137-152, eng] 43-2661
Rheological regularities in frozen soil mechanics. Vialov, S.S., et al, [1988, p.219-232, eng] 43-2665
Determination of rheological property parameters of frozen bases. Mirenburg, IU.S., et al, [1988, p.233-247, eng] 43-2666
Ice flow over viscous basal sediment, ice stream B. MacAyeal, D.R., [1989, p.4071-4087, eng] 43-2721
Differential movement across rock glacier in Colorado. White, S.E., [1987, p.145-149, eng] 43-3051
Rock glacier debris systems and flows. Johnson, P.G., [1987, p.175-192, eng] 43-3054
Field studies of earth dams in the northern construction-climatic zone. Belan, V.I., [1989, p 82-87, rus] 43-3174
Some peculiarities of creep behavior of frozen silt. Fish, A.M., [1989, p.721-724, eng] 43-3222
Data report for the Siple Coast Project. Bindschadler, R.A., et al, [1988, 102p., eng] 43-3235
See also: Plastic flow

Ridges

See also: Pressure ridges

Rime

See also: Hoarfrost

River banks

See also: Banks (waterways)

River basins

Geographic interpretation of satellite survey data. Vasil'ev, L.N., ed, [1988, 132p., rus] 43-108
Landscape and cryolithological characteristics of the Tyukyan-Markhinskiy interfluve. Ivanov, M.S., et al, [1988, p 3-11, rus] 43-519
Permafrost formation in the lower course of the Kureyka River. Kazanskiĭ, O.A., [1988, p.36-43, rus] 43-523
Water balance of the Sary-Tor mountain glacier basin. Diurgerov, M.B., et al, [1988, p.203-207, rus] 43-963
Scheme for forecasting flood runoff for unstudied rivers of eastern Siberia. Petenkov, A.V., [1986, p.451-458, eng] 43-1091
Effects of sea level changes and crustal movement on Arctic river mouth. Ivanov, V.V., et al, [1988, p.390-395, eng] 43-1372
Highest water levels in Dniester River and its tributaries. Vishnevskiĭ, P.F., [1988, p 36-48, rus] 43-1772
Historical ice jam flood data. Stanley, S., et al, [1988, p.115-137, eng] 43-2168
Fluvio-glacial resources of the Issyk-Kul' region. Dikikh, A.N., ed, [1988, 129p., rus] 43-2382
Spatial mechanisms in the pattern of snowmelt rates in the Sary-Dzhaz River basin. Dikikh, A.N., [1988, p.3-12, rus] 43-2383
Daily range of air temperature on glacial and non-glacial surfaces of the Inyl'chek River basin. Bakirov, K.B., [1988, p.26-33, rus] 43-2386
Formation and dispersion of surface moraines in the Koylyu River basin. Osmonov, K., [1988, p.78-92, rus] 43-2388
Maximum boundary of the spread of Upper Pleistocene glaciation in the Sary Dzhaz River basin. Bakov, E.K., [1988, p.93-103, rus] 43-2389
Techniques for climatological analysis of data from aerial observations of snow cover in mountains. Arkhipova, O.M., et al, [1988, p.9-19, rus] 43-2671
Snow cover characteristics in the Kamchatka River basin according to data from traverse measurements of snow thickness and density. Beloglazov, A.M., et al, [1988, p.30-35, rus] 43-2674
Determining the accuracy of existing methods for calculating the distribution of glaciation in mountain basins according to altitude. Fedulov, I.IA., et al, [1988, p.117-120, rus] 43-2688
Mudflows in the Amudarya basin. Tukeev, O.V., [1988, p.37-41, rus] 43-3253
New data on present-day glaciers in the Kyekemeren River basin. Alimukhamedov, M.A., [1988, p.83-87, rus] 43-3261
Runoff analysis of the Urumqi River in China's Xinjiang Province. Sugawara, M., et al, [1989, p.35-72, jpn] 43-3542
Development and descent of avalanches in Western Altai. Diukarev, A.D., et al, [1987, p.51-59, rus] 43-3657
Seasonal stream-flow forecasting of the upper Rio Grande basin. Perkins, T.R., [1988, p.58-69, eng] 43-3997
Snow hydrology in the upper Yamuna basin, India. Malhotra, R.V., et al, [1988, p.84-93, eng] 43-4119
Snowmelt runoff in the upper Colorado River basin in 1983. Shafer, B.A., et al, [1984, p.1-11, eng] 43-4310
Impact of automated hydrometeorological instrumentation upon data quality. Buer, S.M., et al, [1984, p.139-148, eng] 43-4324
Application of a simple snowmelt-runoff model to large river basins. Rango, A., [1983, p.89-99, eng] 43-4356
See also: Watersheds

River crossings
Deployment of floating bridges in ice-covered rivers. Mellor, M., et al, (1988, 38p., eng) 43-1839
Proceedings. (1983, 740p., eng) 43-3412
Influence of northern pipelines on river crossing design. Yaremko, E.K., et al, (1983, p.49-63, eng) 43-3413
Arctic pipeline river crossings—design trends and lessons learned. Veldman, W.M., (1983, p.70-83, eng) 43-3414
See also: Bridges; Ice crossings
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Changes in the regime of the Yenisey and Angara rivers due to flow regulation. Odrova, T.V., (1987, p.84-95, rus) 43-51
Damming of the Vilyuy River channel at the construction site of the Vilyuy III Hydroelectric Station. Panteleev, V.S., (1987, p 692-697, eng) 43-139
Depth-discharge relationships for ice-covered rivers. Santeford, H.S., et al, (1987, p.144-153, eng) 43-397
Study of dynamic ice breakup on the Connecticut River near Windsor, Vermont. Ferrick, M.G., et al, (1987, p.163-177, eng) 43-399
Ice cover and stream flow in the Yukon River, 1983-84. Alford, M.E., et al, (1987, 63p., eng) 43-423
Runoff forecasting and snow melting for rivers in Xinjiang. Zhang, G., et al, (1987, p.57-64, chi) 43-486
Hydrologic reconnaissance of the Chilkat River basin, southeast Alaska. Bugliosi, E.F., (1988, 28p., eng) 43-776
Recent growth of Gulkana Glacier, Alaska. Mayo, L.R., et al, (1986, p 91-99, eng) 43-878
Two-power law for analysis of velocity profiles in ice covered rivers. Papadakis, J.E., (1988, 13p. + append., eng) 43-932
Environmental protection of the BAM zone. Vorob'ev, V.V., ed, (1987, 167p., rus) 43-1435
River-flow studies in the BAM zone in winter. Sokolov, B.L., et al, (1987, p.96-110, rus) 43-1436
Ice cover and stream flow in the Yukon River, 1985/86. Alford, M.E., et al, (1988, 36p., eng) 43-1440
Ground water flow in tundra rivers and water supply. Vetoshkina, N.N., (1988, p.87-98, rus) 43-1543
Water level calculation for northeast European rivers. Kokovkin, A.V., (1988, p.99-112, rus) 43-1544
Climatic influence on upper Mississippi Valley floods. Knox, J.C., (1988, p.279-300, eng) 43-1551
Hydrology of Bayelva, Spitsbergen. Repp, K., (1988, p.259-268, eng) 43-2019
Effects of ice on water levels in the upper Niagara River. Crissman, R.D., et al, (1989, p.141-150, eng) 43-2097
Causative factors leading to the formation of ice jams. Mattke, T.W., et al, (1989, p.170-178, eng) 43-2100
Workshop on Hydraulics of River Ice/Ice Jams, 5th, 1988. (1988, 445p., eng) 43-2162
Ice jam flooding and antecedent conditions, St. John River. Humes, T.M., et al, (1988, p.43-61, eng) 43-2164
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Annual and spring-summer water inflow into reservoir of the Novosibirsk HES. Chernov, I.M., et al, (1988, p.35-44, rus) 43-2346
Forecasting of the water level during ice breakup. Kil'mianinov, V.V., et al, (1988, p.44-48, rus) 43-2347
Minimal river discharge of the Chulyma basin. Proskurina, G.V., (1988, p 67-74, rus) 43-2351
River-flow regulation for controlled ice cover formation. Jain, S.C., et al, (1988, p.12-22, eng) 43-2975
Hydraulic conditions in open channels with ice cover. Majewski, W., et al, (1988, p.112-121, eng) 43-2985
Flow resistance for partially ice-covered channels. Arisz, H., et al, (1988, p.131-141, eng) 43-2987
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Stream discharge during ice-affected periods. Melcher, N.B., (1988, p.293-303, eng) 43-3002
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Surveys of diurnal variations in small river flow during snowmelt. Kravchenko, V.V., (1987, p.104-142, rus) 43-3661
Seasonal stream-flow forecasting of the upper Rio Grande basin. Perkins, T.R., (1988, p.58-69, eng) 43-3997
Hydrograph recession limbs—a case of hydrologic *deja vu*. Van Haveren, B.P., (1988, p.148-154, eng) 43-4006
Water supply and snowmelt forecasting by remote sensing. Baird, G.H., (1985, p.136-147, eng) 43-4277
See also: Runoff; Stream flow
River ice
Dynamic ice breakup on the Connecticut River, VT. Ferrick, M.G., et al, (1988, 16p., eng) 43-5
Capacity of ice-covered canals. Gladkov, E.G., et al, (1987, p.539-542, eng) 43-137
Ice jams and damming of flow-controlled rivers. Karnovich, V.N., et al, (1988, p.598-604, eng) 43-138
Damming of the Vilyuy River channel at the construction site of the Vilyuy III Hydroelectric Station. Panteleev, V.S., (1987, p 692-697, eng) 43-139
Ice problems on the Yellow River. Chen, Z., (1986, p.25-47, eng) 43-260
Controlled river ice cover breakup; part 1. Hudson River field experiments. Ferrick, M.G., et al, (1986, p.281-291, eng) 43-274
Controlled river ice cover breakup; part 2. Theory and numerical model studies. Ferrick, M.G., et al, (1986, p.293-305, eng) 43-275
River ice jams: a state-of-the-art report. (1986, p.561-594, eng) 43-279
Resources and ambitions regarding winter knowledge at the University of Luleå. Fransson, L., (1985, p.35-40, swe) 43-358
Ice problem related to the regulation of rivers and the operation of hydropower stations. Billfalk, L., et al, (1985, p.41-49, swe) 43-359
Depth-discharge relationships for ice-covered rivers Santeford, H.S., et al, (1987, p.144-153, eng) 43-397
Ice jams and the winter climate near White River, SD. Bilello, M.A., (1987, p.154-162, eng) 43-398
Study of dynamic ice breakup on the Connecticut River near Windsor, Vermont. Ferrick, M.G., et al, (1987, p.163-177, eng) 43-399
Timing and duration of river ice break-up. Prowse, T.D., et al, (1987, p.192-196, eng) 43-401
Ice propulsion definition for river icebreakers and transport ships. Segal, Z.B., (1988, 10p., eng) 43-411
Temperature and ice in Mississippi River near a nuclear power station. Schwarz, J., et al, (1973, 17p. + tables, eng) 43-420
Ice cover and stream flow in the Yukon River, 1983-84. Alford, M.E., et al, (1987, 63p., eng) 43-423
Ice conditions along the Allegheny and Monongahela Rivers. Gatto, L.W., (1988, 106p., eng) 43-431
Inventory of ice problem sites and remedial ice control structures. Perham, R.E., (1988, 9p., eng) 43-432
Ice structure analysis of river ice on Datonghe, nearby Liancheng power station. Li, J., et al, (1987, p.79-82, chi) 43-489
Cause analysis of flooded ice in the lower reaches of Huanghe and its preventive measures. Wang, W., (1987, p.111-116, chi) 43-495
Ice jams of the Great Ice Dam, Heilongjiang. Liu, G., et al, (1987, p.117-121, chi) 43-496
Cause of ice jams, Nenjiang. Li, Y., (1987, p.122-128, chi) 43-497
Dissipative structure theory applied in prediction of ice jamming. Wang, Y., et al, (1987, p.129-132, chi) 43-498
International Specialty Conference on Cold Regions Engineering, 1984. (1984, p.1021-1201, eng) 43-667
Ice regime reconnaissance, Yukon River, Yukon. Gerard, R., et al, (1984, p.1059-1073, eng) 43-670
Design of river intakes in cold climates. Hodgson, J.E., et al, (1984, p.1113-1127, eng) 43-674
Ice experiment. Zheleznov, S., et al, (1988, p.20-21, rus) 43-699
Relations of ice microstructures to microconvection in the surface sea layers. Monakhov, E.I., (1988, p.72-77, rus) 43-806
Ice control in river harbors and fleeting areas. Perham, R.E., (1988, 7p., eng) 43-1147
Icebreaking capacity of the *Captain Chechkin* icebreaker in rivers. Tronin, V.A., et al, (1982, 4p., eng) 43-1191
Development of a river ice prow. Tatinclaux, J.C., et al, (1988, 26p., eng) 43-1199
Turbulent effects on river ice cover melting. Sarraf, S., (1988, p.178-189, eng) 43-1327
Damage resulting from a sudden river ice breakup. Doyle, P.F., (1988, p.609-615, eng) 43-1360
Configuration and properties of a breakup jam. Beltaos, S., (1988, p 685-697, eng) 43-1361
Improving transportation in the Yakut ASSR. Belinskiĭ, B.V., (1987, p.31-54, rus) 43-1384
Environmental protection of the BAM zone Vorob'ev, V.V., ed, (1987, 167p., rus) 43-1435
Results and goals of studying naleds in the BAM zone. Sokolov, B.L., et al, (1987, p.120-131, rus) 43-1437
Ice cover and stream flow in the Yukon River, 1985/86. Alford, M.E., et al, (1988, 36p., eng) 43-1440
Fracturing of an ice sheet by ship-induced, ice-coupled waves. Yuen, C., et al, (1989, p.75-82, eng) 43-1580
Foam-initiated ice covers on small rivers and streams. Ettema, R., et al, (1989, p.95-99, eng) 43-1583
Long range forecasting of river freezeup in Kazakhstan. Shmarova, I.N., (1988, p.93-98, rus) 43-1786
Formulae on level ice resistance to motion of a river icebreaker. Zuev, V.A., et al, (1978, 7p., eng) 43-1837
Deployment of floating bridges in ice-covered rivers. Mellor, M., et al, (1988, 38p., eng) 43-1839
Effects of ice on water levels in the upper Niagara River. Crissman, R.D., et al, (1989, p.141-150, eng) 43-2097
Icebreakers and river ice strength. IAkovlev, M.S., (1988, 2p., eng) 43-2140
Workshop on Hydraulics of River Ice/Ice Jams, 5th, 1988. (1988, 445p., eng) 43-2162
Finnish river ice research project. Huokuna, M., (1988, p.15-41, eng) 43-2163
Ice jam flooding and antecedent conditions, St. John River. Humes, T.M., et al, (1988, p.43-61, eng) 43-2164
Ice jam flood frequency and annual damages at Dawson City on the Yukon River. McCreath, P.S., et al, (1988, p 63-83, eng) 43-2165
Ice cover distribution in Vermont and New Hampshire Atlantic salmon rearing streams. Calkins, D.J., et al, (1988, p.85-96, eng) 43-2166
Using historical data to determine flood risk from ice jams. Kriwoken, L.A., et al, (1988, p 97-113, eng) 43-2167
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Field investigation of frazil ice jam in Yellow River. Sun, Z.C., et al, (1988, p.157-175, eng) 43-2170
Preliminary study of scour under an ice jam. Wuebben, J.L., (1988, p.177-192, eng) 43-2171
Transverse velocities and ice jamming potential in a river bend. Zufelt, J.E., (1988, p.193-207, eng) 43-2172
Ice jams, release and surge wave propagation, Mackenzie River. Parkinson, F.E., et al, (1988, p 209-223, eng) 43-2173
Some thoughts on break-up and ice jams. Gerard, R., et al, (1988, p.225-239, eng) 43-2174
Computing stream discharge for ice-affected periods. Melcher, N.B., (1988, p.241-253, eng) 43-2175
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Breakup prediction on a non-regulated river. Andres, D.D., (1988, p.305-325, eng) 43-2178
Statistical assessment of ice jam formation in Canadian rivers. Sarraf, S., (1988, p.327-344, eng) 43-2179
Development of a comprehensive numerical river ice model. Petryk, S., (1988, p.345-367, eng) 43-2180
Ice related flooding on Harry's River. Anderson, J.E., et al, (1988, p.369-391, eng) 43-2181
River cooling and frazil and anchor ice formation. Tsang, G., (1988, p.393-416, eng) 43-2182
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Ice control with thermal/bubbler plumes: line source configuration. Baddour, R.E., (1988, p.435-445, eng) 43-2184
River ice and salmonids. Walsh, M., et al, (1986, p.D-4.1-D-4.26, eng) 43-2280
Peculiarities and regularities of river ice breakup in Yakutia. Lobovikova, Z.P., et al, (1988, p.14-21, rus) 43-2344
Relationship between river ice breakup and atmospheric circulation. Lobovikova, Z.P., et al, (1988, p.21-35, rus) 43-2345
Forecasting of the water level during ice breakup. Kil'mianinov, V.V., et al, (1988, p.44-48, rus) 43-2347
Forecasting river ice breakup in relation to water level. Liser, I.IA., (1988, p.48-53, rus) 43-2348
Extended forecasting of ice breakup on Kett River (Maksimkin Yar settlement). Bogdanova, V.F., (1988, p.53-55, rus) 43-2349
Forecasting of maximal water level on Lena River due to ice jams. Kil'mianinov, V.V., (1988, p.55-67, rus) 43-2350
Minimal river discharge of the Chulyma basin. Proskurina, G.V., (1988, p.67-74, rus) 43-2351
Mathematical model of border-ice formation in rivers. Svensson, U., et al, (1989, p.179-189, eng) 43-2367
Water temperature and ice in Danube River delta. Min'kovskaia, R.IA., (1988, p.86-94, rus) 43-2392
Thermal budget of river ice covers during breakup. Prowse, T.D., et al, (1989, p 62-71, eng) 43-2707
Ice jams and floods on the Lower Vistula River. Grześ, M., (1986, p.51-67, eng) 43-2800
Studies on ice conditions in rivers, lakes and seas in China. Chen, Z.T., (1988, p.279-283, chi) 43-2869
Studies on ice jams in river bends. Urroz Aguirre, G.E., (1989, 268p., eng) 43-2888
Ice conditions and research for economical development and exploitation of natural resource in the cold regions of China. Shen, W., (1988, p.1-17, eng) 43-2907
Characteristics of ice conditions based on aerial photography. Starosolszky, O., et al, (1988, p 611-622, eng) 43-2959
River-flow regulation for controlled ice cover formation. Jain, S.C., et al, (1988, p.12-22, eng) 43-2975
Development of a river ice-prow Part 2. Tatinclaux, J.C., (1988, p.44-52, eng) 43-2978
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Ice problems in intakes to power plants. Roen, S., et al, (1988, p.81-91, eng) 43-2982
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Ice cover breakup on the Susquehanna River Ruggles, R.W., et al, (1988, p.229-238, eng) 43-2996
Forecasts of ice condition on the Yellow River Chen, Z.T., et al, (1988, p.239-248, eng) 43-2997
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Forecast of Yimin River in Eerguna water system. Xu, J.F., et al, (1988, p.271-281, eng) 43-3000
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River bed variation in sections susceptible to ice jamming. Ren, Z.W., (1988, p.326-335, eng) 43-3005
Studies on the formation and evolution of frazil ice jams in rivers. Yang, S.R., et al, (1988, p.336-345, eng) 43-3006
Mathematical model for river ice processes. Shen, H.T., et al, (1988, p.356-366, eng) 43-3008
Heat transfer between water and ice cover. Matoušek, V., et al, (1988, p.367-377, eng) 43-3009
Dynamic transport of river ice Shen, H.T., et al, (1988, p.147-156, eng) 43-3028
Ice jams at a lake: the situation at Hay River, Northwest Territories, Canada. Gerard, R., et al, (1988, p.157-167, eng) 43-3029
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Airborne radar survey of a brash ice jam in the St. Clair River. Daly, S.F., et al, (1989, 17p., eng) 43-3475
Water detection in coastal plains using helicopter-borne short pulse radar. Arcone, S.A., et al, (1989, 25p., eng) 43-3477
Ice jam on Mackenzie River at Norman Wells. Rivard, G., (1985, 188p., eng) 43-3622
Glaciological investigations in Siberia, Vol.2. Antipov, A.N., ed, (1987, 162p., rus) 43-3652
Ice reserves in the south of Eastern Siberia. Orel, G.F., et al, (1987, p.15-27, rus) 43-3654
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In situ testing of river-ice strength using a hydraulic borehole jack. Demuth, M.N., et al, (1988, p.181-185, eng) 43-4128
Framework for control of dynamic ice breakup by river regulation. Ferrick, M.G., et al, (1989, 14p., eng) 43-4385
Environmental pollution and the ice regime of rivers and lakes. Prokacheva, V.G., et al, (1988, p.74-80, rus) 43-4582

River water

Aluminum in meltwater, Chalk River and Turkey Lakes watersheds. Chew, H., et al, (1988, p 66-71, eng) 43-1359

Rivers

Data acquisition for refrigerated physical model. Zufelt, J.E., (1987, p.338-341, eng) 43-8
Ice jams and damming of flow-controlled rivers. Karnovich, V.N., et al, (1988, p.598-604, eng) 43-138
Aeration at overflow weirs. Lakso, E., (1988, 104p., eng) 43-422
Annual runoff on the northern slope of Qilian Mountain. Lai, Z., (1988, p.47-56, chi) 43-467
Observations on floating snowpacks: lakes, rivers and the sea. Adams, P., et al, (1987, p.313-346, eng) 43-1302
Effect of drainage projects on river runoff. Revera, O.Z., (1988, p.134-145, rus) 43-2472
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Forecasting monthly runoff from rivers with glacio-nival alimentation in July-September Karandaeva, L.M., (1988, p.76-80, rus) 43-2683
Computation of water budget of a snow bound river basin. Puri, S.R., et al, (1988, p.103-106, eng) 43-2885
Damming structures at headworks of rivers. Xu, S.B., (1988, p.92-102, eng) 43-2983
Hydraulic conditions in open channels with ice cover. Majewski, W., et al, (1988, p.112-121, eng) 43-2985
Determination of roughness coefficient of the underside of ice cover. Majewski, W., et al, (1988, p.122-130, eng) 43-2986
Ice cover breakup on the Susquehanna River Ruggles, R.W., et al, (1988, p.229-238, eng) 43-2996
Forecasts of ice condition on the Yellow River. Chen, Z.T., et al, (1988, p.239-248, eng) 43-2997
Studies on the formation and evolution of frazil ice jams in rivers. Yang, S.R., et al, (1988, p.336-345, eng) 43-3006
Chemical discharge from rivers into the basin of Issyk-Kul' Lake. Gokhman, V.V., et al, (1988, p.142-145, rus) 43-3320
Dynamics and thermal regimes of rivers Rossinskiĭ, K.I., ed, (1987, 406p., eng) 43-3885
Dynamics and thermal conditions of rivers. Rossinskiĭ, K.I., (1987, p.3-16, eng) 43-3886
Ice regime of rivers in the central Volga region. Korbutiak, M.V., (1987, p.47-55, eng) 43-3891

See also: Glacial rivers; Icebound rivers; Streams

Road icing

Icing damages to the highways in Hulun Buir League, Nei Monggle, and its control. Bai, W., (1987, p.105-110, chi) 43-494
Process of making calcium acetate deicing agents. Gancy, A.B., (1984, 10 col., eng) 43-1070
Effect of snow on urban activities and road facilities, Tohoku District. Horii, M., (1988, p.135-142, jpn) 43-1322
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Improving transportation in the Yakut ASSR. Belinskiĭ, B.V., (1987, p.31-54, rus) 43-1384
Role of extruded expanded polystyrene in Ontario's provincial transportation system. MacMaster, J.B., et al, (1987, p.10-22, eng) 43-1387
Ice prediction enters new phase. Thornes, J., (1988, p 37-39, eng) 43-1426
Thermal mapping of road surface temperature. Sugrue, J.G., et al, (1983, p.212-213, eng) 43-1695
City, two states adopt pavement precip system. Leicht, N., (1988, p.133-135, eng) 43-1854
Icing of insulated pavements. Williams, G.P., (1984, 8p., eng) 43-2697
Proceedings. (1986, var. p., eng) 43-2753
Road weather: state of the art in Austria. Cehak, K., (1986, 3p., eng) 43-2754
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Freeze protection of paved surfaces by phase-change material. Thomas, W.C., et al, (1988, p.195-200, eng) 43-3819
Draining deicing pavings for bridge slabs. Abbruzzese, F., (1989, p.14-19, ita) 43-3978

Road maintenance

Repair of winter damage. Grunau, E.B., (1988, p 21-26, ger) 43-124
Improvement of Federal Highway 27 in a difficult mountain region in the Harz Mountains. Joop, U., et al, (1988, p.137-143, ger) 43-173
Winter road maintenance in Sweden. Thunberg, B., (1985, p.75-87, swe) 43-363
National highway system in the Swedish mountains. Nilsson, A., (1985, p.88-95, swe) 43-364
Development of the unsurfaced roads rating methodology. Eaton, R.A., (1988, 13p., eng) 43-430
Earthwork for snowdrift control on highways, Tian Shan Mts. Wang, C., et al, (1987, p.40-42, chi) 43-481
Snow damage to highways and road maintenance, Yunnan Province. Shao, W., et al, (1987, p.45-52, chi) 43-483
Recent results in improving snow roads and runways in Antarctica. Wuori, A.F., et al, (1988, p.297-307, eng) 43-629
Bibliography of snow and ice hazards on highways. Schweiger, A.J., comp, (1987, 110p., eng) 43-753
Seasonal road closures and highway meteorology. Livet, J., (1988, p 60-65, fre) 43-836
Living snow fence project. (1975, 22p., eng) 43-882
Experience on wintertime road accidents. Peltola, H., et al, (1987, p.11-14, fin) 43-1007
Brief review of snow drifting research in south Sweden. Akerman, J., (1985, p.42-48, swe) 43-1015
Tire friction on roads in winter. Heuser, G., et al, (1985, 116p., ger) 43-1054
ANAS snow clearing service. Zechini, Q., et al, (1988, p.32-41, ita) 43-1062
Contribution of chemistry to road trafficability. Daleq, P., et al, (1988, p 61-63, ita) 43-1064
First official snow-compaction vehicle contest at Vars. (1988, p 64-67, ita) 43-1065
Spring opening of the Gran San Bernardo Pass. Scotto, G.E., (1988, p.76-79, ita) 43-1066
Dobbiaco '78: new developments in operations and technology. Baiano, G., (1988, p.88-93, ita) 43-1067
Road reinforcement with geosynthetics. Kinney, T., et al, (1988, p.17-18, eng) 43-1463
City gives potholes icy reception. Bembry, E., (1988, p.54, eng) 43-1855
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Winter maintenance—learning Finland's methods. (1988, p.22-26, eng) 43-2156
Effects of calcium magnesium acetate on pavements and motor vehicles. Slick, D.S., (1988, p.27-30, eng) 43-2209
Study on wetting salt and sand stockpiles with liquid calcium chloride. McElroy, A.D., et al, (1988, p.38-43, eng) 43-2211
Calcium chloride mixture (Verglimit) as an ice retardant for asphalt. Rainiero, J.M., (1988, p.44-53, eng) 43-2212
Special winter road for the transport of pontoon units. Zavizion, V.G., et al, (1988, p.37-38, rus) 43-2232
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Frost hazard of roads in marshlands of the Sanjiang Plain. Wang, C.H., (1988, p.409-417, chi) 43-2855
Permafrost problems in road engineering. Huang, X.M., (1988, p 344-351, chi) 43-2880
Arctic road construction. Lehtonen, J., et al, (1989, p.679-689, eng) 43-3138
Forecasting snow capacity of existing roadside snow-protection forest strips. Kolomiets, V.A., (1989, p.125-127, rus) 43-3172
Snow and snow-ice surfaced roads. Alekseev, V.R., et al, (1988, p.191-199, rus) 43-3278
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Ice retardant pavements and the importance of stationary winter maintenance. Johannes, H.P., (1989, p.27-29, eng) 43-3485
Load restrictions for flexible pavements during spring thaw. Rutherford, M.S., (1989, 476p., eng) 43-3612
Pre-wetted salt: then and now. (1989, p.52-53, eng) 43-4077
Developing an effective snow plan. Nanninga, J.A., (1989, p.58-60, eng) 43-4078
Snowbelt county's approach to winter maintenance. Buss, M.D., (1989, p 66-67, eng) 43-4079
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Calcium magnesium acetate in winter maintenance. Fritzsche, C., (1989, p.78-79, eng) 43-4082
Colorado fights frost heave with insulation. Upright, W., (1989, p.81-82, eng) 43-4083
Solutions to improve ice and snow control management on road, bridge, and runway surfaces. Kelley, J.R., (1988, p.152-161, eng) 43-4125
Wet de-icing salts in winter road maintenance. Steinhauser, L., (1989, p.139-141, ger) 43-4539

Roadbeds

Highly effective thermal insulation at the bases of airports and roads. Ivanov, V.N., (1988, 134p., rus) 43-760
Engineering geology today: theory, practice, problems. Sergeev, E.M., ed, (1988, 293p., rus) 43-883
Resistance to compacting of treated freezing soils. Migliachenko, V.P., (1988, p.100-103, rus) 43-898
Polystyrene foam for frost protection of roads in Sweden. Gandahl, R., (1987, p.1-9, eng) 43-1386

Roadbeds *(cont.)*
Insulation performance beneath roads and airfields in Alaska. Esch, D.C., (1987, p.23-27, eng) 43-1388
Frost and dimensioning of road structure. Turunen, P., (1988, p 27-33, fin) 43-1797
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Freezing a temporary roadway for transport of a 3000 ton dragline. Maishman, D., et al, (1988, p.357-365, eng) 43-97
Road dust and its environmental impact on Alaskan taiga and tundra. Walker, D.A., et al, (1987, p.479-489, eng) 43-196
National highway system in the Swedish mountains. Nilsson, A., (1985, p 88-95, swe) 43-364
Road grip and its measurement. Ohlsson, E., (1985, p.179-197, swe) 43-373
Measurement and evaluation of tire performance under winter conditions. Blaisdell, G.L., (1985, p.198-228, eng) 43-374
Control the snow damage to the highways within Yili District, Xinjiang. Xu, M., (1987, p 25-26, chi) 43-478
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Water quality of subalpine forest. Stednick, J.D., (1987, p 95-100, eng) 43-577
Freezing degree-days and frost penetration under roads. a field study. Haas, W.M., et al, (1984, p.1151-1165, eng) 43-676
Highly effective thermal insulation at the bases of airports and roads. Ivanov, V.N , (1988, 134p , rus) 43-760
Case histories in seasonal frost areas. Haas, W.M., et al, (1988, p.160-169, eng) 43-772
Environmental influences on the bearing capacity of a road. Final report, Pt.3: Synthesis. Dysli, M., et al, (1984, 118p., fre) 43-778
Foundation technology in cold regions. Quinn, W.F., (1987, p.305-310, eng) 43-865
Northern environmental disturbances. Kershaw, P., ed, (1988, 70p., eng) 43-2303
Environmental impact assessment and review in the North. Duffy, P.J.B., (1988, p.5-8, eng) 43-2304
Protection of roads from snow cover, drifts and avalanches. Tsomaia, V.Sh , (1987, p.376-384, rus) 43-2545
Avalanche formation along the highways of the Magadan Oblast'. Bulgakov, A.B., (1987, p.404-412, rus) 43-2549
Avalanche danger on the Northern Portal-Zakki settlement road (District of the Transcaucasian main highway via the Roksk crossing). Kotsarev, V.G., et al, (1988, p.27-35, rus) 43-2562
Frost hazard of roads in marshlands of the Sanjiang Plain. Wang, C.H., (1988, p.409-417, chi) 43-2855
Ablation process of snow and ice on roads. Naruse, R., et al, (1988, p.294-303, eng) 43-2930
New classification of snow and ice on roads. Maeno, N., et al, (1988, p.304-313, eng) 43-2931
Radiation index. Dysli, M., (1989, p.233-238, eng) 43-3101
Evaluation of frost heave properties of soils. Saarelainen, S.M.I., (1989, p.471-480, eng) 43-3120
Application of direct freezing tests in dimensioning frost protection for roads. Stenberg, L., (1989, p.565-572, eng) 43-3129
Freeze-thaw related stability problems for a road in a steep silt slope. Brorsson, I., et al, (1989, p.645-654, eng) 43-3135
Site investigation on frost damages of roads at highland. Fukuda, M., et al, (1989, p.655-663, eng) 43-3136
Consideration of frost heave in the design of road embankment. Saarelainen, S., et al, (1989, p 699-708, eng) 43-3140
Frost damage in road materials in Kittilä, Northern Finland. Saarenketo, T., et al, (1989, p.709-719, eng) 43-3141
Frost action prevention in road tunnels. Takeichi, K., et al, (1989, p.721-730, eng) 43-3142
Preventing measures against frost actions in soils. Phukan, A.P.E , (1989, p.749-769, eng) 43-3144
Use of thermal inserts to reduce heaving on existing roadways. Sage, J.D., et al, (1989, p.821-830, eng) 43-3150
Dimensioning frost protection in roads—demi-risk analysis by VTI method. Stenberg, L., (1989, p.831-837, eng) 43-3151
Experience from dimensioning frost protection in roads by VTI method. Stenberg, L., et al, (1989, p.839-844, eng) 43-3152
Snow on roads in the Caucasus. Tsomaia, V.Sh., (1988, p.19-24, rus) 43-3250
Method for rating unsurfaced roads. Eaton, R.A., et al, (1989, p.103-106, eng) 43-3484
Winter city planning in Sapporo. Shibata, K., (1988, p 207-219, eng) 43-4244
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Heat and mass transfer during thermal mine drilling. Fomin, S.A., et al, (1987, p.30-33, rus) 43-2266
Drilling through thawed layers of frozen rock. Maksimov, A.M., et al, (1989, p.1014-1019, eng) 43-2766
Technique of drilling blastholes in frozen rocks. Strabykin, N.N., (1989, 171p., rus) 43-3064
Thermo-physical aspects of developing mineral resources. Arens, V.Zh., et al, (1988, 336p., rus) 43-3066
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Thermo-physical aspects of developing mineral resources. Arens, V.Zh., et al, (1988, 336p., rus) 43-3066
Breakup mechanics and dust kinetics in percussive frozen rock breakup. Larionov, V.R., et al, (1988, p.54-58, rus) 43-3852
Torpedoing permafrost when using pillar-free technology. Sleptsov, A.E , et al, (1988, p.84-89, rus) 43-3865
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Rock glaciers in valleys of the Inner Tien Shan and Terskey Alatau. Tarakanov, A.G., (1987, p.130-133, rus) 43-243
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Results of studying rock glaciers in Tien Shan. Titkov, S.N., (1988, p.47-55, rus) 43-525
Structure and evolution of slope rock glaciers (Inner Tien Shan and the Terskey Alatau ridge). Tarakanov, A.G., (1988, p.70-76, rus) 43-571
Eastern Beaufortin. Nicod, J., (1988, p.121-146, fre) 43-1163
Rock glaciers, Southwest Yukon. Johnson, P.G., (1988, p.277-280, eng) 43-1367
Rock glaciers of the Dalton Range, Kluane Ranges, southwest Yukon Territory, Canada. Johnson, P.G., et al, (1988, p.327-332, eng) 43-1989
Rock glaciers. Gorbunov, A.P., (1988, 106p., rus) 43-2283
Lithology and fracture of rock glaciers. Evin, M., (1988, p.137-158, fre) 43-2300
Rock glaciers. Giardino, J.R., ed, (1987, 355p., eng) 43-3041
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Rock glaciers: an approach to their systematics. Barsch, D., (1987, p.41-44, eng) 43-3044
Problem of the ice-cored rock glacier. Barsch, D., (1987, p.45-53, eng) 43-3045
Rock glacier response to abrupt changes in talus production. Olyphant, G.A., (1987, p.55-64, eng) 43-3046
Rock glaciers of central Brooks Range, Alaska, U.S.A. Calkin, P.E., et al, (1987, p.65-82, eng) 43-3047
Lithology and fracturing of rock glaciers in Southwestern Alps. Evin, M., (1987, p.83-106, eng) 43-3048
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Differential movement across rock glacier in Colorado. White, S.E., (1987, p.145-149, eng) 43-3051
Dendrogeomorphology of rock glaciers in Utah and Colorado. Shroder, J.F., Jr., et al, (1987, p.151-159, eng) 43-3052
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Central Andes rock glaciers: applied aspects. Corte, A.E., (1987, p.289-303, eng) 43-3058
Rock glacier bibliography. Vitek, J.D., et al, (1987, p.305-344, eng) 43-3059
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Shore erosion of rock platforms by boulder scoring. Dionne, J.C., et al, (1988, p.101-115, fre) 43-317
Terrain models—a tool for natural hazard mapping. Toppe, R., (1987, p.629-638, eng) 43-1270
Rock stress measurements by wire stressmeter at high temperatures. Dutta, P.K., et al, (1987, p.43-58, eng) 43-1484
Current research in the geological sciences in Canada, May 1987-April 1988. Bolton, T.E., comp, (1988, 101p. (pertinent p.26-39), eng) 43-3528
Frost shattering experiments. Pt. 6, New results on limestone facies. (1974, 42p., fre) 43-3977
Rock properties
Geocryology of the European USSR. Ershov, E.D., ed, (1988, 357p., rus) 43-3067
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Catastrophic landslide deposits in the Karakoram Himalaya. Hewitt, K., (1988, p.64-67, eng) 43-473
Glacial geology in uranium exploration, Dismal Lakes, NWT, Canada. Steele, K.G., (1988, p.183-194, eng) 43-1033
Ice-rock interfaces and subglacial erosion. Vivian, R., (1988, p.207-218, fre) 43-1165
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Temperatures of rock walls and frost shattering. Francou, B., (1988, p.159-180, fre) 43-2301
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Water temperature and ice in Danube River delta. Min'kovskaia, R.IA., (1988, p.86-94, rus) 43-2392
Roofs
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Vents and vapor retarders for roofs. Tobiasson, W., (1987, p.80-90, eng) 43-545
Metallic enclosures (for buildings erected under severe climatic conditions). Tamplon, F.F., (1988, 248p., rus) 43-838
Snow load data analysis, winter 1976-77. O'Rourke, M., (1977, 9p. + append., eng) 43-931
Loads on roofs from snow drifting against vertical obstructions and in valleys. (1988, 12p., eng) 43-1197
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Modeling attic humidity as a function of weather, building construction, and ventilation rates. Gorman, T.M., (1988, 160p., eng) 43-1921
Designing structures for snow loads. Sack, R.L., (1989, p.303-315, eng) 43-1999
Cold weather roofing failures. Dregger, P.D., et al, (1989, p.50-58, eng) 43-2088
Snow loads on roofs. Christoffer, J., et al, (1988, p.79-86, ger) 43-2338
Double roofs to prevent ice damming on eaves. Baumgartner, A.M., et al, (1989, p 211-220, eng) 43-2370
Roofer: a management tool for maintaining built-up roofs. Bailey, D.M., et al, (1989, p 6-10, eng) 43-2691
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Avalanche formation from cylindrical and dome-shaped roofs. Bozhinskiĭ, A.N., et al, (1988, p.134-137, rus) 43-3318
Metal buildings for Air Force facilities in Alaska: a report. (1989, 66p , eng) 43-3529
International Conference on Snow Engineering, 1st, July 1988. (1989, 573p., eng) 43-3544
Snow load and snow load design in Hungary. Tamás, K., (1989, p.35-39, eng) 43-3549
Ground snow loads for t 1990 national building code of Canada. Newark, M. et al, (1989, p 40-49, eng) 43-3550
Wind effect on the distribution of snow depth on a large dome. Sakurai, S., et al, (1989, p.51-58, eng) 43-3551
Characteristics of snow and snow-induced building damage in Japan. Suzuya, J., et al, (1989, p.59-68, eng) 43-3552

Snow loads on roofs—three case histories in Warsaw. Sobolewski, A., et al, (1989, p 69-80, eng) 43-3553
Snow damage to buildings in Poland, 1968-1987. Wilbik, J., et al, (1989, p.81-84, eng) 43-3554
Roof snow loads in deep snow regions. Taylor, D., (1989, p 85-94, eng) 43-3555
Snow load on gable roofs: results from snow load measurements on farm buildings in Norway. Höibø, H., (1989, p.95-104, eng) 43-3556
Thermal characteristics of a double roof. Baumgartner, A.M., et al, (1989, p.107-117, eng) 43-3557
Predicting snow loading on the Toronto Skydome. Irwin, P.A., et al, (1989, p.118-127, eng) 43-3558
Variability of snow loads on large-area flat roofs. Mikitiuk, M., et al, (1989, p.142-157, eng) 43-3560
Wind effects on snow loads Mihashi, H., et al, (1989, p.158-167, eng) 43-3561
Snow-melting and snow loads on glass roofs. Nielsen, A., (1989, p.168-177, eng) 43-3562
Modeling wind effects on drifting. O'Rourke, M., et al, (1989, p.178-187, eng) 43-3563
Cold room studies for sliding snow. Sack, R.L., et al, (1989, p.199-209, eng) 43-3565
Consideration of wind effect in standardization of snow load. Otstavnov, V.A., et al, (1989, p.256-263, eng) 43-3570
Physical modeling for the assessment of snow load and drift. Petersen, R.L., et al, (1989, p.276-285, eng) 43-3572
Wind deflection fins for the control of snow on roofs. Williams, C.J., (1989, p 307-314, eng) 43-3575
Calculation of maximum snow load on roofs. Sandvik, R., (1989, p.317-324, eng) 43-3576
Standards for snow loads. Apeland, K., (1989, p.385-402, eng) 43-3583
Developing the Eurocode. Judge, C.J., (1989, p.403-412, eng) 43-3584
Changes coming in snow load design criteria. Tobiasson, W., (1989, p.413-418, eng) 43-3585
Snow loads on roofs in East European standards. Zuranski, J.A., (1989, p.419-428, eng) 43-3586
Architectural design in regions of snow and cold. Mackinlay, I (1989, p.441-455, eng) 43-3588
Determination of ground and roof snow loads at a particular site. Powell, D.R., (1989, p 456-461, eng) 43-3589
Roof design in cold regions. Tobiasson, W., (1989, p 462-472, eng) 43-3590
Control and prevention of leaking from ice dams. Marne, H., de, (1989, p.473-482, eng) 43-3591
Building design for heavy snow areas. Paine, J.C., (1989, p.483-492, eng) 43-3592
Perspective on analytical methods. Irwin, P.A., (1989, p.499-501, eng) 43-3594
Codes and standards: perspective. O'Rourke, M., (1989, p.507-509, eng) 43-3597
Case histories of snow loads on roofs Taylor, D., (1989, p.510-511, eng) 43-3598
Cracking of roof felt caused by an ice-cover. Cederwall, K., et al, (1989, p.796-807, eng) 43-3778
Probabilistic prediction of snow loads on sloped roofs. Sack, R.L., et al, (1986, p.41-50, eng) 43-3902
Designing structures for snow loads. Sack, R.L., (1987, p.97-107, eng) 43-3932
Settlement pressures on roof structures. Albrecht, R.G., (1987, p.118-123, eng) 43-3934
Roof snow loads; drifting against a higher wall. O'Rourke, M., et al, (1987, p.124-132, eng) 43-3935
Snow loads on multi-level flat roofs in Canada. Taylor, D.A., (1987, p.133-141, eng) 43-3936
Roof load predictions using artificial snow. Sack, R.L., et al, (1987, p.150-153, eng) 43-3939
Methodology for establishing ground snow loads. Sack, R.L., et al, (1985, p.163-166, eng) 43-4282
Structural snow loads. Sack, R.L., et al, (1983, p.120-129, eng) 43-4359
Roof design in cold regions. Tobiasson, W, (1989, p.1029-1037, eng) 43-4412
Changes and latest developments in roof snow removal techniques. Kimura, T., (1989, p.111-117, jpn) 43-4523
Bibliography on roofing materials and coatings. (1989, 63p., eng) 43-4608

Rotary drilling
Exploratory drilling on the shelf. Aseev, A.G., et al, (1988, 198p., rus) 43-755
Drilling and blasting in permafrost at the Wilbur Creek mine. Ziegler, D.R., (1987, p.235-258, eng) 43-3083

Roughness coefficient
Determination of roughness coefficient of the underside of ice cover. Majewski, W., et al, (1988, p.122-130, eng) 43-2986
Flow resistance for partially ice-covered channels. Arisz, H., et al, (1988, p.131-141, eng) 43-2987
See also: Surface roughness

Route surveys
Albedo of characteristic surfaces of Mongolia according to land and satellite survey data. Grinberg, A.M., et al, (198?, p.101-109, rus) 43-110
Regime of river runoff in West Spitsbergen. Gokhman, V.V., (1988, p.96-103, rus) 43-942
Vessel performance study for the MV *Arctic* 1987, Appends A, B, C. (1988, 2 pieces, eng) 43-2151

Rubber
Performance of rubber-modified asphalt pavements in cold regions. Takallou, H.B, et al, (1989, p.81-91, eng) 43-2091
Adhesion of ice to polymer materials. Andersson, L.O., (1989, p.786-795, eng) 43-3777

Rubber ice friction
Adhesiveness of ice on rubber materials. Andersson, L.O., (1988, p.271-280, eng) 43-2928

Rubber snow friction
Process of breaking up hard snow. Maevskiĭ, A.A., (1987, p 60-71, rus) 43-3658

Runoff
Application of a snowmelt and rainfall sediment yield model to New Mexico watersheds. Foltz, R.B., et al, (1987, p.98-102, eng) 43-4
Slushflows in a subarctic environment, Kilpisjärvi, Finnish Lapland. Clark, M.J., et al, (1988, p.97-105, eng) 43-16
Fresh water content of Hudson Bay and Foxe Basin due to ice melting. Prinsenberg, S J., (1988, p.6-11, eng) 43-156
Effect of glaciers on annual run-off, Johan Dahl Land, south Greenland. Braithwaite, R.J., et al, (1988, p.200 207, eng) 43-165
Meltwater movement in natural heterogeneous snow covers. Marsh, P., et al, (1985, p.1710-1716, eng) 43-181
Measurement of snow: runoff, evaporation and soil water contribution. Bengtsson, L, (1985, p 101-110, swe) 43-366
Streamflow modelling in the Tobique Basin Jobin, D.L., et al, (1987, p.90-107, eng) 43-393
Clarification of criteria of WMO intercomparison of snowmelt runoff models. Cavadias, G., et al, (1988, p.369-377, eng) 43-454
Glacier water resources of Qilian Mountains. Yang, Z., (1988, p.36-46, chi) 43-466
Hydrologic characteristics of the Gongba Glacier in the Mount Gongga area. Cao, Z., (1988, p.57-65, chi) 43-468
Observations of oversnow flow in subalpine meadows of Colorado. Kattelmann, R, (1987, p 185-188, eng) 43-581
Factors affecting snowmelt and streamflow Garstka, W.U., (1987, p.253, eng) 43-585
Hydrologic reconnaissance of the Chilkat River basin, southeast Alaska. Bugliosi, E.F., (1988, 28p, eng) 43-776
Isotopic and geochemical study of snowmelt runoff in a small Arctic watershed. Obradovic, M.M., et al, (1986, p.15-30, eng) 43-835
Regime of river runoff in West Spitsbergen Gokhman, V.V., (1988, p.96-103, rus) 43-942
Water balance of the Sary-Tor mountain glacier basin. Diurgerov, M.B., et al, (1988, p.203-207, rus) 43-963
Scheme for forecasting flood runoff for unstudied rivers of eastern Siberia. Petenkov, A.V., (1986, p.451-458, eng) 43-1091
Snowmelt and runoff during rain-on-snow in forest and adjacent clearcut. Beaudry, P.G., et al, (1987, p.285-311, eng) 43-1301
Energy-budget snowmelt model for the Canadian Prairies. Gray, D.M., et al, (1988, p.1292-1303, eng) 43-1316
Meltwater runoff and erosion on cultivated slopes. Azhigirov, A.A., et al, (1987, p.90-99, rus) 43-1385
Monitoring of seasonal snow cover on glaciers. Haefner, H., et al, (1988, p.443-445, eng) 43-1526
Erosion and diagnostics of eroded soils in Siberia. Panfilov, V.P., ed, (1988, 117p., rus) 43-1561
Effect of a small wetland on runoff response during spring snowmelt. Taylor, C.H., et al, (1985, p.137-154, eng) 43-1694
Stochastic concept of flooding data. Sosedko, M.N., et al, (1988, p.21-29, rus) 43-1770
Spring-runoff features according to meteorological data. Manukalo, V.A., et al, (1988, p.30-36, rus) 43-1771
Effect of thermal polynyas on runoff and wind flow in a reservoir. Pavlov, V.K., et al, (1986, p.49-55, rus) 43-1884
Snow resources and regional runoff. Mishon, V.M., (1988, 192p., rus) 43-1886
Simultaneous heat and water model of a snow-residue-soil system. Flerching, , G.N., (1988, 161p., eng) 43-1917
Measurement of outflow from a snowbank with basal ice. Young, K.L., et al, (1988, p.358-362, eng) 43-1994
Movement of meltwater in small basins. Bengtsson, L., (1988, p.237-244, eng) 43-2017
Hydrology of Bayelva, Spitsbergen. Repp, K., (1988, p.259-268, eng) 43-2019
Hydrological background of a glacier-influenced hydropower station in Greenland. Kern-Hansen, C., (1988, p.269-280, eng) 43-2020
Water resources of the North Slope, Alaska. Sloan, C.E., (1987, p.233-252, eng) 43-2372
Effect of air temperature and soil conditions on snowmelt. Strikharchuk, V.P., (1988, p.120-127, rus) 43-2393
Problems of swamp hydrology Novikov, S.M., ed, (1988, 152p., rus) 43-2461
Effect of drainage projects on river runoff. Revera, O.Z., (1988, p.134-145, rus) 43-2472
Glaciology of mountainous regions. Getker, M.I., ed, (1988, 136p., rus) 43-2669
Runoff from the Pamir-Alai glaciers and potential opportunities for its regulation. Shchetinnikov, A.S., (1988, p.80-91, rus) 43-2684
Hydrometeorological conditions, mass balance and runoff from Alpine glaciers. Collins, D.N., (1989, p.235-260, eng) 43-3187
Meteorological conditions in the formation of water and snow flows. Perov, V.F., et al, (1988, p.41-47, rus) 43-3254
Runoff in glacier region of Kunlun Mountains. Cao, Z.T., et al, (1989, p.111-117, eng) 43-3449
Runoff analysis of the Urumqi River in China's Xinjiang Province. Sugawara, M., et al, (1989, p.35-72, jpn) 43-3542
Azonal factors in rain runoff formation in the Kolyma water balance station. Boiarintsev, E.L., (1988, p.67-94, rus) 43-3637
Use of new SSARR model automatic updating procedure. Orwig, C.E., et al, (1988, p.52-57, eng) 43-3996
Seasonal stream-flow forecasting of the upper Rio Grande basin Perkins, T.R., (1988, p.58-69, eng) 43-3997
Peakflow forecast for Payette Lake using SNOTEL data. Sarantitis, B.C., et al, (1988, p.70-77, eng) 43-3998
Hydrograph recession limbs—a case of hydrologic *deja vu*. Van Haveren, B.P., (1988, p.148-154, eng) 43-4006
Predicting snow course snow water equivalent. Zuzel, J.F., (1988, p.155-157, eng) 43-4007
Eastern Snow Conference, 45th, 1988. (1988, 218p., eng) 43-4109
Stream chemistry during snowmelt runoff. Wels, C., et al, (1988, p 60-73, eng) 43-4117
Snow hydrology in the upper Yamuna basin, India. Malhotra, R.V., et al, (1988, p.84-93, eng) 43-4119
Snowmelt runoff processes in a small precambrian watershed. Shibatani, R., et al, (1988, p.94-107, eng) 43-4120
Snowmelt models for shallow and short-living snowpacks. Baumens, W., (1988, p.108-120, eng) 43-4121
Snowpack modelling using daily climatological data. Garr, D.A., (1988, p.176-180, eng) 43-4127
Proceedings of the 53rd annual meeting, Boulder, CO, Apr. 16-18, 1985. (1985, 183p., eng) 43-4262
Probability distributions of rain on snow for northcentral Oregon. Zuzel, J.F., et al, (1985, p.37-43, eng) 43-4266
Analysis of water supply forecast accuracy. Schaake, J.C., Jr., et al, (1985, p.44-53, eng) 43-4267
Basin division and snowmelt discharge in an alpine basin. Michaels, P.S, (1985, p.117-126, eng) 43-4275
Redistribution and sublimation loss of the snowpack in the alpine watershed James, E.D., et al, (1985, p.148-151, eng) 43-4278
Determining variability of snow accumulation and ablation on western rangelands. Cooley, K.R., et al, (1985, p.156-159, eng) 43-4280
Temporal variations in snowmelt runoff from an alpine snowfield. Sarantitis, B., (1985, p.160-162, eng) 43-4281
Five snowmelt models: a comparison of prediction accuracy. McGurk, B.J., (1985, p.171-174, eng) 43-4284
Suspended sediments as a function of stream flow. Salway, A.A., (1985, p.175-178, eng) 43-4285
Monitoring a rain-on-snow event. Cooley, K.R., et al, (1983, p.19-26, eng) 43-4349
Gamma radiation snow water equivalent measurements. Carroll, T.R., et al, (1983, p.27-37, eng) 43-4350
Snow accumulation and melt during rainfall in forests. Harr, R.D., et al, (1983, p.38-45, eng) 43-4351
Analysis of three rain on snow floods in the Sierra Nevada, California. Hall, R.L., et al, (1983, p.46-54, eng) 43-4352
Snowmelt during rain on snow in coastal British Columbia. Beaudry, P., et al, (1983, p.55-66, eng) 43-4353
Rain on snow: shallow, transient snowpacks with frozen soils. Zuzel, J.F., et al, (1983, p 67-75, eng) 43-4354
Snow accumulation and ablation algorithms for watershed models. Huber, A.L., (1983, p.76-88, eng) 43-4355
Influence of snowmelt in evaluating small hydropower generation potential. Tangborn, W.V., et al, (1983, p.100-108, eng) 43-4357
Continuous frozen ground index for flood forecasting. Molnau, M., et al, (1983, p.109-119, eng) 43-4358
Rain-on-snow flood event in central Arizona Pfolliott, P.F., et al, (1983, p.130-138, eng) 43-4360
Willamette National Forest local flood prediction. Christner, J., et al, (1983, p.139-140, eng) 43-4361
Hydrologic response of central Sierra Nevada snowpacks to rainfall. Bergman, J.A., (1983, p.141-144, eng) 43-4362
Streamwater chemistry during snow-melt in a Scottish upland catchment. Abrahams, P.W., et al, (1989, p.231-248, eng) 43-4618
See also: Stream flow

Runoff forecasting
Snowmelt-runoff forecast model with remote sensing input. Rango, A., (1988, p.65-76, eng) 43-301

Runoff forecasting *(cont.)*
Forecasting of snowmelt runoff using water temperature data. Pangburn, T., (1987, p.108-113, eng) 43-394
Sensitivity analysis of SNOW-17 in the Lake Laflamme watershed Laberge, G., et al, (1987, p 114-128, fre) 43-395
Analysis and forecasting of low runoff in the Northwest. Li, X., et al, (1988, p.28-35, chi) 43-465
Annual runoff on the northern slope of Qilian Mountain. Lai, Z., (1988, p.47-56, chi) 43-467
Runoff forecasting and snow melting for rivers in Xinjiang. Zhang, G., et al, (1987, p 57-64, chi) 43-486
Orographic precipitation model for hydrometeorological use. Rhea, J.O., (1978, 198p., eng) 43-1363
Improvement in NOAA-AVHRR snowcover determination for runoff prediction. Frank, C., et al, (1988, p.433-435, eng) 43-1522
Snowmelt runoff estimation to control dam water level. Kawata, Y., et al, (1988, p.439-440, eng) 43-1524
Water equivalent of snow in mountains using microwaves and satellite data. Rango, A., et al, (1988, p 447-448, eng) 43-1527
Calibration of a water-balance model for small watersheds in eastern Oregon. Higgins, D.A., et al, (1988, p.347-360, eng) 43-1556
Short-term forecasting of snowmelt runoff using ARMAX models. Haltiner, J.P., et al, (1988, p.1083-1089, eng) 43-1558
Use of satellite images in snowmelting runoff forecasts in Chile. Araya F., M., (1984, p.235-240, eng) 43-1932
Runoff from spring floods in swamps. Pakutin, A.V., (1988, p.82-86, rus) 43-2468
Runoff from drained swamps. Baliasova, E.L., et al, (1988, p 87-98, rus) 43-2469
Forecasting monthly runoff from rivers with glacio-nival alimentation in July-September. Karandaeva, L.M., (1988, p.76-80, rus) 43-2683
Using maps to calculate glacial runoff. Zverkova, N.M., et al. (1988, p.129-134, rus) 43-3270
Proceedings of the 54th annual meeting, Phoenix, AZ, Apr. 15-17, 1986. (1986, 198p., eng) 43-3897
Variability of Southwest precipitation and seasonal snowpacks. Jones, R., et al, (1986, p.12-17, eng) 43-3899
Satellite monitoring of snowpack conditions Allen, M.W., et al, (1986, p.51-60, eng) 43-3903
Centralized forecasting system for the Western United States. Shafer, B.A., et al, (1986, p.61-70, eng) 43-3904
Evaluation of the NWSRFS model on a Montana watershed. Cooley, K.R., (1986, p.112-121, eng) 43-3910
Generation of a snow depletion curve for an alpine basin. Buchanan, L., (1986, p.122-133, eng) 43-3911
Snowmelt runoff simulation. Kim, S., et al, (1986, p.134-145, eng) 43-3912
Estimation of runoff using snow telemetry data Marron, J.K., (1986, p.154-157, eng) 43-3915
Snowmelt hydrograph separation. Woo, S., et al, (1986, p.158-161, eng) 43-3916
Snow compaction effects on nighttime freezing. Kattelmann, R., (1986, p.168-171, eng) 43-3919
Proceedings of the 55th Western Snow Conference, 1987. (1987, 184p. + appends, eng) 43-3921
Snowmelt-runoff modeling in the microcomputer environment. Rango, A., et al, (1987, p.1-9, eng) 43-3922
Runoff in the Upper Colorado River Basin, water years 1983-85. Wahl, K.L., et al, (1987, p.31-40, eng) 43-3925
Factors limiting snowmelt runoff in a permafrost environment. Marsh, P., (1987, p.61-68, eng) 43-3928
Methods of estimating liquid water storage in snow. Kattelmann, R., (1987, p 158-161, eng) 43-3941
Results from international intercomparisons of snowmelt runoff model performance Rango, A., et al, (1988, p.121-128, eng) 43-4122
Multisensor snow cover mapping and snowmelt runoff simulations. Baumgartner, M.F., et al, (1988, p.186-191, eng) 43-4129
Accuracy of hydrologic forecasts. Dracup, J.A., et al, (1985, p.13-24, eng) 43-4264
Results of the snowmelt-runoff model in an international test. Rango, A., (1985, p.99-106, eng) 43-4273
Snowmelt rate methods used in forecasting runoff from mountains. Ferner, S., et al, (1985, p.107-116, eng) 43-4274
Stochastic models for forecasting snowmelt runoff Haltiner, J.P., et al, (1985, p.127-135, eng) 43-4276
Interannual fluctuations in primary production: meteorological forcing at two subalpine lakes Goldman, C.R., et al, (1989, p.310-323, eng) 43-4291
Western Snow Conference, 52nd, 1984. (1984, 192p., eng) 43-4309
Snowmelt runoff in the upper Colorado River basin in 1983. Shafer, B.A., et al, (1984, p.1-11, eng) 43-4310
Predicting time of peak snowmelt runoff from snow pillow data. Farnes, P.E., (1984, p.132-138, eng) 43-4323
Western Snow Conference, 51st, 1983. (1983, 160p., eng) 43-4346
Application of a simple snowmelt-runoff model to large river basins. Rango, A., (1983, p.89-99, eng) 43-4356
Snow Survey and Water Supply Forecast Activity. Barton, M., (1983, p.151-154, eng) 43-4365
Prediction of run off of meltwater in south of central region of Nonchernozem zone of RSFSR. Barabanov, A.T., (1986, p.23-27, eng) 43-4427
Runoff from hummocky swamps in Western Siberia. Moskvin, IU.P., (1989, p 88-94, rus) 43-4552
Intensity and duration of water yield during snowmelt at a watershed. Dobroumov, B.M., et al, (1988, p.81-90, rus) 43-4583
Runways
Recent results in improving snow roads and runways in Antarctica. Wuori, A.F., et al, (1988, p.297-307, eng) 43-629
Hard-surface runways in Antarctica. Mellor, M., (1988, 87p., eng) 43-1148
Insulation performance beneath roads and airfields in Alaska. Esch, D.C., (1987, p.23-27, eng) 43-1388
Development of methodology for improved design of snow roads and airstrips. Lee, S.M., et al, (1988, p.301-302, eng) 43-1647
Airfields in Arctic Alaska. Crory, F.E., (1988, p.49-55, eng) 43-1724
Comprehensive study of cold climate airport pavement cracking. Haas, R., et al, (1987, p.198-245, eng) 43-1863
Asphalt pavement crack control at Fairbanks International Airport. Esch, D.C., et al, (1989, p.59-69, eng) 43-2089
Performance of pavement at Central Wisconsin Airport. Stark, J., et al, (1989, p.92-103, eng) 43-2092
Deep frost effects on a longitudinal edge drain. Allen, W.L., (1989, p.343-352, eng) 43-2115
Response of runway pavement to freeze thaw cycles. Allen, W.L., et al, (1989, 31p., eng) 43-2809
Porous portland cement concrete as an airport runway overlay. Korhonen, C., et al, (1989, 20p., eng) 43-3070
Compacted-snow runways: design and construction guidelines for Antarctica. Russell-Head, D.S., et al, (1989, 68p., eng) 43-3474
Solutions to improve ice and snow control management on road, bridge, and runway surfaces. Kelley, J.R., (1988, p.152-161, eng) 43-4125
See also: Aircraft landing areas; Ice runways
Safety
Artificial intelligence and avalanche risk forecasting. Lafeuille, J., et al, (1987, p.537-548, fre) 43-1259
Skill evaluation of avalanche risk forecasting. Giraud, G., et al, (1987, p.583-591, fre) 43-1264
Recent developments in artificial avalanche triggering in France. Borrel, G., (1987, p 623-626, fre) 43-1268
Risk analysis—is it a useful tool for the politician in making decisions on avalanche safety. Bohnenblust, H., et al, (1987, p 653-664, eng) 43-1273
Alpine Meadows avalanche trial: conflicting viewpoints of the expert witnesses. Penniman, D., (1987, p 665-677, eng) 43-1274
Avalanche risk assessment by backcountry skiers. Sutherland, L.A., et al, (1987, p.679-684, eng) 43-1275
Arctic marine lifesaving equipment. Part 1. Thompson, E.W., (1988, p.14-17, eng) 43-1460
Arctic marine lifesaving equipment. Part 2. Thompson, E.W., (1988, p.14-15, eng) 43-1461
Baltimore stresses snowfighter safety. Swank, P.R., (1988, p.31-32, eng) 43-1851
Recommendations for urban planning in snowy country. Kuriyama, H., (1986, p.30-36, jpn) 43-2191
Problems in safety technology in the management of underground mining explorations under permafrost conditions, with regard to the temperature factor. Voronov, E.T., (1987, p.44-48, rus) 43-2288
Avalanche danger on the Northern Portal-Zakki settlement road (District of the Transcaucasian main highway via the Roksk crossing). Kotsarev, V.G., et al, (1988, p.27-35, rus) 43-2562
Master plan for highway meteorology. Le Quentrec, M., (1986, 12p., eng) 43-2757
Climatic factors for road maintenance and traffic safety. Lindqvist, S., (1986, 8p., eng) 43-2762
Transport of freezing cargoes: a handbook. Noskov, IU.A., ed, (1988, 206p., rus) 43-2895
Operation and safe driving of amphibious vehicles. Stepanov, A.P., et al, (1988, 318p., rus) 43-3065
Need to regulate mountain area use vis-à-vis avalanche risk. Ellena D., A., et al, (1988, p.37-42, fre) 43-3208
Ice retardant pavements and the importance of stationary winter maintenance. Johannes, H.P., (1989, p.27-29, eng) 43-3485
Cold weather handbook for surface ships. (1988, c 236p., eng) 43-3620
Underwater observations of ice/structure interactions in small-craft harbors. Wortley, C.A., et al, (1989, p.930-942, eng) 43-3790
Arctic: safety problems in navigation. Bogorodskiĭ, V., et al, (1989, p.16-19, rus) 43-3966
See also: Accidents
Saint Clair River
Water quality during winter river navigation seasons. Sletten, R.S., (1988, 56p., eng) 43-1201
Airborne radar survey of a brash ice jam in the St. Clair River. Daly, S.F., et al, (1989, 17p., eng) 43-3475
Saline ice
See also: Salt ice
Saline soils
Salt redistribution during laboratory freezing of saline sand columns. Baker, G.C., et al, (1988, p.29-33, eng) 43-57
On salt heave of saline soil. Chen, X., et al, (1988, p.35-39, eng) 43-58
Salt redistribution during freezing of saline sand columns. Baker, G.C., (1988, 248p., eng) 43-343
Experimental studies of heat- and mass-transfer kinetics in salinized, freezing disperse rocks. Ershov, E.D., et al, (1988, p.39-41, rus) 43-552
Unfrozen water contents of six antarctic soil materials. Anderson, D.M., et al, (1989, p.353-366, eng) 43-2116
Deformation features of saline soils. Maslov, A.D., (1987, p.237-243, rus) 43-3388
Salt migration in freezing soils. Romanov, V.P., et al, (1989, p.57-65, rus) 43-4611
Salinity
Model for an oceanic salt pump. Broecker, W.S., et al, (1987, p.251-259, eng) 43-211
Sea salt in deposited snow on sea ice and snow drift. Osada, K., et al, (1988, p.17-24, jpn) 43-219
Oceanography of the Baffin Bay and Nares Strait, Sep. 1986. Bourke, R.H., et al, (1988, 32p. + appends, eng) 43-421
Effects of river plume on sea-ice meiofauna in Hudson Bay. Grainger, E.H., (1988, p.131-141, eng) 43-1487
Activity of concentrated NaCl solutions at low temperature. Thurmond, V.L., et al, (1988, p.411-414, eng) 43-1567
Formulae for total porosity evaluation of saline ice. Häusler, F.U., (1989, p.83-87, eng) 43-1581
Greenland Sea convection in the winter of 1987-1988. Rudels, B., et al, (1989, p.3223-3227, eng) 43-2395
Chemical discharge from rivers into the basin of Issyk-Kul' Lake. Gokhman, V.V., et al, (1988, p.142-145, rus) 43-3320
Thermohaline circulation under Ronne Ice Shelf. Hellmer, H.H., (1989, 87p., ger) 43-4075
See also: Ice salinity
Salt extraction
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Salt ice
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Salt lakes
Salts in pond waters of the Labyrinth; lithium and boron contents. Takamatsu, N., et al, (1988, p.103-112, eng) 43-839
Water quality of lakes and rivers in Tibet. Fushimi, H., et al, (1989, p.129-137, eng) 43-3452
Salt spray
See also: Sea spray
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Snow-drifting: a review of the process and of modelling methods. Kind, R.J., (1987, p.411-434, eng) 43-1305
Salting
Repair of winter damage. Grunau, E.B., (1988, p.21-26, ger) 43-124
Equipment and salt: one, two punch for winter opponents. (1988, p.54-55, 106, eng) 43-504
Study sets guidelines for liquid CaCl2 injection. Kirchner, H., (1988, p.38-40, eng) 43-1853
Limited salt spreading on highways—effects on traffic movement and safety. Hanke, H., et al, (1988, p.392-402, ger) 43-2187
Deicing chemicals and snow control. (1988, 53p., eng) 43-2205
Comparison of calcium magnesium acetate and rock salt as deicers. McElroy, A.D., et al, (1988, p.12-19, eng) 43-2207
Study on wetting salt and sand stockpiles with liquid calcium chloride. McElroy, A.D., et al, (1988, p.38-43, eng) 43-2211
Calcium chloride mixture (Verglimit) as an ice retardant for asphalt. Rainiero, J.M., (1988, p.44-53, eng) 43-2212
Correlations between road salt use and winter intensity. Speth, O., (1986, 16p., eng) 43-2756
Pre-wetted salt: then and now. (1989, p.52-53, eng) 43-4077
Calcium chloride and winter road safety strategies. Gillespie, K., (1989, p.69-70, eng) 43-4081
Wet de-icing salts in winter road maintenance. Steinhauser, L., (1989, p.139-141, ger) 43-4539

Samplers
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Sampling
Aliphatic hydrocarbons and isomers of hexachlorocyclohexane in water, ice and snow. Dmitriev, F.A., et al, (1988, p.566-568, eng) 43-3944
On determination of maximum hailstone sizes from hailpad observations. Smith, P.L., et al, (1989, p.71-76, eng) 43-4259
Accumulation rates of rock debris at the foot of supraglacial walls in northwest Spitsbergen. André, M.F., (1988, p.351-373, fre) 43-4336
Efficiencies of the ASCME and PMS aspirator hydrometeor instruments. Norment, H.G., (1986, p.57-75, eng) 43-4627
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Sanding
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Sands
Salt redistribution during laboratory freezing of saline sand columns. Baker, G.C., et al, (1988, p.29-33, eng) 43-57
Thermal and hydraulic conductivity of unsaturated frozen sands. Van Loon, W.K.P., et al, (1988, p.81-90, eng) 43-64
Mechanical properties of circular slabs of frozen sand and clay in bending tests. Izuta, H., et al, (1988, p.187-192, eng) 43-76
Creep formula for practical application based on crystal mechanics Orth, W., (1988, p 205-211, eng) 43-79
Uniaxial compressive strength of frozen medium sand under constant deformation rates. Zhu, Y., et al, (1988, p 225-232, eng) 43-82
Volume change behavior of frozen sands. Youssef, H., (1988, p.49-64, eng) 43-147
Salt redistribution during freezing of saline sand columns. Baker, G.C., (1988, 248p., eng) 43-343
Water erosion of frozen fines. IAkovlev, A.V., (1988, p.131-135, rus) 43-537
Thixotropy of water-saturated soils, its nature and the determining factors (scientific review). Osipov, V.I., (1988, p.3-31, rus) 43-597
Behavior of water saturated sand-clay ground under dynamic conditions. Nikolaeva, S.K., et al, (1988, p.207-215, rus) 43-886
Influence of water content on compressive strength of frozen sands. Enokido, M., et al, (1987, p.148-152, eng) 43-1025
Rates of infiltration into frozen and unfrozen fine sand. Engelmark, H., (1988, p.343-347, eng) 43-1126
Permeability coefficient of sea ice formed within sands and gravels fills. Muraki, Y., et al, (1988, p.252-262, eng) 43-2926
Heat and moisture properties in frozen sandy soil; measurements and modeling. Lemmelä, R., et al, (1989, p.323-340, eng) 43-3109
Study on deformation features of frozen coarse sand. Shusherina, E.P., et al, (1987, p.227-237, rus) 43-3387
Niveo-aeolian deposits and denivation forms in northwestern Alaska. Koster, E.A., et al, (1988, p.153-170, eng) 43-3531
Acoustically induced ground motion in sand under winter conditions. Peck, L., (1989, p.37-54, eng) 43-3875
Ancient and modern cold-climate aeolian sand deposition: a review. Koster, E.A., (1988, p 69-83, eng) 43-4341
Sanitary engineering
Frost action and deterioration of building foundations. Nuriev, F.Z., (1988, p.135-140, rus) 43-538
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Observational and modeling studies of the Terra Nova Bay confluence zone. Bromwich, D.H., et al, (1988, p.101-104, eng) 43-1497
Optical properties of antarctic snow Warren, S.G., et al, (1988, p.247-248, eng) 43-1644
Ice-core drilling for paleoclimatic information at plateau remote. Mosley-Thompson, E., et al, (1987, p.78-79, eng) 43-2743
Satellites
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Experimental studies of heat- and mass-transfer kinetics in salinized, freezing disperse rocks. Ershov, E.D., et al, (1988, p.39-41, rus) 43-552
Influence of water-saturation techniques on temperature deformations of freezing concrete. Almazov, V.O., et al, (1986, p.162-169, rus) 43-733
New achievements in foundation construction on peat and weak ground (according to materials of the Baltic International Conference). Svetlinskii, B.V., (1988, p.28-30, rus) 43-815
Behavior of water saturated sand-clay ground under dynamic conditions. Nikolaeva, S.K., et al, (1988, p.207-215, rus) 43-886
Model for simulating freezing and thawing of unsaturated soils. Karvonen, T., et al, (1989, p.267-281, eng) 43-3104
Characteristics of soil freezing under open system conditions. Zhestkova, T.N., (1987, p.124-133, rus) 43-3377
Cryogenic structure formation in unconsolidated water-saturated deposits. Ershov, E.D., et al, (1987, p.133-141, rus) 43-3378
See also: Supersaturation
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Scanning electron microscopy of ice in cement paste. Monteiro, P.J.M., et al, (1989, p.306-314, eng) 43-2894
Scattering
Particle scattering via the digitized Green's function algorithm. Goedecke, G.H., et al, (1988, p.2431-2438, eng) 43-973
Scattering of millimeter waves by snow crystals. O'Brien, S.G., et al, (1988, p.2439-2444, eng) 43-974
Propagation of polarized millimeter waves through falling snow. O'Brien, S.G., et al, (1988, p 2445-2450, eng) 43-975
SAR-seen multi-mode waves in ice: evidence of imaging non-linearities. Raney, R.K., et al, (1988, p.141-144, eng) 43-1505
Synthetic aperture radar data over terrestrial ice. Rees, W.G., (1988, p.165-168, eng) 43-1508
Some advantages of using polarisation diversity illustrated through the analysis of radar data from a storm in Central Alberta. Holt, A.R., et al, (1988, p.237-240, eng) 43-1511
SAR image statistics related to atmospheric drag over sea ice. Burns, B.A., et al, (1988, p.409-412, eng) 43-1515
Millimeter-wave backscatter measurements of various snow forms. Narayanan, R.M., et al, (1988, p.451-452, eng) 43-1528
Extinction and scattering of radiation by ice cylinders. Petrushin, A.G., (1987, p.1004-1008, eng) 43-3198
Permittivity of dielectric spheres. Sihvola, A., et al, (1989, p.37-60, eng) 43-4421
Scattering by irregular inhomogeneous particles. O'Brien, S.G., et al, (1986, p.93-100, eng) 43-4629
Phase function of two dimensional snow crystals. Winchester, L.W., Jr., (1986, p.101-109, eng) 43-4630
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Estimating sea ice motion in SAR imagery by matched filtering. Collins, M.J., et al, (1988, p.9241-9251, eng) 43-17
Double-diffusive convection under sea ice. Atkinson, J.F., et al, (1988, p.89-95, eng) 43-149
Microcomputer-based image-processing system. Perovich, D.K., et al, (1988, p.249-252, eng) 43-172
Effects of dirty snow in nuclear winter simulations. Vogelmann, A.M., et al, (1988, p.5319-5332, eng) 43-210
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Navy Arctic research. Curtain, T.B., (1988, p.15-19, eng) 43-220
Effect of sea ice on Beaufort Sea coastal processes. (1987, 104p. + appends, eng) 43-281
Particle flux in the Weddell Sea related to ice cover. Fischer, G., et al, (1988, p 426-428, eng) 43-418
Sea ice and meteorology of the Bering Sea, 1985. Pease, C.H., et al, (1985, 120p., eng) 43-424
Meteorological and oceanographic data from the Weddell Sea, 1986. Kottmeier, C., et al, (1988, 115p., eng) 43-438
Determination of compressive strength of sea ice on Bohai aimed at designing. Li, F., (1987, p.97-102, chi) 43-492
Sea ice variations observed by Nimbus 7, 1978-1987 Gloersen, P., et al, (1988, p.10,666-10,674, eng) 43-507
Nimbus 7 SMMR radiance and Landsat derived sea ice concentrations. Steffen, K., et al, (1988, p 10,769-10,781, eng) 43-508
Geologic studies in Alaska by the U.S. Geological Survey during 1987. Galloway, J.P., ed, (1988, 215p., eng) 43-509
Construction of an arctic barrier island by alternating sea-ice pileup and overwash. Barnes, P.W., et al, (1988, p.180-182, eng) 43-513
Evidence for sea-ice impact on Icy Reef, Beaufort Sea coast. Reimnitz, E., et al, (1988, p.190-192, eng) 43-514
Arctic program annual report 1987. Curtin, T.B., (1987, 163p., eng) 43-515
Oceanographic conditions on the northern Bering Sea shelf: 1984-1985. Salo, S., et al, (1988, 55p., eng) 43-516
Petrographic characteristics of recent shore deposits of the Laptev Sea. Slagoda, E.A., (1988, p.11-21, rus) 43-520
Pendulum indentation tests on manufactured ice. Fransson, L., et al, (1988, p 669-678, eng) 43-653
Ice experiment. Zheleznov, S., et al, (1988, p.20-21, rus) 43-699
Experimental study on abrasion of concrete due to sea ice. Itoh, Y., et al, (1988, p.61-68, eng) 43-712
Numerical simulation of first-year sea ice. Cox, G.F.N., et al, (1988, p.12,449-12,460, eng) 43-721
Exploratory drilling on the shelf. Aseev, A.G., et al, (1988, 198p., rus) 43-755
Polynyas in the southern ocean. Gordon, A.L., et al, (1988, p.90-97, eng) 43-784
Studying and forecasting the development of anomalous ice phenomena. Kovalev, E.G., (1988, p.28-32, rus) 43-800
Relations of ice microstructures to microconvection in the surface sea layers. Monakhov, E.I., (1988, p.72-77, rus) 43-806
Prospects for modeling and predicting the large-scale ocean circulation and its mesoscale variability in the Arctic Ocean and Greenland Sea. Semtner, A.J., Jr., (1987, p.119-121, eng) 43-849
Workshop on Extreme Ice Features, Banff, Alta., Nov. 3-5, 1986. (1987, 463p., eng) 43-899
Beaufort Gyre ice trajectories. Cornett, S., (1987, p.11-37, eng) 43-900
Mechanical properties of multi-year sea ice. Richter-Menge, J.A., et al, (1987, p.121-153, eng) 43-905
Oxygen isotope evidence of freshwater pools and ice accretion below multiyear landfast sea ice, northern Ellesmere Island. Jeffries, M.O., (1987, p.405-412, eng) 43-917
Confined compressive strength of multi-year pressure ridge sea ice samples. Cox, G.F.N., et al, (1988, p 295-301, eng) 43-921
Local ice pressures measured in thick level ice in Antarctica. Final report. St. John, J., et al, (1986, 174p., eng) 43-976
Observations of wind-generated waves in antarctic sea ice. Crocker, G.B., et al, (1988, p.1292-1299, eng) 43-1069
Clouds and ice in relation to climate, 1977-1983. Herman, G.F., et al, (1984, 117p., eng) 43-1076
Southern ocean—the Antarctic: present and past. (1988, p.1-179, eng) 43-1093
Antarctic cryogenic sediments. Kellogg, T.B., et al, (1988, p.51-74, eng) 43-1096
Numerical modelling of the southern ocean ice cover. Guretskii, V.V., (1987, 39p., rus) 43-1097
Possible sea ice impacts on oceanic deep convection. Parkinson, C.L., (1985, p.47-49, eng) 43-1156
Physical oceanography and tracer chemistry of the southern ocean. (1988, 128p., eng) 43-1173
Study of the ice cover in Iglookik Bay. Murat, J.R., et al, (1988, p.239-249, eng) 43-1345
Optical studies of antarctic sea ice. Schlosser, E., (1988, p.289-293, eng) 43-1349
Arctic Science Conference, 39th, Fairbanks, AK, 1988: Abstracts. (1988, 264p., eng) 43-1373
Microalgae community on floating ice in Admiralty Bay. Ligowski, R., (1987, p.367-380, eng) 43-1375
Abundance and production of ice algae in Resolute Passage, Canadian Arctic. Smith, R.E.H., et al, (1988, p.251-263, eng) 43-1376
Surface winds over the antarctic continent: a review. Parish, T.R., (1988, p.169-180, eng) 43-1407
On mesoscale modelling of the dynamics and thermodynamics of sea ice. Lu, Q., (1987, 154p., eng) 43-1411
Canadian Arctic islands; program and abstracts. (1988, 110p., eng) 43-1452
Some thoughts on the large-scale circulation of the Arctic Ocean. Aagaard, K., (1988, p.1-3, eng) 43-1492
Meridional heat transport by the ice and ocean in the western Arctic. Pease, C.H., (1988, p.16-19, eng) 43-1493
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SAR-seen multi-mode waves in ice: evidence of imaging non-linearities. Raney, R.K., et al, (1988, p.141-144, eng) 43-1505
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35-GHz helicopter-borne polarimeter radar Hallikainen, M.T., et al, (1988, p.423-424, eng) 43-1520

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Sea ice type classification of SAR imagery. Wackerman, C.C., et al, (1988, p.425-428, eng) 43-1521
Regional Ice Model (RIM) for operational applications. Neralla, V.R., et al, (1988, p.135-153, eng) 43-1565
Periodicities and keel spacings of the ice bottom surface. Key, J.R., et al, (1989, p.1-10, eng) 43-1574
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Biotic provinces in modern Amundsen Sea sediments: implications for glacial history. Kellogg, D.E., et al, (1988, p.154-156, eng) 43-1633
Recent diatom distributions in the Amundsen Sea. Kellogg, D.E., et al, (1988, p.161-162, eng) 43-1634
Chlorophyll *a* distribution near an advancing ice edge: AMERIEZ, 1986. Smith, W.O., et al, (1988, p.163-164, eng) 43-1635
Microalgae at the ice edge in the northern Weddell Sea. Fryxell, G.A., (1988, p.166-168, eng) 43-1636
Microheterotrophs in the ice edge zone: an AMERIEZ study. Garrison, D.L., et al, (1988, p.169-171, eng) 43-1637
Carbon fixed by nitrifying bacteria during ice cover in McMurdo Sound. Priscu, J.C., et al, (1988, p.171-172, eng) 43-1638
Antarctic benthic and sea-ice microalgal interactions. Smith, G.A., et al, (1988, p.174-175, eng) 43-1640
Changes in photosynthetic metabolism of sea-ice microalgae. Palmisano, A.C., et al, (1988, p.176-177, eng) 43-1641
Photosynthesis by antarctic microalgae. Rivkin, R.B., et al, (1988, p.176-177, eng) 43-1642
Interactions between air, water, and sea ice in polar regions. Augstein, E., (1988, p.535-543, ger) 43-1668
Evaluation of sea ice thickness sensors. Rossiter, J.R., et al, (1988, 58p, eng) 43-1732
Mathematical characteristics of sea ice dynamics models. Pritchard, R.S., (1988, p.15,609-15,618, eng) 43-1736
Modeling ice dynamics of coastal seas. Overland, J.E., et al, (1988, p.15,619-15,637, eng) 43-1737
Requirements for ACV operations in Antarctica. Dibbern, J.S., (1988, p.133-146, eng) 43-1755
All around but ice. Kozlovskiĭ, A.M., (1988, 112p., rus) 43-1801
Stresses and deformations in a first-year ice cover. Sayed, M., et al, (1988, p.726-734, eng) 43-1803
Report of the International Ice Patrol in the North Atlantic. Season of 1986. (1988, 71p., eng) 43-1817
Outer Continental Shelf Environmental Assessment Program; comprehensive bibliography. (1988, 746p., eng) 43-1833
Chroococcoid cyanobacteria at coastal site. Walker, T.D., et al, (1989, p.193-196, eng) 43-1834
Multifrequency passive microwave observation of saline ice grown in a tank. Grenfell, T.C., et al, (1988, p.1687-1690, eng) 43-1896
Step frequency radar experiments on the antarctic sea ice. Uratsuka, S., et al, (1988, p.1703-1706, eng) 43-1900
Population dynamics of bacteria in Arctic sea ice. Smith, R.E.H., et al, (1989, p.63-76, eng) 43-1967
Dielectric and scattering properties of young snow-covered sea ice. Drinkwater, M.R., et al, (1988, p.274-282, eng) 43-1981
Two-dimensional deformation patterns in sea ice. Erlingsson, B., (1988, p.301-308, eng) 43-1986
Particulate material in sea ice in the Fram Strait. Larssen, B.B., et al, (1987, p.313-315, eng) 43-2011
Deuterium concentration and growth rate of antarctic first-year ice. Souchez, R., et al, (1988, p.1385-1388, eng) 43-2032
Ice pack conditions drive production, transport design. LeBlanc, L., (1989, p.26-28, eng) 43-2185
Arctic pipeline installation method uses ice sheet for support. Masterson, D.M., et al, (1989, p.29-30, eng) 43-2186
SPRI participation in the winter Marginal Ice Zone Experiment, MIZEX-87. Rottier, P., (1989, p.33-36, eng) 43-2218
Transformation of petroleum films in the ocean-ice-atmosphere system. Izmailov, V.V., (1988, 144p., rus) 43-2282
Update on portable hot-water sea ice drilling. Govoni, J.W., et al, (1989, p.175-178, eng) 43-2366
Sewage waste discharge to the Arctic marine environment. (1987, 5 sections, eng) 43-2380
Generation of internal waves by sea ice. McPhee, M.G., et al, (1989, p.3287-3302, eng) 43-2396
Acoustic emission from the Arctic ice sheet. Langley, A.J., (1989, p.692-701, eng) 43-2401
Physical control of arctic ice algal production. Cota, G.F., et al, (1989, p.111-121, eng) 43-2403
Physical oceanography. Johnson, W.R., (1988, p.29-38, eng) 43-2428
Second Icebreaking Technology Expedition with R.V. *Polarstern*. Final report, Vol.1. Schwarz, J., et al, (1987, 354 leaves, ger) 43-2430
Measurement of characteristic length of floating ice sheets. Sodhi, D.S., (1987, n.p. (Ch.7), eng) 43-2431
Operation Deep Freeze 89 end of season report. (1989, Var. p., eng) 43-2442
Parameterization of the dynamics of sea ice cover in climatological studies. Makshtas, A.P., et al, (1988, p.128-136, rus) 43-2444
Coupled energy balance climate-sea ice model. Ledley, T.S., (1988, p.15,919-15,932, eng) 43-2490
Proceedings. (1988, Var. p, eng) 43-2556
Measuring ice motion—from below. Belliveau, D.J., et al, (1989, p.10-14, eng) 43-2571
Tensile strength test for multi-year sea ice. Sinha, N.K., (1989, p.1-6, eng) 43-2602
Experimental study on properties of multi-layer sea ice of Bohai Sea. Li, H.S, et al, (1989, p.43-46, eng) 43-2608
Environmental loads on structures NPD—guidelines for loads and load effects. Kvitrud, A., et al, (1989, p.133-138, eng) 43-2619
Over-the-horizon target detection from a floating platform. Khan, R.H., et al, (1989, p.221-228, eng) 43-2630
Simple model for collision of floating bodies. Nawwar, A.M., et al, (1989, p 309-314, eng) 43-2640
Atmospheric processes at the edge of the antarctic continent. Kottmeier, C, et al, (1986, p.62-63, ger) 43-2663
Sea ice sediment entrainment and rafting in the Arctic. Kempema, E.W., et al, (1989, p.308-317, eng) 43-2690
Measurements of ridge sails in the Beaufort Sea. Sayed, M., et al, (1989, p.16-21, eng) 43-2706
Numerical model of the atmospheric boundary layer over a marginal ice zone. Kantha, L.H., et al, (1989, p.4959-4970, eng) 43-2723
Under-ice thickness distribution of the Arctic Basin as recorded in 1958 and 1970. McLaren, A.S., (1989, p.4971-4983, eng) 43-2724
Sea ice ridging in the Ross Sea, Antarctica, as compared with sites in the Arctic. Weeks, W.F., et al, (1989, p.4984-4988, eng) 43-2725
Sea-ice investigations during the Winter Weddell Sea Project. Ackley, S.F., et al, (1987, p.88-89, eng) 43-2749
Enigmatic basal sea-ice layer of the Filchner-Ronne Ice Shelf. MacAyeal, D.R., et al, (1987, p.89-91, eng) 43-2750
Ice thickness in McMurdo Sound. Leventer, A., et al, (1987, p.94-96, eng) 43-2752
Bacteria in pack-ice north of Elephant Island (BIOMASS III, October 1986). Zdanowski, M.K., (1988, p.203-216, eng) 43-2770
Drifting sea ice algae north of Elephant I., Oct. 1986. Ligowski, R., et al, (1988, p.217-229, eng) 43-2771
1982 diving program, Davis. Perrin, R., (1983, p.18-20, eng) 43-2803
Gas vacuolate bacteria from the sea ice of Antarctica. Staley, J.T., et al, (1989, p.1033-1036, eng) 43-2834
Photoadaptation of sea-ice microalgae in springtime. Michel, C., et al, (1988, p.177-185, eng) 43-2839
Vertical stratification model for the upper Arctic Ocean. Björk, G., (1989, p.52-67, eng) 43-2840
Studies on ice conditions in rivers, lakes and seas in China. Chen, Z.T., (1988, p.279-283, chi) 43-2869
IAHR Symposium on Ice, 9th, 1988. (1988, 3 vols., eng) 43-2906
Ice conditions and research for economical development and exploitation of natural resource in the cold regions of China. Shen, W., (1988, p.1-17, eng) 43-2907
Comparative study of sea ice research. Mawhinney, M., (1988, p.128-137, eng) 43-2916
Mechanical properties of antarctic sea ice. Inoue, M., et al, (1988, p.162-176, eng) 43-2919
Mechanical and physical properties of old and brackish ice. Jeffries, M.O., et al, (1988, p.177-187, eng) 43-2920
Flexural properties of eastern Bohai one-year sea ice. Shen, W., et al, (1988, p.199-205, eng) 43-2922
Permeability coefficient of sea ice formed within sands and gravels fills. Muraki, Y., et al, (1988, p.252-262, eng) 43-2926
Kinetic energy analysis of friction coefficient between sea ice and materials. Li, Z.J., et al, (1988, p 263-270, eng) 43-2927
Adfreeze strength of sea ice to steel pipe piles. Ohtsuki, F., et al, (1988, p.281-293, eng) 43-2929
Finite element discretization of sea ice plates. Horrigmoe, G., et al, (1988, p.439-450, eng) 43-2943
Indentation and arrest stress intensity factors of first year columnar sea ice. Parsons, B.L., et al, (1988, p.502-511, eng) 43-2949
Conceptual design of multipurpose structure in ice covered sea. Inoue, K., et al, (1988, p.580-590, eng) 43-2956
Measurements of the properties and brightness temperature of saline ice and snow. Welsh, J.P., et al, (1988, p.623-632, eng) 43-2960
Atmospheric disturbances triggering arctic sea ice fracture. Kozo, T.L., et al, (1988, p.633-642, eng) 43-2961
Step frequency radar experiments for the measurement of sea ice thickness. Uratsuka, S., et al, (1988, p 643-650, eng) 43-2962
Air-sea observation system of Hokkaido University. Aota, M., et al, (1988, p.651-660, eng) 43-2963
Tidal entrances in the Okhotsk coast, Japan. Kondo, H., et al, (1988, p.103-111, eng) 43-2984
Frazil ice in wind-generated polynyas. Ushio, S., et al, (1988, p.179-188, eng) 43-2991
Distribution of brine drainage channels in sea ice. Kawamura, T., (1988, p.219-228, eng) 43-2995
Dynamic model of sea ice forecast in the Bohai Sea. Liu, X.S., et al, (1988, p.282-292, eng) 43-3001
Meteorological factors in construction of ice platforms. Szilder, K., et al, (1988, p 410-424, eng) 43-3013
Sewage waste discharge to the arctic marine environment, February 1987. (1988, var. p., eng) 43-3060
Semianalytic energy balance climate model with explicit sea ice and snow physics. Harvey, L.D.D., (1988, p.1065-1085, eng) 43-3074
Expedition Arctic V/1a, 1b, and 2 with RV *Polarstern* 1988. Spindler, M., ed, (1989, 197p., ger) 43-3077
Expedition Antarktis VII/1 and 2 (EPOS) of RV *Polarstern* in 1987/1989. Hempel, I., ed, (1989, 185p, eng) 43-3092
Seasonal variations of ice algal standing crop near Showa Station. Watanabe, K., et al, (1987, p.143-164, eng) 43-3160
Development of UHF band step frequency radar for the measurement of sea ice thickness. Mineno, H., et al, (1987, p.275-283, jpn) 43-3161
Ocean heat flux in northern seas. Häkkinen, S., et al, (1989, p 6145-6157, eng) 43-3199
Ice-dominated shores of Canadian Arctic islands. Taylor, R.B., et al, (1987, p.33-48, eng) 43-3200
Tidal jacking of nearshore ice. Stander, E., et al, (1987, p.381-392, eng) 43-3202
Data report for the Siple Coast Project. Bindschadler, R.A., et al, (1988, 102p., eng) 43-3235
Proceedings of the Symposium on Ice Dynamics, 1988. (1989, 226p., eng) 43-3326
Pack ice drift off East Antarctica. Allison, I., (1989, p.1-8, eng) 43-3327
Arctic sea ice characteristics related to atmospheric processes. Barry, R.G., et al, (1989, p.9-15, eng) 43-3328
Development of sea ice in the Weddell Sea. Lange, M.A., et al, (1989, p.92-96, eng) 43-3341
Interactions between Arctic weather conditions and sea ice. Maslanik, J.A., et al, (1989, p.113-117, eng) 43-3344
Periodic motions in Weddell Sea pack ice. Rowe, M.A., et al, (1989, p.145-151, eng) 43-3350
Reflection of ocean waves related to ice edge dynamics. Squire, V.A., (1989, p.157-161, eng) 43-3352
Ice motion and deformation in the Weddell Sea. Wadhams, P., et al, (1989, p.178-186, eng) 43-3355
Lidar detection of leads in Arctic sea ice. Schnell, R.C., et al, (1989, p.530-532, eng) 43-3359
Acoustic propagation across the East Greenland marginal ice zone. Gallagher, C.J., (1989, 82p., eng) 43-3366
Cold ocean hydrocarbon resources. Clark, J.I., (1989, p.119-139, eng) 43-3489
Technology for offshore development: strengths and weaknesses. Hayley, D.W., (1989, p.140-148, eng) 43-3490
Proceedings. (1988, 64p, eng) 43-3495
Limit force loads and measurements of pack ice driving forces in the Beaufort Sea. Croasdale, K.R., et al, (1988, p.5-11, eng) 43-3496
Global and local ice loads for structure design. Allyn, N., (1988, p.13-22, eng) 43-3497
New results in ice load predictions using the fracture mechanics approach. Wierzbicki, T., (1988, p.23-27, eng) 43-3498
Full-thickness ice strength measurements. Ralston, T.D., (1988, p.29-31, eng) 43-3499
Ice loads and failure mechanisms. Churcher, A., (1988, p.33-35, eng) 43-3500
Meteorological and oceanic forcing of the Alaskan continental shelf seas. Overland, J.E., (1988, p.39-40, eng) 43-3501
Sea ice characteristics, motion and interactions. Coon, M., (1938, p.41-44, eng) 43-3502
Results of the Arctic buoy program. Moritz, R.E., (1988, p.45-54, eng) 43-3503
Ice stress measurements around offshore structures. Johnson, J.B., (1988, p.55-59, eng) 43-3504
Total ice force measurements on an instrumented structure, an overview of ice islands, and spray ice bonding to offshore structure coatings. Sackinger, W.M., (1988, p.61-64, eng) 43-3505
Review and status of remote sensing of sea ice. Carsey, F., (1989, p.127-138, eng) 43-3508
GEOSAT altimeter sea-ice mapping. Hawkins, J.D., et al, (1989, p.139-148, eng) 43-3509
Sea-ice characterization measurements needed for remote sensing models. Winebrenner, D.P., et al, (1989, p.149-158, eng) 43-3510
Stress and strain instruments developed for field measurements of ice. Duckworth, R., et al, (1989, p.159-165, eng) 43-3511
Physical oceanography instrumentation for the polar regions: a review. Morison, J.H., (1989, p.173-185, eng) 43-3513
Structure of medium-scale ice drift over the arctic shelf. Bannov-Balkov, IU.L., et al, (1989, p.105-110, rus) 43-3601

Cold weather handbook for surface ships. [1988, c 236p., eng] 43-3620
Oil spill under multi-year ice. [1983, 34p., eng] 43-3621
Hydrodynamic modeling of ice drift in Far Eastern seas. Pokrashenko, S.A., [1988, p.49-53, rus] 43-3635
Mechanical properties of multi-year sea ice. Richter-Menge, J.A., [1988, p.54-61, eng] 43-3646
Proceedings. POAC 89. Vols.1 and 2. [1989, 1187p. (2 vols.), eng] 43-3708
Water drag on sea ice—a revisit. Myrhaug, D., [1989, p.113-122, eng] 43-3717
Elastic properties of frazil ice from the Weddell Sea, Antarctica. Lange, M.A., et al, [1989, p 208-217, eng] 43-3726
Temperature, salinity and density of fast ice in Liaodong Bay. Li, Z.J., et al, [1989, p.218-224, eng] 43-3727
Compressive strength of antarctic frazil ice. Richter-Menge, J.A., et al, [1989, p.269-278, eng] 43-3732
Fracture of multi-year sea ice under triaxial stress Sammonds, P.R., et al, [1989, p.279-288, eng] 43-3733
Elastic coefficients of Bohai Sea ice. Shen, W., et al, [1989, p.321-331, eng] 43-3737
Plane strain fracture toughness K(IC) of sea ice Zhang, M.Y., et al, [1989, p.332-341, eng] 43-3738
Constitutive laws for sea ice at Adam's I. Montemurro, M.P., et al, [1989, p.367-376, eng] 43-3741
Dynamic and thermodynamic modelling of sea ice in coastal seas. Omstedt, A., [1989, p.377-384, eng] 43-3742
Measurement of impact forces on sea ice. Chin, S.N., et al, [1989, p.638-647, eng] 43-3764
Airborne sea ice thickness sounding. Kovacs, A., et al, [1989, p.1042-1052, eng] 43-3801
Studies of sea ice forcing during MIZEX'87. Sandven, S., et al, [1989, p.1073-1083, eng] 43-3804
Radar observation on the sort of sea ice. Sun, Y., et al, [1989, p.1084-1095, eng] 43-3805
Ice management in the Barents Sea. Jensen, H., et al, [1989, p.1107-1117, eng] 43-3807
Properties of sea ice coastal regime in southeastern Weddell Sea. Eicken, H., et al, [1989, p.8193-8206, eng] 43-3821
NASA Sea Ice and Snow Validation Program for the DMSP SSM/I. Cavalieri, D.J., [1988, 145p., eng] 43-3970
Electromagnetic properties of freshwater ice, sea ice, and snow. Lüdecke, C., [1986, 97p., ger] 43-4163
Proceedings. [1988, 216p., eng] 43-4166
Overview of the physical properties of sea ice. Tucker, W.B., [1988, p.71-85, eng] 43-4171
Brief overview of the fracture of ice. Parsons, B.L., [1988, p.103-112, eng] 43-4173
Methods for sea ice impact testing. Chin, S.N., et al, [1988, p.131-134, eng] 43-4177
Methods for sea ice indentation tests. Nadreau, J.P., et al, [1988, p.143-147, eng] 43-4179
Thin sections of indented ice. Nadreau, J.P., et al, [1988, p.149-152, eng] 43-4180
Penetrating radar sensing of oceanic and freshwater ice. Bogorodskiĭ, V.V., et al, [1987, 314p., eng] 43-4183
Changes in lipid composition of sea-ice diatom communities during bloom. Nichols, P.D., et al, [1989, p.133-140, eng] 43-4185
Scientific cruise reports of Arctic Expeditions ARK IV/1, 2 & 3. Krause, G., comp., [1989, 146p., eng] 43-4191
Picocyanobacteria in the high Arctic. Gradinger, R., et al, [1989, p.99-101, eng] 43-4254
Probabilistic ice information system for Canadian waterways. Perchanok, M., et al, [1989, p.28-32, eng] 43-4255
Morphology of a Baltic Sea ice pressure ridge. Kankaanpää, P., [1988, p.15-33, eng] 43-4380
Particle-laden Eurasian Arctic sea ice: observations from July and August 1987. Pfirman, S., et al, [1989, p.59-66, eng] 43-4389
Theoretical models for polarimetric microwave remote sensing of earth terrain. Borgeaud, M., et al, [1989, p.61-81, eng] 43-4422
Winter Weddell Sea Project 1986—Physical oceanography during leg V/2. Huber, B.A., et al, [1989, p.97-98, eng] 43-4435
Drifter/modeling program of the Winter Weddell Sea Project 1986. Martinson, D.G., [1989, p.100-102, eng] 43-4436
Sediment fluxes beneath fast ice: October 1986 through February 1987. Dunbar, R.B., et al, [1989, p.112-115, eng] 43-4437
Anisotropic light radiance in and under sea ice. Trodahl, H.J., et al, [1989, p.305-308, eng] 43-4450
Comparative study of polar planktonic and sea ice microbial communities. Rivkin, R.B., et al, [1989, p.273-283, eng] 43-4483
Passive microwave *in situ* observations of winter Weddell Sea ice. Camiso, J.C., et al, [1989, p.10,891-10,905, eng] 43-4526
Blending radiometer and buoy data into a sea ice model. Thomas, D.R., et al, [1989, p.10,907-10,920, eng] 43-4527
On spatial arrangement of crystalline structure of ice in antarctic seas. Strakhov, M.V., [1989, p 67-70, rus] 43-4542
Probability modeling of Baltic Sea ice conditions. Drabkin, V.V., et al, [1988, p.126-130. rus] 43-4554
Using multipurpose optimization algorithms in sea ice prediction. Plotnikov, V.V., [1988, p.57-66, rus] 43-4556
Chemical and structural properties of sea ice in the southern Beaufort Sea. Meese, D.A., [1989, 294p., eng] 43-4573
Processing satellite data for sea ice research in the marginal ice zone. Kergomard, C., [1989, p.321-326, eng] 43-4579
Mechanical properties of multi-year sea ice. Richter-Menge, J.A., et al, [1988, 27p., eng] 43-4593
Profile properties of undeformed first-year sea ice. Cox, G.F.N., et al, [1988, 57p., eng] 43-4595
Sea ice distribution
Monitoring of environmental background pollution Vol.4. Izrael', Iu.A., ed, [1987, 384p., rus] 43-26
Snow and ice cover pollution in Arctic seas. Smagin, V.M., et al, [1987, p.246-255, rus] 43-28
Beaufort Sea geophysical survey: scoping study. Harper, J.R., et al, [1985, 68p. + append., eng] 43-282
Distribution and life cycle of three antarctic copepods *(Calanoides acutus, Calanus propinquus,* and *Rhincalanus gigas).* Marin, V.H., [1986, 177p., eng] 43-546
Transversal jets detected on satellite images in marginal ice zones. Ginzburg, A.I., [1988, p.3-10, rus] 43-588
Current and future petroleum activities in Canada. Hnatiuk, J., et al, [1988, p.55-69, eng] 43-612
Okhotsk program and related activities. Oshima, M., [1988, p.71-88, eng] 43-613
Ice reconnaissance and forecasts in Storfjorden, Svalbard. Håkansson, B., [1988, p.447-454, eng] 43-639
Aerial surveillance system for ice management in the marginal ice zone. Rudkin, P., et al, [1988, p.471-483, eng] 43-641
Integrated remote sensing for Barents Sea ice. Olaussen, T., et al, [1988, p.495-506, eng] 43-643
Problems in using floating production units in Arctic conditions. Korppoo, S., et al, [1988, p.507-521, eng] 43-644
Some ocean drift ice scaling ideas. Korsnes, R., [1988, p 647-659, eng] 43-651
Development and opportunities in Greenland. Rosendahl, G.P., [1988, p.769-782, eng] 43-661
KRMS GEOSAT-LIMEX '87 quick look report. Farmer, L.D., et al, [1988, 47p., eng] 43-707
Offshore Technology Conference, 20th, 1988. [1988, 4 vols., eng] 43-708
Impact of external factors on marine hydraulic structures. Smirnov, G.N., ed, [1986, 178p., rus] 43-728
Experimental determination of total pressure-ridge load on cylindrical structures. Belov, A.B., [1986, p.158-161, rus] 43-732
Bering Sea Monitoring Program. Houghton, J.P., et al, [1987, var.p., eng] 43-754
Role of sea ice in the dynamics of the Arctic climatic system. Subbotin, V.V., [1988, p.82-97, rus] 43-762
Ice budget of the Greenland Sea. Moritz, R.E., [1988, 117p., eng] 43-780
Alaska synthetic aperture radar (SAR) facility project. Carsey, F., et al, [1987, p.593-596, eng] 43-781
Deep-sea research by the R/V *Polarstern* Expedition, 1987. [1988, p.665, 676-678, eng] 43-782
Role of the phase transformation heat of ice in the energy balance at the ocean-atmosphere interface. Lebedev, A.A., [1988, p.6-23, rus] 43-798
Characteristics of pack-ice distribution in the East Siberian Sea during the summer period. Kovalev, E.G., [1988, p.23-27, rus] 43-799
Long range forecasting of ice conditions in the Barents and Kara seas. Gudkovich, Z.M., et al, [1988, p.32-40, rus] 43-801
Experience in real-time forecasting of the relief, level and drift of ice in Arctic seas with a 6-8 day lead. Vanda, Iu.A., et al, [1988, p.41-45, rus] 43-802
Morphometric characteristics of ice pressure ridges in the Arctic Basin. Grishchenko, V.D., [1988, p.46-55, rus] 43-803
Studying discontinuities of sea ice cover from radar data. Brestkin, S.V., et al, [1988, p.94-103, rus] 43-808
Analyzing the probability and statistical characteristics of sea ice compaction. Borodachev, V.E., [1988, p.103-120, rus] 43-809
Results of radar sounding of drifting sea ice from its surface. Bogatyrev, E.F., et al, [1988, p.148-151, rus] 43-813
Radar measurements of sea ice thickness from an icebreaker. Kraĭniukov, A.V., et al, [1988, p.152-156, rus] 43-814
Remote sensing of ice covered seas. Weeks, W.F., et al, [1987, p.327-332, eng] 43-868
Formulas for calculating volume of sea ice. Smirnov, V.I., [1987, p.24-28, rus] 43-888
Sverdrup wave propagation in ice-free water and under ice. Legen'kov, A.P., [1987, p.53-58, rus] 43-889
Computer processing of ice data analyses obtained from side looking radar. Prokof'ev, I.A., et al, [1987, p 86-90, rus] 43-890
Multi-year ice statistics. Spedding, L.G., et al, [1987, p.81-120, eng] 43-904
Remote sensing of extreme ice hazards. Leavitt, E., et al, [1987, p.335-347, eng] 43-911
Ultimate extreme ice feature: antactic icebergs. Thomson, R.B., [1987, p.369-371, eng] 43-914
Origin of the permanent transarctic current in the Arctic Ocean. Beliakov, L.N., [1988, p.441-443, rus] 43-1092
Notes on southern ocean hydrography, sea-ice and bottom water formation. Foldvik, A., et al, [1988, p.3-17, eng] 43-1094
North Atlantic deep water formation. Bennett, T., ed, [1985, 82p., eng] 43-1152
Numerical simulation of North Atlantic sea ice variability, 1951-1980. Walsh, J.E., [1985, p.43-46, eng] 43-1155
Sea ice, climate and Fram Strait. Hunkins, K., [1985, p.50-52, eng] 43-1157
Climatic impact of a change in North Atlantic deep water formation. Rind, D., [1985, p.62-65, eng] 43-1160
Effects of sea level changes and crustal movement on Arctic river mouth. Ivanov, V.V., et al, [1988, p.390-395, eng] 43-1372
Assessment of polar climate change using satellite technology. Hall, D.K., [1988, p.26-39, eng] 43-1403
On deep convection in the Weddell Gyre. Bersch, M., [1988, p.1269-1296, eng] 43-1434
Spectral analysis of Canada Basin under-ice thickness data. Key, J.R., et al, [1988, p.1117-1120, eng] 43-1459
Radar backscatter from sea ice. Gogineni, S.P., [1986, p.107-114, eng] 43-1479
SAR image statistics related to atmospheric drag over sea ice. Burns, B.A., et al, [1988, p.409-412, eng] 43-1515
Analysis of Seasat SAR sea-ice data from the Beaufort Sea. Partington, K.C., [1988, p.413-416, eng] 43-1516
Sea ice remote sensing of the Canadian East Coast. McNutt, L., et al, [1988, p.421-422, eng] 43-1519
Aerogeophysical survey yields new data in the Weddell Sea. LaBrecque, J., et al, [1988, p.69-70, eng] 43-1615
Study on ice meltponds. Lapp, D., [1982, 62p. + append., eng] 43-1666
Antarctic ice charts 1985-1986. [1987, 426p., eng] 43-1675
Quaternary sediment patterns in the Weddell Sea: relations and environmental conditions. Futterer, D.K., et al, [1988, p.551-561, eng] 43-1787
Quantitative use of satellite SAR imagery of sea ice. Fily, M., et al, [1987, p.323-326, eng] 43-1794
Route selection through a dynamic ice field using the maximum principle. Thomson, N.R., et al, [1988, p.339-356, eng] 43-1800
Effects of ice structure on microwave signatures of sea ice. Bowline, C., [1986, p.64-67, eng] 43-1828
Sea currents and ice drift in the southeastern Barents Sea. Denisov, V.V., et al, [1987, p.105-112, rus] 43-1881
Ice transfer in the Barents Sea. Zubakin, G.K., [1987, p.113-117, rus] 43-1882
Long range forecasting of ice conditions in the Barents Sea. Potanin, V.A., [1987, p.117-124, rus] 43-1883
Water temperature in the polar zone of the Greenland Sea. Blinov, N.I., et al, [1986, p.68-81, rus] 43-1885
IGARSS '88 remote sensing: moving towards the 21st century; Vol.3. [1988, p.1231-1858, eng] 43-1889
Radar observations of Arctic sea ice during winter MIZEX '87. Shuchman, R.A., et al, [1988, p.1419-1422, eng] 43-1890
Mapping of seasonal sea ice off Labrador with C-band SAR imagery. Holt, B., et al, [1988, p.1423-1424, eng] 43-1891
SAR imagery of the Grand Banks pack ice pack and its relationship to surface features. Argus, S.D., et al, [1988, p.1425-1428, eng] 43-1892
Ice information during severe ice event, from SAR imagery Carsey, F., et al, [1988, p.1431-1433, eng] 43-1893
Estimating sea ice concentration from satellite passive microwave data and a physical model Rothrock, D.A., et al, [1988, p.1677-1683, eng] 43-1895
Shipborne passive microwave sea ice experiment in the East Greenland Sea: May-July 1987. Garrity, C., [1988, p.1691-1692, eng] 43-1897
Preliminary observations of polar sea ice with the special sensor microwave imager. Cavalieri, D.J., [1988, p.1693-1694, eng] 43-1898
Real-time analysis of digital sea ice image data. Ramsay, B., et al, [1988, p.1707-1711, eng] 43-1901
Toward the automated use of remote sensing data in operational ice forecasting. McNutt, L., et al, [1988, p.1713-1715, eng] 43-1902
Sea-ice analysis software—ICEMAN. Lee, M., [1988, p.1717-1720, eng] 43-1903
Constrained cluster analysis and image understanding. Banfield, J.D., [1988, 105p., eng] 43-1912
Phases of the ice season in the Baltic Sea (North of latitude 57N). Leppäranta, M., et al, [1988, 83p., eng] 43-1975

Sea ice distribution *(cont.)*

Mesoscale interaction of ocean and atmosphere in the Greenland Sea. Bogorodskiĭ, P V , et al, (1987, p.54-58, eng) 43-2021

Index of sea ice variations in the nordic seas. Sear, C B , (1988, p.339-355, eng) 43-2038

Morphological and structural peculiarities of the SP-22 drifting ice island Grishchenko, V.D., et al, (1989, p.77-86, eng) 43-2050

Thermal action of coastal waters on the boundary of the antarctic ice cover. Dubrovin, L.I , et al, (1989, p.101-108, eng) 43-2053

Winter vessel performance and trafficability Wells, D., et al, (1987, 33p., eng) 43-2139

First antarctic voyage of a Soviet icebreaker. Likhomanov, V.A., et al, (1988, p.10-18, rus) 43-2220

Anomalous development of the Pacific and Balleny ice massifs during the 1986 cruise Lutsenko, E.I., (1988, p.58-62, rus) 43-2223

Iceberg distribution in the Atlantic sector of the southern ocean. Kovalev, A.D., et al, (1988, p.73-78, rus) 43-2227

Life at the ice edge. Sakshaug, E , et al, (1989, p.60-67, eng) 43-2446

Adelie land airport. Regrettier, J.F., et al, (1989, p.91-96, eng) 43-2614

Probability of winter environmental forces on arctic offshore structures. Tunik, A.L., et al, (1989, p.105-112, eng) 43-2616

Icebergs in the Barents Sea. Vinje, T E , (1989, p.139-145, eng) 43-2620

Emergency preparedness in arctic areas. Sandberg, L., (1989, p.155-159, eng) 43-2622

Application of decision analysis to arctic exploration structures. Nessim, M A , et al, (1989, p.161-168, eng) 43-2623

On modeling the energetics of the ridging process Hopkins, M.A., et al, (1989, p.175-178, eng) 43-2625

Design of the Great Belt western bridge for ice forces. Christensen, F.T., et al, (1989, p.365-376, eng) 43-2647

Antarctic winter; simulations with climatological and reduced sea-ice extents. Mitchell, J.F.B., et al, (1989, p.225-246, eng) 43-2836

Automation of radar measurements of the thickness of sea ice. Bogorodskiĭ, V.V , et al, (1987, p.982-985, eng) 43-2844

Satellite and airborne infrared sensing of sea surface temperature. Bychkova, I A , et al, (1988, 222p., rus) 43-2858

Sea ice-atmosphere signal of the Southern Oscillation, Weddell Sea. Carleton, A.M., (1988, p.379-388, eng) 43-2897

Circulation in the Arctic Ocean. Lewis, E.L., (1989, p.5-7, eng) 43-2901

Internal friction characteristics of sea ice. Bogorodskiĭ, V.V., et al, (1983, 8p., eng) 43-3171

Problems of the Arctic and the Antarctic. Collection of articles, Vol 61. Krutskikh, B.A., ed, (1989, 103p., eng) 43-3226

Results of investigation of the dynamics of the Barents sea ice cover. Zubakin, G.K., et al, (1989, p 26-38, eng) 43-3228

Steady-state coupled ice-ocean model. Willmott, A.J., et al, (1989, p.501-518, eng) 43-3293

Interpretation of aerospace photographs of glaciers and sea ice. Kravtsova, V.I., (1988, p.156-160, rus) 43-3323

Weather effect on Weddell Sea pack ice and the sea-ice budget. Limbert, D.W.S., et al, (1989, p.104-112, eng) 43-3343

Bibliography of remote sensing, mapping and characterization of sea ice. (1989, 114p., eng) 43-3467

Recent biogenic sedimentation on the antarctic continental margin. Leventer, A.R., (1988, 238p , eng) 43-3521

JARE-28 ACR report. Yamanouchi, T , et al (1989, p.53-72, jpn) 43-3703

NOAA data processing system Takabe, H., et al, (1989, p.73-87, jpn) 43-3704

Analysis of sea ice drift in a coastal ice zone. Smith, P.A., (1989, p.168-177, eng) 43-3722

Ice floe distributions. Lensu, M., (1989, p.354-366, eng) 43-3740

Ice navigation conditions during summer 1976/77. Grigor'ev, IU.A., et al, (1988, p.83-93, rus) 43-3840

Fast ice conditions during unloading operations at Soviet stations. Grigor'ev, IU.A., et al, (1988, p 93-98, rus) 43-3841

Ice conditions and hydrometeorology during the forced drift of the *Mikhail Somov* in Feb.-Mar. 1977. Grigor'ev, IU.A., et al, (1988, p.103-110, rus) 43-3843

Drift of *Mikhail Somov* in the Balleny ice pack. Grigor'ev, IU.A., et al, (1988, p.110-121, rus) 43-3844

Early progress of *Mikhail Somov* in Alasheyev Bight in spring 1976. Bardin, G I , et al, (1988, p.121-125, 127, rus) 43-3845

Sea ice and surface albedo in models of climate change. Ingram, W.J., et al, (1989, p.8609-8622, eng) 43-3848

NOAA satellite observations of marginal ice zone in Fram Strait. (1988, 132p., eng) 43-3959

Ice-ocean mixed layer model of the marginal ice zone. Ikeda, M., (1989, p.9699-9709, eng) 43-3961

Sea ice in the Arctic Ocean and industrial development. Wadhams, P., (1989, 23p., eng) 43-4018

Satellite observations of sea ice. Voituriez, B , (1989, 22p., fre) 43-4020

Problems of the Arctic and the Antarctic. collection of articles. Krutskikh, B.A., ed, (1989, 152p., eng) 43-4367

Investigation of large-scale flows of sea ice from satellite television photographs. Karelin, I.D., (1989, p.115-124, eng) 43-4372

1987-seasonal ice cycle in the Canadian Beaufort Sea. Borstad, G.A., et al, (1988, 57p. + appends., eng) 43-4397

Climatic atlas of Alaskan coastal regions and shelf waters. Brower, W A., Jr., et al, (1988, 3 vols , eng) 43-4476

Two-dimensional coupled ice-ocean model of the Bering Sea Marginal Ice Zone. Kantha, L.H., et al, (1989, p.10,921-10,935, eng) 43-4528

Sea ice motion and concentration in the Canada Basin. Serreze, M.C., et al, (1989, p.10,955-10,970, eng) 43-4530

Spectral evolution of wind-generated surface gravity waves in a dispersed ice field. Masson, D., et al, (1989, p.43-81, eng) 43-4535

Ice regime and navigation conditions in 1987 along the Mawson Coast. Vanda, IU.A., (1989, p.74-78, rus) 43-4544

Variability in thickness of ice and snow in arctic seas. Appel', I.L., (1989, p.80-87, rus) 43-4551

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Ocean level and models simulating its oscillations. Kligc, R.K., et al, (1988, p.273-278, eng) 43-315

Antarctic ice sheet response to changes. Robin, G. de Q., (1988, p.31-50, eng) 43-1095

Effect and mechanism of episodic sea level events: the record preserved within the Late Wisconsinan-Holocene incised valley-fill sequences. Thomas, M.A., et al, (1988, p.399-406, eng) 43-1151

Effects of sea level changes and crustal movement on Arctic river mouth. Ivanov, V.V., et al, (1988, p.390-395, eng) 43-1372

Zonality of modern coastal processes and sea level indicators. Kelletat, D., (1988, p.219-230, eng) 43-2005

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Late Pleistocene and Holocene sea-level change in the Australian region and mantle rheology. Nakada, M., et al, (1989, p.497-517, eng) 43-2441

Illusions and problems in water-budget synthesis. Morner, N.A., (1983, p.419-423, eng) 43-3038

Sea-level fluctuation and coastal evolution. Nummedal, D., ed, (1987, 267p , eng) 43-3391

Global sea-level changes during the past century. Gornitz, V., et al, (1987, p.3-16, eng) 43-3392

Short-term sea-level changes and coastal erosion. Komar, P.D., et al, (1987, p.17-27, eng) 43-3393

Recent relative sea-level change in eastern North America Braatz, B.V., et al, (1987, p.29-46, eng) 43-3394

Continental shelf evolution in response to a rise in sea level. Everts, C.H., (1987, p.49-57, eng) 43-3395

Analysis of coastal recession models: North Carolina coast. Pilkey, O.H., et al, (1987, p.59-68, eng) 43-3396

Late Quaternary sea-level changes in Maine. Belknap, D.F., et al, (1987, p.71-85, eng) 43-3397

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Sea-level and tidal- and wave-dominated coastal sequences. Davis, R.A., Jr., et al, (1987, p.167-178, eng) 43-3404

Sea level fluctuations and the Texas coast. Morton, R.A., et al, (1987, p.181-198, eng) 43-3405

Sea level fluctuations of Louisiana continental shelf. Suter, J.R., et al, (1987, p.199-219, eng) 43-3406

Stratigraphic record of Quaternary sea levels. Demarest, J.M., II, et al, (1987, p.223-239, eng) 43-3407

Transgressive stratigraphy at sequence bounding unconformities. Nummedal, D., et al, (1987, p.241-260, eng) 43-3408

Sea level changes from future retreat of ice sheets. Clark, J A., et al, (1987, p.356-370, eng) 43-3623

Glacial and sea-level generation of spit in Jutland. Bruun, P., (1989, p.18-30, eng) 43-3709

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Estimating the extent of the spraying zone on a sea-going ship. Zakrzewski, W.P., et al, (1988, p.413-429, eng) 43-1341

Ship icing in the northern seas. Golubev, V.A., et al, (1987, p.26-37, rus) 43-1880

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Comparing the creep behaviour of spray ice and polycrystalline freshwater ice. Shields, D.H., et al, (1989, p.235-245, eng) 43-2632

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Time dependent settlement of ice and earth offshore structures. Vinogradov, A.M., et al, (1989, p.263-268, eng) 43-2635

Formation of spray ice on offshore structures. Makkonen, L., (1989, p.277-309, eng) 43-2822

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Recent approaches in the modeling of ship icing. Zakrzewski, W.P., et al, (1988, p.458-476, eng) 43-3017

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Chevron Beaufort test to use spray ice island. (1989, p.23, eng) 43-4084

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North Atlantic deep water formation: information from ice cores. Oeschger, H., (1985, p.27-31, eng) 43-1153

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Possible sea ice impacts on oceanic deep convection. Parkinson, C.L., (1985, p.47-49, eng) 43-1156

Climatic impact of a change in North Atlantic deep water formation. Rind, D., (1985, p.62-65, eng) 43-1160

Observations on floating snowpacks: lakes, rivers and the sea. Adams, P., et al, (1987, p.313-346, eng) 43-1302

Roll vortices during Arctic cold air outbreaks over open water. Hein, P.F., et al, (1988, p.177-199, eng) 43-1378

Trace metal distributions at Fram 3 and Cesar ice camps. Yeats, P.A., (1988, p.383-389, eng) 43-1673

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Soil temperature and electric potential during diurnal and seasonal freeze-thaw. Outcalt, S.I., et al, (1989, p.37-43, eng) 43-1577
Effect of seasonal freezing on melt pools beneath buildings. Pichuev, V.V., (1985, p.31-37, rus) 43-1653
Maintenance of unheated warehouses on frost-heaving soils in Chita. Makarov, A.P., et al, (1985, p.43-47, rus) 43-1655
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Comment on "Water movement into seasonally frozen soils" by Douglas L. Kane and Jean Stein. Burn, C.R., et al, (1985, p.1051-1054, eng) 43-4493
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Summer radiation balance, West Gulkana Glacier. Miller, T.A., (1988, p.47-61, eng) 43-2793
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Meteorological and oceanic forcing of the Alaskan continental shelf seas. Overland, J.E., (1988, p.39-40, eng) 43-3501
Heat exchange characteristics in frozen and seasonally frozen soils. Kulikov, A.I., (1988, p.149-152, rus) 43-3616
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Flood geomorphology. Baker, V.R., ed, (1988, 503p., eng) 43-1546
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Assessment of waste containment sites in the Mackenzie Valley region. (1988, 30p. + appends., eng) 43-1971
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Summary of India's geophysical programme in Antarctica. Gupta, H.K., (1989, p.153-170, eng) 43-2662
Effects of ground conditions on earthquake risk. Pavlov, O.V., ed, (1988, 223p. (pertinent p.168-183), rus) 43-4014
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Seismic velocity
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Shoreline modification
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Beaufort Sea coastal erosion, sediment flux and shoreline evolution. Reimnitz, E., et al, (1988, 22p. + map, eng) 43-103
Effect of sea ice on Beaufort Sea coastal processes. (1987, 104p. + appends, eng) 43-281
Permafrost on Arctic coasts of North America. Hunter, J.A., (1988, p.27-34, eng) 43-1721
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Sea-level fluctuation and coastal evolution Nummedal, D., ed, (1987, 267p., eng) 43-3391
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Shores
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Establishing stations for monitoring environmental background in the Far North. Krasovskaia, T.M., et al, (1987, p.285-291, eng) 43-132
Petrographic characteristics of recent shore deposits of the Laptev Sea. Slagoda, E.A., (1988, p.11-21, rus) 43-520
Intensification of placer exploration on the Arctic shelf and plains. Tarakanov, L.V., et al, (1988, p.103-107, rus) 43-689
Tidal entrances in the Okhotsk coast, Japan. Kondo, H., et al, (1988, p.103-111, eng) 43-2984
Ice-dominated shores of Canadian Arctic islands. Taylor, R.B., et al, (1987, p.33-48, eng) 43-3200
Accuracy of a map of the Arctic National Wildlife Refuge coastal plain. Felix, N.A., et al, (1989, p.475-478, eng) 43-4394
Energy balance of the intertidal zone of western Hudson Bay I: ice-free period. Silis, A., et al, (1989, p 327-345, eng) 43-4560
Energy balance of the intertidal zone of western Hudson Bay II: ice-dominated periods and seasonal patterns. Rouse, W.R., et al, (1989, p.346-366, eng) 43-4561
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Side looking radar
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Sidewalks
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Sikkim
Periglacial phenomena in Sikkim. Chattopadhyay, G.P., (1986, p.145-152 + 6 plates, eng) 43-2831

Silver iodide
Secondary ice nucleus generation by silver iodide applied to the ground. Bigg, E.K., (1988, p.453-457, eng) 43-607
Ice crystal formation on AgI particles. Klingo, V.V., (1988, p 34-42, rus) 43-1431
Determination of the ice-forming activity of amorphous and crystalline silver particles. Bubnov, A.V., et al, (1988, p.295-298, eng) 43-2486
Characterization of a modified hexagonal silver iodide ice nucleus aerosol. Scott, P.T., et al, (1989, p.722-726, eng) 43-4547
Ice-forming activity of AgI and PbI2 pyrotechnic nucleants. Aksenov, M.IA., et al, (1988, p.41-47, rus) 43-4585

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Simulation
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Melting layer of frozen precipitation. Klaassen, W., (1988, p.3741-3753, eng) 43-2360
Effect of longwave radiation and ice microphysics on convection. Chen, S., et al, (1988, p.3897-3910, eng) 43-2361
Probabilistic study of ice island trajectories. Li, F.C., et al, (1988, p.405-414, eng) 43-2940
Adaptive simulation of transportation marine system along the Northern Sea Route. Arikainen, A., et al, (1988, p.706-718, eng) 43-2967
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Site surveys
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Site-specific meteorology. Bates, R.E., et al, (1989, p.13-15, eng) 43-4299

Skid resistance
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Over-snow mobility systems test of towed howitzers in Alaska. Rohe, D.R., (1988, 53p. + appends., eng) 43-1976
Development Test II (DT II) (POG) of snow and ice traversing equipment (SITE). Final report. Geasa, W.R., (1988, 65p. + appends., eng) 43-1977
Ski tribology. Spring, E., (1989, p.108-119, eng) 43-4472

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Possible origin of the formation of slab avalanches. Sargaev, E.M., (1988, p.61-63, rus) 43-2680
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Sleds
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Sliding
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Landsliding in rock glacier formation and movement. Vick, S.G., (1987, p.239-263, eng) 43-3056
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Glaciers of the Iskaten Range. Sedov, R.V., (1988, p.129-133, rus) 43-949
Estimating south slope irradiance in the Arctic. Gardner, C.L., et al, (1988, p.227-240, eng) 43-1072
Snow cover stability on slopes and avalanche dynamics. Voitkovskiĭ, K.F., (1987, p.337-351, eng) 43-1243
Geotechnical aspects of snow pack stability in the Himalayan region. Pathak, R.C., (1987, p.353-354, eng) 43-1244
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Studies of frozen strata and cryogenic phenomena. Klimovskiĭ, I.V., ed, (1988, 153p., rus) 43-518
Solifluction effluents at the Yamal Peninsula. Grigor'ev, N.F., et al, (1988, p 43-46, rus) 43-524
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Structure and evolution of slope rock glaciers (Inner Tien Shan and the Terskey Alatau ridge). Tarakanov, A.G., (1988, p.70-76, rus) 43-571
Problems of rational use, management and preservation of geological media. Golodkovskaia, G.A., et al, (1988, p.103-116, rus) 43-737
Engineering geology today: theory, practice, problems. Sergeev, E.M., ed, (1988, 293p., rus) 43-883
Forecasts and prevention of major rockslides in high mountains. Fedorenko, V.S., (1988, p.106-119, rus) 43-884
Glacial mudflows in Central Caucasus: activities for the last millennium. Golodkovskaia, N.A., (1988, p.71-78, rus) 43-938
Forecasting snow-melt mudflows in the western Pamirs. Tukeev, O.V., (1988, p.78-85, rus) 43-939
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Slope stability
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Arctic Science Conference, 39th, Fairbanks, AK, 1988: Abstracts. (1988, 264p., eng) 43-1373
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Slopes
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Sluices (hydraulic engineering)

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Swiss Federal Institute of Snow and Avalanche Research. Dickman, S., (1988, p.330-331, eng) 43-1144
Symposium on Antarctic Glaciology, Bremerhaven, Sep. 7-11, 1987. (1988, 229p., eng) 43-1934
Instrumented vehicle for the measurement of mobility parameters. Blaisdell, G.L., (1988, p.377-388, eng) 43-2667
New classification of snow and ice on roads. Maeno, N., et al, (1988, p.304-313, eng) 43-2931
To the Arctic: an introduction to the far northern world. Young, S.B., (1989, 354p., eng) 43-3080
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Station climatic summaries, Antarctica, Australia and Oceania. Sjoberg, W.F., (1987, 48p., eng) 43-3520
Current research in the geological sciences in Canada, May 1987-April 1988 Bolton, T.E., comp, (1988, 101p. (pertinent p.26-39), eng) 43-3528
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Snow accumulation

On the 50th anniversary of snow avalanche studies in Khibiny and the Alps. Akif'eva, K.V., et al, (1987, p.10-14, rus) 43-221
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Avalanche research Karlén, W., (1985, p.96-100, swe) 43-365
Snow accumulation studies in the Central Karakoram, Pakistan. Wake, C., (1987, p.19-33, eng) 43-386
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Snow metamorphism. Zhang, Z., et al, (1987, p.27-33, chi) 43-479
JARE glaciological research, Queen Maud Land, 1986. Nishio, F., et al, (1988, 49p., eng) 43-540
Management of subalpine forests: building on 50 years of research (1987, 253p., eng) 43-573
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Snow cover at the foot of Mt. Iwaki, Japan, winter of 1971-1972. Satoh, K., et al, (1979, p.102-122, eng) 43-846
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Short introduction to snow simulation. Jansson, B.-O., (1987, 3p., eng) 43-1114
Adaptation of the building construction guidelines to the weight of snow. Primault, B., (1987, p.73-78, fre) 43-1219
Snow Property Measurement Workshop, Lake Louise, Alta., Apr. 1-3, 1985. (1987, 524p., eng) 43-1286
Snow pillows in the mountainous areas of Alberta. Coles, G.A., et al, (1987, p.193-206, eng) 43-1296
Extrapolating snow measurements on the Marmot Creek experimental basin. Bernier, P.Y., (1987, p.215-229, eng) 43-1298
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Maximum snow accumulations in the Transcarpathian Oblast'. Grishchenko, V.F., (1988, p.63-70, rus) 43-1773
Snow reserves on the slopes of little studied mountain basins Golubtsov, V.V., et al, (1988, p.86-89, rus) 43-1784
Snow resources and regional runoff. Mishon, V.M., (1988, 192p., rus) 43-1886
Snow accumulation in the runway region of the Molodezhnaya Antarctic Meteorological Center. Alekhin, A.N., et al, (1989, p.114-118, eng) 43-2055
Ice sheet surface topography, eastern Wilkes Land. Goodwin, I.D., (1988, 100p., eng) 43-2144
Snow cover dynamics in the vicinity of Russkaya Station. Bulatov, L.V., (1988, p.66-68, rus) 43-2225
Ablation of perennial snow patches in Japanese mountains. Watanabe, T., (1988, p.560-581, eng) 43-2276
Antenna pattern degradation by snow accretion on the reflector surface. Shimba, M., et al, (1988, p.871-874, eng) 43-2278
Comment on "Implications of snowpack/paleo-ELA relation in western U.S.A.". Locke, W.W., (1989, p.97-101, eng) 43-2479
Calculation of snow accumulation by avalanches. Sokolov, V.M., et al, (1987, p.248-255, rus) 43-2526
Measuring snow accumulation for avalanche engineering. Zhidkov, V.A., (1987, p.269-274, rus) 43-2529
Snow conditions in avalanche hazard zones of the Salang Pass. Sukhanov, I.P., et al, (1987, p.275-282, rus) 43-2530
Aerial and spaceborne surveys of snow avalanches. Barbat, IU.P., (1987, p.368-375, rus) 43-2544
Methods for estimating average long-period snow accumulation for the northern slopes of the Caucasus. Kozhaev, D.A., et al, (1988, p.20-27, rus) 43-2561
Winter accumulation reduces summer ablation on Nordbogletscher, South Greenland. Braithwaite, R.J., et al, (1988, p.21-30, eng) 43-2595
Glaciology of mountainous regions. Getker, M.I., ed, (1988, 136p., rus) 43-2669
Intra-annual distribution and inter-annual variability in snow accumulation in the mountains of Central Asia. Arkhipova, O.M., et al, (1988, p.3-9, rus) 43-2670
Method of preparing operational maps of snow accumulation distribution in mountain regions of Kazakhstan (in the example of Zailiyskiy Alatau). Kolesnikov, E.I., et al, (1988, p.20-25, rus) 43-2672
Nitrate variability in South Pole ice sequences and fossil surface effects. Laird, C.M., et al, (1987, p.80-83, eng) 43-2745
Seasonal snow resources and their recent secular variations in China. Li, P., (1988, p.1808-1812, eng) 43-2777
Temporal statistics: an application in snowfall climatology. Harrington, J.A., Jr., et al, (1988, p.337-353, eng) 43-2826
JARE glaciological research, Queen Maud Land, 1986-1987. Nishio, F., et al, (1989, 59p., eng) 43-3071
Snow and avalanches in the Davos region. Föhn, P., et al, (1988, p.28-42, ger) 43-3238
Snow accumulation in the Greater Caucasus. Khodakov, V.G., et al, (1988, p.13-19, rus) 43-3249
Snow on roads in the Caucasus. Tsomaia, V.Sh., (1988, p.19-24, rus) 43-3250
Snow data analysis for structural safety. Harris, J.R., (1989, p.15-24, eng) 43-3547
Annual maximum snow depth and snow loads. Izumi, M., et al, (1989, p.25-34, eng) 43-3548
Snow load and snow load design in Hungary. Tamás, K., (1989, p.35-39, eng) 43-3549
Wind effect on the distribution of snow depth on a large dome. Sakurai, S., et al, (1989, p.51-58, eng) 43-3551
Snow loads on roofs—three case histories in Warsaw. Sobolewski, A., et al, (1989, p.69-80, eng) 43-3553
Simulation to predict snow sliding and lift-off on buildings. Lepage, M.F., et al, (1989, p.128-141, eng) 43-3559
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Modeling wind effects on drifting. O'Rourke, M., et al, (1989, p.178-187, eng) 43-3563
Minimizing snow accumulation around the entrance of a building. Dickey, R., et al, (1989, p.243-255, eng) 43-3569
Snow control with vortex and blower fences. Meroney, B.N., et al, (1989, p.286-296, eng) 43-3573
Snow fence technology: state of the art. Tabler, R.D., (1989, p.297-306, eng) 43-3574
Wind deflection fins for the control of snow on roofs. Williams, C.J., (1989, p.307-314, eng) 43-3575
Control and prevention of leaking from ice dams. Marne, H., de, (1989, p.473-482, eng) 43-3591
Building design for heavy snow areas. Paine, J.C., (1989, p.483-492, eng) 43-3592
Perspective on analytical methods. Irwin, P.A., (1989, p.499-501, eng) 43-3594
Physical property reference horizons. Shoji, H., et al, (1989, p.161-175, eng) 43-3686
Days and snow cover, its occurrence and disappearance, and daily increase. Tsomaia, V.Sh., (1988, p.58-70, rus) 43-3835
Snow accumulation and ablation in forested and clearcut sites Toews, D.A.A., et al, (1986, p.101-111, eng) 43-3909
Snow accumulation patterns in the Sierra Nevada. Aguado, E., (1986, p.172-175, eng) 43-3920
Reliability of statistical analysis of hydrological data. Salway, A.A., (1987, p.41-52, eng) 43-3926

Snow accumulation *(cont.)*
Interception and redistribution of snow in a subalpine forest. Wheeler, K., (1987, p.78-87, eng) 43-3930
Proceedings of the 56th annual meeting, Kalispell, Montana, Apr. 19-21, 1988. (1988, 191p., eng) 43-3990
Snowpack variability on western rangelands. Cooley, K.R., (1988, p.1-12, eng) 43-3991
Snow hydrology—forest harvesting interface. Toews, D.A.A., et al, (1988, p.13-22, eng) 43-3992
Snowpack-vegetation dynamics: mountain hemlocks in the Lake Tahoe area. Nachlinger, J.L., et al, (1988, p.23-34, eng) 43-3993
Estimating dates of the snow accumulation season. Tabler, R.D., (1988, p.35-42, eng) 43-3994
Snow deposition processes in a forest stand with a clearing. Troendle, C.A., et al, (1988, p.78-86, eng) 43-3999
Effect of evaporation on snow distribution in partially clear-cut forests. Swanson, R.H., (1988, p.87-92, eng) 43-4000
Numerical simulation of snow transport, deposition, and redistribution. Tesche, T.W., (1988, p.93-104, eng) 43-4001
Toward correlating California's wilderness snow sensors. Brandow, C.A., et al, (1988, p.136-147, eng) 43-4005
Predicting snow course snow water equivalent. Zuzel, J.F., (1988, p.155-157, eng) 43-4007
Density of new snow in the central Sierra Nevada. McGurk, B., et al, (1988, p.158-161, eng) 43-4008
Measuring snow interception and loss from an artificial conifer. Schmidt, R.A., et al, (1988, p.166-169, eng) 43-4010
Eastern Snow Conference, 45th, 1988. (1988, 218p., eng) 43-4109
Blizzard of '88 in historical perspective. Ludlum, D.M., (1988, p.1-4, eng) 43-4110
Lake effect snowfall situations. Sykes, R.B., Jr., (1988, p.5-6, eng) 43-4111
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Microcomputer data for snow and wind engineering. Soligo, M.J., et al, (1988, p.162-175, eng) 43-4126
Redistribution and sublimation loss of the snowpack in the alpine watershed. James, E.D., et al, (1985, p.148-151, eng) 43-4278
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Methodology for establishing ground snow loads Sack, R.L., et al, (1985, p.163-166, eng) 43-4282
Snow concentration and precipitation rate measurements during SNOW IV. Lacombe, J., (1989, p.25-29, eng) 43-4301
Western Snow Conference, 52nd, 1984 (1984, 192p., eng) 43-4309
Development of an automatic weather station for cold regions. Strangeways, I.C., (1984, p.12-23, eng) 43-4311
Swiss improvements of the FMCW radar for snow measurements. Schmidt, R.A., et al, (1984, p.24-32, eng) 43-4312
Options for harvesting timber to control snowpack accumulation. Troendle, C.A., et al, (1984, p.86-97, eng) 43-4319
Snow accumulation, melt, and soil moisture in pine forest. Potts, D.F., (1984, p.98-108, eng) 43-4320
Influences of snow persistence on subalpine forest. Daly, C., (1984, p.109-119, eng) 43-4321
Large, adjustable tipping bucket gauge for measuring snowmelt. Wilford, D.J., (1984, p.176-179, eng) 43-4330
Laser discrimination between rain and snow. Strachan, J.W., et al, (1984, p.180-183, eng) 43-4331
Western Snow Conference, 51st, 1983. (1983, 160p., eng) 43-4346
Snow accumulation and melt during rainfall in forests. Harr, R.D., et al, (1983, p.38-45, eng) 43-4351
Analysis of three rain on snow floods in the Sierra Nevada, California. Hall, R.L., et al, (1983, p.46-54, eng) 43-4352
Snow accumulation and ablation algorithms for watershed models. Huber, A.L., (1983, p.76-88, eng) 43-4355
Snowfencing for mined-land rehabilitation. Van Haveren, B.P., (1983, p.147-150, eng) 43-4364
Snow water equivalent model during rain-on-snow events. Berg, N.H., et al, (1983, p.155-158, eng) 43-4366
Precipitation types in winter storms Stewart, R.E., (1985, p.597-609, eng) 43-4415

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Use of acoustic ranging devices as snow depth sensors: an assessment. Metcalfe, J.R., et al, (1987, p.203-207, eng) 43-403
Acoustic, geometric and mechanical parameters of snow. Buser, O., et al, (1987, p.61-71, eng) 43-1218
Snow cover stability on slopes indicated by acoustic emission. Kuz'menko, V.P., (1987, p.255-260, rus) 43-2527
Ground motion induced by an acoustic pulse, and its wintertime variations. Peck, L., (1988, p.361-385, eng) 43-3211
Blast noise propagation research. Raspet, R., (1987, p.251-252, eng) 43-3297
Proceedings. (1989, 136p., eng) 43-3871
Observations of low-frequency acoustic-to-seismic coupling in the summer and winter. Albert, D.G., et al, (1989, p.352-359, eng) 43-4500
Snow as an acoustically porous material. Lee, S.M., et al, (1986, p.343-352, eng) 43-4648

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Studies on the settlement force of snow as a generation mechanism. Nakamura, H., (1988, p.361-385, jpn) 43-458
Recent results in improving snow roads and runways in Antarctica. Wuori, A.F., et al, (1988, p.297-307, eng) 43-629
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First official snow-compaction vehicle contest at Vars. (1988, p.64-67, ita) 43-1065
Improved techniques for construction of snow roads and airstrips. Lee, S.M., et al, (1988, 99p., eng) 43-1150
Use of index measurements in studies of snow under vertical loading. Irwin, G.J., (1987, p.137-163, eng) 43-1294
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Snow compaction effects on nighttime freezing. Kattelmann, R., (1986, p.168-171, eng) 43-3919
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Snow composition
Sea salt in deposited snow on sea ice and snow drift Osada, K., et al, (1988, p.17-24, jpn) 43-219
Incorporation of sulfur dioxide into snow and depositing ice. Valdez, M.P., (1988, 189p., eng) 43-307
Snow algae and their interaction with environments. Hoham, R.W., (1987, p.73-79, eng) 43-391
Limnological investigations of Lake Unter-See. Kaup, E.B., et al, (1988, p.101-111, rus) 43-797
Trace-element studies in a Scottish upland catchment, Pt1. Abrahams, P.W., et al, (1988, p.255-271, eng) 43-820
Isotopic and geochemical study of snowmelt runoff in a small Arctic watershed. Obradovic, M.M., et al, (1986, p.15-30, eng) 43-835
Comment on the paper "The cometary breakup hypothesis re-examined". Boutron, C.F., (1988, p.215-220, eng) 43-876
Regarding the validity of polar trace metal data a response. LaViolette, P.A., (1988, p.221-224, eng) 43-877
Structure and chemistry of snow samples. Page, Y., (1987, p.85-86, eng) 43-1221
Abnormally enriched elemental concentrations in urban snow. Drake, J.J., et al, (1987, p.79-88, eng) 43-1291
Octanol-water partition coefficients for organophosphonates. Britton, K.B., et al, (1988, 24p., eng) 43-1338
Snowpack and snowmelt chemistry due to atmospheric composition. Semkin, R.G., et al, (1988, p.38-46, eng) 43-1358
Neutron activation analysis of snow and ice in Antarctica. Koyama, M., et al, (1988, p.235-249, eng) 43-1442
Monitoring snow-cover pollution Vasilenko, V.N., et al, (1988, p.61-71, eng) 43-1454
Polar atmospheric circulation and chemistry of recent (1957-1983) south polar precipitation. Legrand, M., et al, (1988, p.879-882, eng) 43-1554
Dominion Range ice core. Mayewski, P.A., (1988, p.120-121, eng) 43-1629
Excess and deficit of sulfate in polar snow. Gjessing, Y., (1989, p.155-160, eng) 43-2082
D and O-18 in falling snow in Japan. Sugimoto, A., et al, (1988, p.205-213, eng) 43-2244
Critique of article on nitrate in antarctic snow. Laird, C.M., et al, (1988, p.233-240, eng) 43-2245
Variations in stream water constituents during snowmelt season. Suzuki, K., (1984, p.137-148, eng) 43-2400
Transantarctic Mountains ice core study. Mayewski, P.A., (1987, p.78, eng) 43-2742
Nitrate variability in South Pole ice sequences and fossil surface effects Laird, C.M., et al, (1987, p.80-83, eng) 43-2745
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Aliphatic hydrocarbons and isomers of hexachlorocyclohexane in water, ice and snow Dmitriev, E.A., et al, (1988, p.566-568, eng) 43-3944
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Evaporation preconcentration of trace elements in rainwater for inductively coupled plasma emission spectrometry. Nishikawa, M., et al, (1985, p.659-664, jpn) 43-4190
pH of mountain snowfall in Montana 1981-1984. Farnes, P.E., (1985, p.72-75, eng) 43-4270
Acidic deposition and snowpack chemistry at a Sierra Nevada site. Berg, N., et al, (1985, p.76-87, eng) 43-4271
Snowpack chemistry in southcentral British Columbia. Kotturi, M.S., et al, (1985, p.88-98, eng) 43-4272
Megalopolitan snowstorm of 11-12 February 1983: isotopic composition of the snow. Gedzelman, S.D., et al, (1989, p.1637-1649, eng) 43-4417
Measurement of Chernobyl radioactivity in accumulation zones of European glaciers. Pinglot, J.F., et al, (1989, p.365-370, fre) 43-4489
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Stable isotopes and climate of East Antarctica. Hermichen, W.D., et al, (1988, p.33-53, eng) 43-4515
Compilation of deuterium data at Schirmacher Hills. Kowski, P., et al, (1988, p.55-97, eng) 43-4516

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Mechanical and physical properties of snow. Fukue, M., et al, (1987, p.11-32, eng) 43-1287
Energy analysis of confined compression and shear behavior of snow. Yong, R.N., (1987, p.165-192, eng) 43-1295
Evaluation of new thermomechanical constitutive theory for snow; final report. Brown, R.L., (1989, 43p., eng) 43-2135

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Compacted-snow runways: design and construction guidelines for Antarctica. Russell-Head, D.S., et al, (1989, 68p., eng) 43-3474

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Specific weight of snow. Wold, K., (1987, p.79-84, eng) 43-1220
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On the pressure drop through a uniform snow layer. Yen, Y.C., (1988, 10p., eng) 43-1401
Improvement in NOAA-AVHRR snowcover determination for runoff prediction. Frank, C., et al, (1988, p.433-435, eng) 43-1522
Microwave emission behaviour of snow. Hallikainen, M.T., et al, (1988, p.437-438, eng) 43-1523

Snow reflectivity data using a microcomputer. Trostel, J.M., (1988, p.453-454, eng) 43-1529
Planning surface transportation in northern Canada. Hume, V., (1988, p.17-21, eng) 43-1749
Variations in infrared radiation from snow and ice cover. Bordonskiĭ, G.S., et al, (1988, p.83-87, rus) 43-2196
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All-Union Conference on Avalanches, 2nd, Yangiabad, USSR, May 1985. Proceedings. (1987, 439p., rus) 43-2493
Results and prospects for mapping of avalanche hazard in the USSR. Miagkov, S.M., et al, (1987, p.167-180, rus) 43-2516
Regional mapping of avalanche hazard. Getker, M.I., et al, (1987, p.180-193, rus) 43-2517
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Parameterization of snow albedo. Kondo, J., et al, (1988, p.216-224, jpn) 43-2702
Research on snow cover, snowdrifts and avalanches in China. Wang, Z.L., (1988, p.273-278, chi) 43-2868
Review and prospect of snow and ice remote sensing in China. Zeng, Q.Z., (1988, p.352-355, chi) 43-2881
Hydrological cycle as simulated by an atmospheric general circulation model. Mitchell, J.F.B., (1983, p.429-446, eng) 43-3039
Physical geography of Transcaucasia. Gabrielian, G.K., ed, (1986, 309p., rus) 43-3068
Radar backscatter characteristics of snow covered terrain at 94 gigahertz. Green, A.H., Jr., et al, (1984, p.115-119, eng) 43-3478
Basic snow cover formation mechanisms in Eastern Kazakhstan. Diukarev, A.D., et al, (1987, p.39-50, rus) 43-3656
NASA Sea Ice and Snow Validation Program for the DMSP SSM/I. Cavalieri, D.J., (1988, 145p., eng) 43-3970
Flow fingers and ice columns in a cold snowcover. Marsh, P., (1988, p.105-112, eng) 43-4002
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Radiative energy budget in the cloudy and hazy Arctic. Tsay, S.C., et al, (1989, p.1002-1018, eng) 43-4288
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Applications of microwaves to remote sensing. Schanda, E., (1987, p.399-403, eng) 43-20
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Eastern Snow Conference, 44th, 1987. (1987, 216p., eng) 43-383
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Stone avalanche in the Bartuytsete glacier area (Central Caucasus). Dokukin, M.D., (1988, p.348-353, rus) 43-570
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Glacier mass balance and oscillations in the USSR for 1958-1985. Observational data. (1988, p 224-240, rus) 43-966
Calculating the neutron field of cosmic radiation near the surface of snow-covered soil. Altbaev, F.B., et al, (1987, p.18-36, rus) 43-1041
Interaction between Eurasian winter snowcover and an atmospheric ridge. Bhanu Kumar, O.S.R.U., (1988, p.509-514, eng) 43-1172
Monitoring atmospheric precipitation and the length of snow persistence in the Arctic. Briazgin, N.N., et al, (1988, p.96-105, rus) 43-1176
Adaptation of the building construction guidelines to the weight of snow. Primault, B., (1987, p.73-78, fre) 43-1219
Snow cover disappearance as influenced by site conditions, snow distribution, and avalanche activity. Rychetnik, J., (1987, p.355-361, eng) 43-1245
Avalanche distribution in the Caucasus. Zalikhanov, M., et al, (1987, p.627-628, eng) 43-1269
Distribution and forecasting of avalanches in northern Japan. Nakamura, T., et al, (1987, p.639-646, eng) 43-1271
Snow Property Measurement Workshop, Lake Louise, Alta., Apr. 1-3, 1985. (1987, 524p., eng) 43-1286
Snow pillows in the mountainous areas of Alberta. Coles, G.A., et al, (1987, p.193-206, eng) 43-1296
Extrapolating snow measurements on the Marmot Creek experimental basin. Bernier, P.Y., (1987, p.215-229, eng) 43-1298
Snowpack measurements in a forested environment. Daugharty, D.A., et al, (1987, p 255-284, eng) 43-1300
Observations on floating snowpacks: lakes, rivers and the sea. Adams, P., et al, (1987, p.313-346, eng) 43-1302
Physical properties of snow cover. Gordeĭchik, D.E., et al, (1988, p 83-97, rus) 43-1383
Monitoring of seasonal snow cover on glaciers. Haefner, H., et al, (1988, p.443-445, eng) 43-1526
Microcomputers (PCs) for snow cover analyses using multisensor satellite data. Baumgartner, M.F., et al, (1988, p.459-460, eng) 43-1531
Hydrology of the Transcarpathian and Bulgarian mountains. Sakali, L.I., ed, (1988, 339p., rus) 43-1767
Maximum snow accumulations in the Transcarpathian Oblast'. Grishchenko, V.F., (1988, p.63-70, rus) 43-1773
Snow reserves on the slopes of little studied mountain basins. Golubtsov, V.V., et al, (1988, p.86-89, rus) 43-1784
Snow cover-summer monsoon rainfall over parts of Sahel. Bhanu Kumar, O.S.R.U., (1988, p.1847-1848, eng) 43-1904
Penetration of solar radiation in the snow-firn layer on Vavilov Glacier (Severnaya Zemlya Archipelago, October Revolution Island). Nazarov, V.D., et al, (1989, p 64-70, eng) 43-2048
Tundra snow disappearance as climate change indicator Foster, J.L., (1989, p 69-70, eng) 43-2477
Snow cover distribution in the Central Caucasus. Sesiashvili, L.D., (1987, p.240-248, rus) 43-2525
Snow conditions in avalanche hazard zones of the Salang Pass. Sukhanov, I.P., et al, (1987, p.275-282, rus) 43-2530
Aerial and spaceborne surveys of snow avalanches. Barbat, IU.P., (1987, p.368-375, rus) 43-2544
Snow avalanches in the volcanic regions of Kamchatka. Volodicheva, N.A., et al, (1987, p.384-391, rus) 43-2546
Redistribution of water among oceans via the continental snow cover: the Northern Hemisphere. Kotliakov, V.M., et al, (1988, p.235-238, eng) 43-2600
Glaciology of mountainous regions. Getker, M.I., ed, (1988, 136p., rus) 43-2669
Intra-annual distribution and inter-annual variability in snow accumulation in the mountains of Central Asia. Arkhipova, O.M., et al, (1988, p 3-9, rus) 43-2670
Method of preparing operational maps of snow accumulation distribution in mountain regions of Kazakhstan (in the example of Zailiyskiy Alatau). Kolesnikov, E.I., et al, (1988, p.20-25, rus) 43-2672
Seasonal snow resources and their recent secular variations in China. Li, P., (1988, p.1808-1812, eng) 43-2777
Temporal statistics: an application in snowfall climatology. Harrington, J.A., Jr., et al, (1988, p.337-353, eng) 43-2826
Snow accumulation in the Greater Caucasus. Khodakov, V.G., et al, (1988, p.13-19, rus) 43-3249
Studies on snow cover to evaluate conditions for winter recreation. Getker, M.I., et al, (1988, p.81-89, rus) 43-3307
Comments on "Comparison of Northern Hemisphere snow cover datasets". Robinson, D.A., et al, (1988, p.435-442, eng) 43-3468
Wind effect on the distribution of snow depth on a large dome. Sakurai, S., et al, (1989, p.51-58, eng) 43-3551
Estimating snowpack distribution by pattern recognition. Leu, C.H., (1989, 220p., eng) 43-3611
Glaciological investigations in Siberia, Vol.2. Antipov, A.N., ed, (1987, 162p., rus) 43-3652
Basic snow cover formation mechanisms in Eastern Kazakhstan. Diukarev, A.D., et al, (1987, p.39-50, rus) 43-3656
Days and snow cover, its occurrence and disappearance, and daily increase. Tsomaia, V.Sh., (1988, p.58-70, rus) 43-3835
Satellite monitoring of snowpack conditions. Allen, M.W., et al, (1986, p.51-60, eng) 43-3903
Centralized forecasting system for the Western United States. Shafer, B.A., et al, (1986, p.61-70, eng) 43-3904
Snow accumulation patterns in the Sierra Nevada. Aguado, E., (1986, p.172-175, eng) 43-3920
Interception and redistribution of snow in a subalpine forest. Wheeler, K., (1987, p.78-87, eng) 43-3930
Proceedings of the 56th annual meeting, Kalispell, Montana, Apr. 19-21, 1988. (1988, 191p., eng) 43-3990
Snowpack variability on western rangelands. Cooley, K.R., (1988, p.1-12, eng) 43-3991
Snowpack-vegetation dynamics: mountain hemlocks in the Lake Tahoe area. Nachlinger, J.L., et al, (1988, p.23-34, eng) 43-3993
Effect of evaporation on snow distribution in partially clear-cut forests. Swanson, R.H., (1988, p.87-92, eng) 43-4000
Numerical simulation of snow transport, deposition, and redistribution. Tesche, T.W., (1988, p 93-104, eng) 43-4001
Multi-spectral classification of snow. Harrison, A.R., et al, (1989, p.907-916, eng) 43-4105
Multisensor snow cover mapping and snowmelt runoff simulations. Baumgartner, M.F., et al, (1988, p.186-191, eng) 43-4129
Snowmelt rate methods used in forecasting runoff from mountains. Ferner, S., et al, (1985, p.107-116, eng) 43-4274
Basin division and snowmelt discharge in an alpine basin. Michaels, P.S., (1985, p.117-126, eng) 43-4275
Redistribution and sublimation loss of the snowpack in the alpine watershed. James, E.D., et al, (1985, p.148-151, eng) 43-4278
Determining variability of snow accumulation and ablation on western rangelands. Cooley, K.R., et al, (1985, p.156-159, eng) 43-4280
Model studies of snowdrifts formed by livestock shelters and pond embankments. Jairell, R.L., et al, (1985, p.167-170, eng) 43-4283
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Options for harvesting timber to control snowpack accumulation. Troendle, C.A., et al, (1984, p.86-97, eng) 43-4319
Snow accumulation, melt, and soil moisture in pine forest. Potts, D.F., (1984, p.98-108, eng) 43-4320
Remote sensing of an alpine snow cover Davis, R., et al, (1984, p.161-164, eng) 43-4326
Application of a simple snowmelt runoff model to large river basins. Rango, A., (1983, p.89-99, eng) 43-4356
Willamette National Forest local flood prediction. Christner, J., et al, (1983, p.139-140, eng) 43-4361
Principles of calculating the temperature and melting of polluted snow-covered ice. Izmailov, V.V., (1989, p.44-53, eng) 43-4369
Winter albedo characteristics at St. Paul, Minnesota. Baker, D.G., et al, (1989, p.227-232, eng) 43-4404
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Distributions of daily depth of snowfall in the Kanto Plain. Uyeda, H., et al, (1989, p.27-36, jpn) 43-4518

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Experimental study of propagation characteristics on roads on a snowy mountain. Ohtaki, Y., et al, (1988, p.137-144, eng) 43-18
Climatic impact on thermokarst development in low-temperature permafrost. Shamanova, I.I., et al, (1987, p.306-312, eng) 43-134
Fungi in alpine snow-bed communities. Senn-Irlet, B., (1988, p.251-263, eng) 43-155
Proceedings. (1987, var.p., eng) 43-218
Effects of El Niño on growth of Sierra Nevada pines during 1982-83. Armstrong, J.K., et al, (1988, p.352-357, eng) 43-292
Winter knowledge in the Swedish forestry. Scholander, J., (1985, p.50-53, swe) 43-360
Need of winter knowledge in the construction industry. Sjökvist, K., (1985, p.54-71, swe) 43-361
Measurement and evaluation of tire performance under winter conditions. Blaisdell, G.L., (1985, p.198-228, eng) 43-374
Mobility of different forest machines in snow. Sirén, M., et al, (1985, p.229-239, swe) 43-375
Mobility in snow due to tires and snow chains. Bernhardsson, S., (1985, p.240-248, swe) 43-376
Tracks for increased mobility under winter conditions. Granlund, D., (1985, p.249-255, swe) 43-377
U.S. Marine Corps cold weather combat operations study. (1980, var.p., eng) 43-439
Disaster of snow and ice in the region of Dahinggan Mountains. Pang, G., (1987, p.53-54, chi) 43-484
Snow cover effect of furrows for sowing and irrigation. Shi, Y., (1987, p.55-56, chi) 43-485
Obscuration and background dynamics in and over snow. Hogan, A.W., (1987, p.181-185, eng) 43-856
Recent research on acoustic to seismic coupling. Albert, D.G., (1987, p.223-225, eng) 43-857
Seismic and acoustic wave propagation: working group report. Albert, D.G., et al, (1987, p.253-255, eng) 43-858
Vehicle mobility over snow. Blaisdell, G.L., (1987, p.265-266, eng) 43-859
Arctic mobility problems. Abele, G., (1987, p.267-269, eng) 43-860
Atmospheric remote sensing in arctic regions. Felde, G.W., et al, (1987, p 319-326, eng) 43-867
Space remote sensing workshop: working group report. Breslau, L.R., et al, (1987, p.333-339, eng) 43-869
Reconstruction of the Tuyuksu glacier mass balance for the last century. Vilesov, E.N., et al, (1988, p.51-58, rus) 43-936
Sediment transport during snowmelt in periglacial environments. Rehn, F.K.J., (1985, p.56-68, swe) 43-1017
Experimental and theoretical studies of acoustic-to-seismic coupling. Albert, D.G., (1988, p.19-31, eng) 43-1036
Studying water resources from cosmic radiation. Avdiushin, S.I., et al, (1987, p.3-10, rus) 43-1039
Manual interpretation of small forestlands on Landsat MSS data. Kateris, M.A., (1988, p.751-755, eng) 43-1125
Effect of moisture content on temperature at the bottom of dams. Proskuriakov, A.B., et al, (1987, p.73-75, rus) 43-1195
Higher frequency ambient noise in the Arctic Ocean. Lewis, J.K., et al, (1988, p.1444-1455, eng) 43-1209
Winter performance of residential heat pump. Tarnawski, V.R., et al, (1988, p.271-278, eng) 43-1319
Impact of snow on herbaceous and shrubby vegetation. Knight, D.H., et al, (1975, p.175-214, eng) 43-1364
Effect of snow on litter decomposition and nutrient leaching. Knight, D.H., et al, (1975, p.215-224, eng) 43-1365
Seasonal ground frost occurrence Loewenherz, D.S., et al, (1988, p.186-198, eng) 43-1368
Improving transportation in the Yakut ASSR. Belinskiĭ, B.V., (1987, p.31-54, rus) 43-1384
Soils of pine forests in the Angara depression area. Bugakov, I.P., (1986, p.56-63, rus) 43-1409
Injuries from single-vehicle crashes and snow depth Brorsson, B., et al, (1988, p.367-377, eng) 43-1451
Topographic effects on light scattering from snow Rees, W.G., et al, (1988, p.161-164, eng) 43-1507
35-GHz helicopter-borne polarimeter radar. Hallikainen, M.T., et al, (1988, p.423-424, eng) 43-1520
Snow cover to alter terrain signatures on radar images. Geile, W., (1988, p 455-457, eng) 43-1530
Spectral reflectance of snow-covered/snow-free terrain. Rott, H., et al, (1987, p.115-121, eng) 43-1677
Mass balance of Charles Rabots Bre, Norway, 1970-1985. Theakstone, W.H., et al, (1987, p.155-163, eng) 43-1681
Desig and test results of air cushion vehicles built by the A.M. Gorki Polytechnic Institute. Kirkin, S.F., (1988, p.249-265, eng) 43-1760
Albedo of underlying surfaces of the USSR. Morozova, I.V., et al, (1988, p 69-81, rus) 43-1776
Shipborne passive microwave sea ice experiment in the East Greenland Sea: May-July 1987. Garrity, C., (1988, p.1691-1692, eng) 43-1897
Dielectric and scattering properties of young snow-covered sea ice. Drinkwater, M.R., et al, (1988, p.274-282, eng) 43-1981
Antitank obstacles for winter use. Richmond, P.W., (1988, 11p., eng) 43-1997
Glacier mass balance investigations in the balance year 1986-87. Hagen, J.O., (1988, p.205-209, eng) 43-2010
Estimating Cn square over snow and sea ice from meteorological quantities. Andreas, E.L., (1988, p.258-267, eng) 43-2025
Cold weather roofing failures. Dregger, P.D., et al, (1989, p.50-58, eng) 43-2088
Using the Ground Emplaced Mine Scattering System in winter. Richmond, P.W., et al, (1988, 13p., eng) 43-2120
SNOW III WEST field experiment report. Volume 1. Lacombe, J., et al, (1988, 170p., eng) 43-2121
Annual and spring-summer water inflow into reservoir of the Novosibirsk HES. Chernov, I.M., et al, (1988, p.35-44, rus) 43-2346
Snow surface drag of air movement on the Antarctic Plateau, Pt.1. Inoue, J., (1989, p.2207-2217, eng) 43-2491
Snow surface drag of air movement on the Antarctic Plateau, Pt.2. Inoue, J., (1989, p.2219-2224, eng) 43-2492
Review of ship performance in level ice. Jones, S.J., (1989, p.325-342, eng) 43-2643
Carbon dioxide exchange in a frozen antarctic lichen. Kappen, L., (1989, p.31-34, eng) 43-2700
Seasonal variations of ice algal standing crop near Showa Station. Watanabe, K., et al, (1987, p.143-164, eng) 43-3160
Effect of snow patches in the Western Pamirs on mudflow activity. Tukeev, O.V., (1988, p.47-53, rus) 43-3255
Approximation methods for calculating the thermal effect of snow cover. Romanovskiĭ, V.E., (1987, p.183-188, rus) 43-3383
Overview of obscuration in the cold environment. Berger, R.H., et al, (1988, p.537-555, eng) 43-3433
Effect of snow cover on cloud analysis. McGuffie, K., et al, (1988, p.1124-1137, eng) 43-3470
Glaciological investigations in Siberia, Vol.2. Antipov, A.N., ed, (1987, 162p., rus) 43-3652
Climate in southeastern Siberia and climatic aspects of exogenetic processes. D'iakonov, A.I., (1987, p.80-103, rus) 43-3660
Radar reflectivity of snow at millimeter wave frequencies. Greneker, E.F., III, et al, (1989, p.123-132, eng) 43-3882
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Managing snow to extend the areal range of winter wheat production. Steppuhn, H., et al, (1986, p.30-40, eng) 43-3901
Simultaneous heat and water model of freezing soils, parts 1 & 2. Flerchinger, G.N., et al, (1989, p.565-578, eng) 43-3972
Influence of the freeze depth of ground on the rise in ground water. Zinov'ev, M.L., (1988, p.25-31, rus) 43-4040
Effect of snow cover on the climate. Cohen, J., (1988, p.27-41, eng) 43-4114
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Interannual fluctuations in primary production: meteorological forcing at two subalpine lakes. Goldman, C.R., et al, (1989, p.310-323, eng) 43-4291
Influences of snow persistence on subalpine forest. Daly, C., (1984, p.109-119, eng) 43-4321
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Spectra and cospectra of atmospheric turbulence over snow. Andreas, E.L., (1986, p.219-233, eng) 43-4636
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Millimeter wave snow data collection program description: Snowman I. Green, A.H., et al, (1986, p.273-290, eng) 43-4641
Radar backscattering from snow-covered ice. Lin, F.C., et al, (1986, p.321-328, eng) 43-4646
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Stability index and various triggering mechanisms. Föhn, P.M.B., (1987, p.195-214, eng) 43-1230
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Stability and fracture of the snow pack for glide avalanches. Lackinger, B., (1987, p.229-241, eng) 43-1233
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Geotechnical aspects of snow pack stability in the Himalayan region. Pathak, R.C., (1987, p.353-354, eng) 43-1244
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Quantitative approach for verifying avalanche hazard ratings. Elder, K., et al, (1987, p.593-603, eng) 43-1265
Snow properties in actual field conditions and stability analysis. Fukue, M., (1987, p.111-136, eng) 43-1293
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Snow physics, avalanches, mudflows. Bolov, V.R., ed, (1988, 132p, rus) 43-2557
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Snow vehicles. Barakhtanov, L.V., et al, (1986, 191p., rus) 43-715
Snow cover at the foot of Mt. Iwaki, Japan, winter of 1966-1967. Satoh, K., et al, (1975, p.1-30, eng) 43-844
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Atmospheric aerosol fractionation resulting from snow crystal formation. Borys, R.D., et al, (1988, p.213-239, eng) 43-1467

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International Conference on Snow Engineering, 1st, July 1988. (1989, 573p., eng) 43-3544

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Mountain glacier basins of the USSR, 1969-1974. Bochin, N.A., ed, (1987, 300p., rus) 43-1774

IGARSS '88 remote sensing: moving towards the 21st century; Vol.3. (1988, p.1231-1858, eng) 43-1889

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Trends in snow surveying in Canada. Goodison, B.E., et al, (1987, p.231-253, eng) 43-1299
Orographic precipitation model for hydrometeorological use. Rhea, J.O., (1978, 198p, eng) 43-1363
Maximum snow accumulations in the Transcarpathian Oblast'. Grishchenko, V.F., (1988, p.63-70, rus) 43-1773
Determination of snow water equivalent of Norwegian snow cover. Kuittinen, R., (1988, 139p, eng) 43-2080
Snow measurement in the mountain-glacial basin of Aktru (Altay Mts.). Sheremetov, R.T., et al, (1988, p.81-87, rus) 43-2353
Redistribution of water among oceans via the continental snow cover: the Northern Hemisphere. Kotliakov, V.M., et al, (1988, p.235-238, eng) 43-2600
Computation of water budget of a snow bound river basin. Puri, S.R., et al, (1988, p.103-106, eng) 43-2885
Proceedings of the 54th annual meeting, Phoenix, AZ, Apr. 15-17, 1986. (1986, 198p, eng) 43-3897
Reliability of statistical analysis of hydrological data Salway, A.A., (1987, p.41-52, eng) 43-3926
Snow hydrology—forest harvesting interface. Toews, D.A.A., et al, (1988, p.13-22, eng) 43-3992
Use of new SSARR model automatic updating procedure. Orwig, C.E., et al, (1988, p.52-57, eng) 43-3996
Effect of evaporation on snow distribution in partially clear-cut forests. Swanson, R.H., (1988, p.87-92, eng) 43-4000
Hydrograph recession limbs—a case of hydrologic *deja vu*. Van Haveren, B.P., (1988, p.148-154, eng) 43-4006
Activities at the Norwegian Hydrotechnical Laboratory. McClimans, T.A., (1989, p.617-623, eng) 43-4103
Snow hydrology in the upper Yamuna basin, India. Malhotra, R.V., et al, (1988, p.84-93, eng) 43-4119
Snowmelt runoff processes in a small precambrian watershed. Shibatani, R., et al, (1988, p.94-107, eng) 43-4120
Snow hydrology of the Waimakariri catchment, South Island, New Zealand. Moore, R.D., et al, (1988, p.44-68, eng) 43-4258
Proceedings of the 53rd annual meeting, Boulder, CO, Apr. 16-18, 1985. (1985, 183p, eng) 43-4262
Windy Gap Project streamflow forecasting. Eckhardt, J.R., et al, (1985, p.54-62, eng) 43-4268
Basin division and snowmelt discharge in an alpine basin. Michaels, P.S, (1985, p.117-126, eng) 43-4275
Hydrometeorological instrumentation and automation Strauss, F.A., (1984, p.43-47, eng) 43-4314
Use of data logging systems in snow hydrology Gundy, T.W., (1984, p.120-131, eng) 43-4322
Isotope profiling snow gage: twenty years of experience. Kattelmann, R.C., et al, (1983, p.1-8, eng) 43-4347
Gamma radiation snow water equivalent measurements. Carroll, T.R., et al, (1983, p.27-37, eng) 43-4350
Snow accumulation and ablation algorithms for watershed models. Huber, A.L., (1983, p.76-88, eng) 43-4355
Influence of snowmelt in evaluating small hydropower generation potential. Tangborn, W.V., et al, (1983, p.100-108, eng) 43-4357
Hydrologic response of central Sierra Nevada snowpacks to rainfall. Bergman, J.A., (1983, p.141-144, eng) 43-4362

Snow ice
System of factors and processes affecting the formation of chemical composition of aqueous and water-snow ice. Ivanov, A.V., (1987, p.74-80, rus) 43-231
Impact strength of iceberg and artificial snow ice. El-Tahan, H., et al, (1985, p.365-380, eng) 43-1532
Snow and snow-ice surfaced roads. Alekseev, V.R., et al, (1988, p.191-199, rus) 43-3278

Snow ice interface
Meltwater movement in natural heterogeneous snow covers. Marsh, P., et al, (1985, p.1710-1716, eng) 43-181
Observations on floating snowpacks: lakes, rivers and the sea. Adams, P., et al, (1987, p.313-346, eng) 43-1302
Soil heat flux and ice growth in snow cover Marsh, P., et al, (1987, p.497-524, eng) 43-1310
Step frequency radar experiments on the antarctic sea ice Uratsuka, S., et al, (1988, p.1703-1706, eng) 43-1900
Science of ice. Maeno, N., (1988, 229p., rus) 43-2327
Interannual fluctuations in primary production: meteorological forcing at two subalpine lakes. Goldman, C.R., et al, (1989, p.310-323, eng) 43-4291

Snow impurities
Effects of dirty snow in nuclear winter simulations. Vogelmann, A.M., et al, (1988, p 5319-5332, eng) 43-210
System of factors and processes affecting the formation of chemical composition of aqueous and water-snow ice. Ivanov, A.V., (1987, p.74-80, rus) 43-231
Incorporation of sulfur dioxide into snow and depositing ice. Valdez, M.P., (1988, 189p., eng) 43-307
Snow algae and their interaction with environments. Hoham, R.W., (1987, p.73-79, eng) 43-391
Evaporation of chemical agents from ice and snow. Leggett, D.C., (1988, 10p, eng) 43-425
Soot in the Arctic snowpack. Clarke, A.D., et al, (1985, p.2045-2053, eng) 43-988
Air pollution trends in the Canadian High Arctic Barrie, L.A., et al, (1985, p.2055-2063, eng) 43-989
Atmospheric transport and deposition of trace elements onto the Greenland Ice Sheet. Davidson, C.I., et al, (1985, p.2065-2081, eng) 43-990
Aliphatic and polycylic aromatic hydrocarbons in urban rain, snow and fog. Leuenberger, C., et al, (1988, p.695-705, eng) 43-1071
Quality of used-snow discharged in Montreal Harbor. Zinger, I., et al, (1988, p.47-57, eng) 43-1074
Snow cover and lawn soil pollution in northern cities. Lepneva, O.M., et al, (1988, p.17-20, rus) 43-1121
Chernobyl reactor accident; contamination of snow cover on Alpine glaciers. Ambach, W., et al, (1987, p.276-281, ger) 43-1280
Abnormally enriched elemental concentrations in urban snow. Drake, J.J., et al, (1987, p.79-88, eng) 43-1291
Optical properties of antarctic snow Warren, S.G., et al, (1988, p.247-248, eng) 43-1644
Atmospheric transport of organochlorines to the Arctic Ocean. Hargrave, B.T., et al, (1988, p.480-493, eng) 43-2246
Radioactive ice. Davidson, C.I., (1988, p.98-99, eng) 43-2587
Lead records in antarctic ice: changes in global atmospheric concentrations. Patterson, C., et al, (1987, p.85-87, eng) 43-2748
Light scattering by inhomogeneous composite particles. Srivastava, V., (1989, 155p., eng) 43-2889
Trace analysis of iron in water and snow. Golimowski, J., (1989, p.481-492, eng) 43-3247
Technogenic pollution of snow cover in Spitsbergen. Il'ina, E.A., (1988, p.113-116, rus) 43-3266
Industrial pollution of snow cover. Ivanov, A.V., et al, (1988, p.116-120, rus) 43-3267
Arctic haze. Ruhnke, L.H., et al, (1987, p.285-288, eng) 43-3298
Mechanisms of deposition of atmospheric contaminants to snow. Davidson, C.I., (1989, p.29-51, eng) 43-3679
pH of mountain snowfall in Montana 1981-1984. Farnes, P.E., (1985, p.72-75, eng) 43-4270
Acidic deposition and snowpack chemistry at a Sierra Nevada site. Berg, N., et al, (1985, p.76-87, eng) 43-4271
Snowpack chemistry in southcentral British Columbia Kotturi, M.S., et al, (1985, p.88-98, eng) 43-4272
Dilution method for measuring liquid water in snow Perla, R., et al, (1984, p.80-85, eng) 43-4318
Comparative chemistry of background and polluted snowfall in Scotland. Landsberger, S, et al, (1989, p.395-401, eng) 43-4342
Relationship between rain and snow acidity and air mass trajectory in eastern France. Colin, J.L., et al, (1989, p.1487-1498, eng) 43-4458
Pesticides in Canadian arctic snow Gregor, D.J, et al, (1989, p.561-565, eng) 43-4498

Snow line
Influence of origin and age of geological formations on glaciation and topography. Krefter, A.A., et al, (1987, p.24-30, rus) 43-223
Characteristics of external mass transfer on the Malyy Azau glacier, Elbrus Mountain. Diurgerov, M.B., et al, (1987, p.91-95, rus) 43-235
Monitoring of seasonal snow cover on glaciers. Haefner, H., et al, (1988, p.443-445, eng) 43-1526
Ablation of perennial snow patches in Japanese mountains. Watanabe, T., (1988, p.560-581, eng) 43-2276
Upper limit of glacier zone in the Himalayas. Kuhle, M., (1986, p.185-206, ger) 43-2833

Snow loads
Studies on the settlement force of snow as a generation mechanism. Nakamura, H., (1988, p.361-385, jpn) 43-458
Winterdrilling in the Barents Sea. Friedberg, R., et al, (1988, p.367-391, eng) 43-634
Snow load data analysis, winter 1976-77. O'Rourke, M., (1977, 9p. + appends, eng) 43-931
Markov model for wood structural systems. Bulleit, W.M., (1987, p 2023-2031, eng) 43-1136
Loads on roofs from snow drifting against vertical obstructions and in valleys. (1988, 12p, eng) 43-1197
Adaptation of the building construction guidelines to the weight of snow. Primault, B., (1987, p.73-78, fre) 43-1219
Equation for calculating snow avalanche run-up against barriers. Hungr, O., et al, (1987, p.605-612, eng) 43-1266
Mechanical and physical properties of snow Fukue, M., et al, (1987, p.11-32, eng) 43-1287
Expert system countermeasures for snow accretion on transmission lines. Nara, K., et al, (1988, p.1052-1058, eng) 43-1317
Simulating uniform roof snow loads. Sack, R.L., et al, (1988, p.503-510, eng) 43-1443
On the probabilistic collapse analysis of transmission line structures. Murotsu, Y., et al, (1987, p.53-64, eng) 43-1586
Field guide for predicting snow damage to ponderosa pine plantations. Megahan, W.F., et al, (1988, 9p., eng) 43-1710
Framing arrangements using pressure-stabilized beams. Krainski, W.J., Jr., (1988, 101p., eng) 43-1864
Designing structures for snow loads. Sack, R.L., (1989, p 303-315, eng) 43-1999
Snow loads on roofs. Christoffer, J., et al, (1988, p.79-86, ger) 43-2338
Coefficients of resistance to avalanche motion. Blagoveshchenskiĭ, V.P., (1987, p.353-357, rus) 43-2541
Design formulas in building codes for avalanche-resistant structures. Andreev, IU.B., et al, (1987, p.357-362, rus) 43-2542
Environmental loads on structures NPD—guidelines for loads and load effects. Kvitrud, A., et al, (1989, p.133-138, eng) 43-2619
Avalanche formation from cylindrical and dome-shaped roofs. Bozhinskiĭ, A.N., et al, (1988, p.134-137, rus) 43-3318
On the frozen force between snow and ethylene tetrafluoride resin. Kobayashi, S., et al, (1988, p.107-112, jpn) 43-3523
International Conference on Snow Engineering, 1st, July 1988. (1989, 573p., eng) 43-3544
Snow depth and snow load in Umeå. Åkerlund, S., (1989, p.3-7, eng) 43-3545
Snow loads in mountainous terrain Gabl, K., (1989, p 8-14, eng) 43-3546
Snow data analysis for structural safety. Harris, J.R., (1989, p.15-24, eng) 43-3547
Annual maximum snow depth and snow loads. Izumi, M., et al, (1989, p.25-34, eng) 43-3548
Snow load and snow load design in Hungary. Tamás, K., (1989, p.35-39, eng) 43-3549
Ground snow loads for the 1990 national building code of Canada. Newark, M.J., et al, (1989, p.40-49, eng) 43-3550
Characteristics of snow and snow-induced building damage in Japan. Suzuya, J., et al, (1989, p.59-68, eng) 43-3552
Snow loads on roofs—three case histories in Warsaw. Sobolewski, A., et al, (1989, p 69-80, eng) 43-3553
Snow damage to buildings in Poland, 1968-1987. Wilbik, J., et al, (1989, p.81-84, eng) 43-3554
Roof snow loads in deep snow regions. Taylor, D., (1989, p.85-94, eng) 43-3555
Snow load on gable roofs: results from snow load measurements on farm buildings in Norway. Höibø, H., (1989, p.95-104, eng) 43-3556
Predicting snow loading on the Toronto Skydome. Irwin, P.A., et al, (1989, p.118-127, eng) 43-3558
Variability of snow loads on large-area flat roofs. Mikitiuk, M., et al, (1989, p.142-157, eng) 43-3560
Wind effects on snow loads. Mihashi, H., et al, (1989, p.158-167, eng) 43-3561
Snow-melting and snow loads on glass roofs. Nielsen, A., (1989, p.168-177, eng) 43-3562
Modeling wind effects on drifting. O'Rourke, M., et al, (1989, p.178-187, eng) 43-3563
Consideration of wind effect in standardization of snow load. Otstavnov, V.A., et al, (1989, p 256-263, eng) 43-3570
Physical modeling for the assessment of snow load and drift. Petersen, R.L., et al, (1989, p.276-285, eng) 43-3572
Calculation of maximum snow load on roofs. Sandvik, R., (1989, p.317-324, eng) 43-3576
Snow density for structural snow load in moderate climate. Sobolewski, A., et al, (1989, p.364-372, eng) 43-3581
Standards for snow loads. Apeland, K., (1989, p.385-402, eng) 43-3583
Developing the Eurocode. Judge, C.J., (1989, p.403-412, eng) 43-3584
Changes coming in snow load design criteria. Tobiasson, W., (1989, p.413-418, eng) 43-3585
Snow loads on roofs in East European standards. Zuranski, J.A., (1989, p 419-428, eng) 43-3586
Structural system designed to resist creep and glide forces. Albrecht, R.G., (1989, p 431-440, eng) 43-3587
Architectural design in regions of snow and cold. Mackinlay, I., (1989, p.441-455, eng) 43-3588
Determination of ground and roof snow loads at a particular site. Powell, D.R., (1989, p.456-461, eng) 43-3589
Building design for heavy snow areas. Paine, J.C., (1989, p.483-492, eng) 43-3592
Perspective on analytical methods. Irwin, P.A., (1989, p.499-501, eng) 43-3594
Perspective on mechanical properties of snow. Brown, R.L., (1989, p.502-503, eng) 43-3595
Perspective: design considerations. Mackinlay, I., (1989, p 504-506, eng) 43-3596
Codes and standards: perspective. O'Rourke, M., (1989, p.507-509, eng) 43-3597
Case histories of snow loads on roofs. Taylor, D., (1989, p.510-511, eng) 43-3598
Perspective: ground loads and mapping. Tobiasson, W., (1989, p.512-513, eng) 43-3599
Average snow reserves and snow loads in the Caucasus. Aliev, I.A., et al, (1988, p.46-58, rus) 43-3834
Probabilistic prediction of snow loads on sloped roofs. Sack, R.L., et al, (1986, p.41-50, eng) 43-3902

Snow loads *(cont.)*
Proceedings of the 55th Western Snow Conference, 1987. [1987, 184p. + appends., eng] 43-3921
Designing structures for snow loads. Sack, R.L., [1987, p.97-107, eng] 43-3932
Settlement pressures on roof structures Albrecht, R.G., [1987, p.118-123, eng] 43-3934
Roof snow loads; drifting against a higher wall. O'Rourke, M., et al, [1987, p.124-132, eng] 43-3935
Snow loads on multi-level flat roofs in Canada. Taylor, D.A., [1987, p.133-141, eng] 43-3936
Heavy snow failures in the Sierra Nevada Mountains of California. Coen, C.C., et al, [1987, p.146-149, eng] 43-3938
Roof load predictions using artificial snow. Sack, R.L., et al, [1987, p.150-153, eng] 43-3939
Snow survey water supply forecasting program Palmer, P.L., [1988, p.43-51, eng] 43-3995
Methodology for establishing ground snow loads. Sack, R.L., et al, [1985, p.163-166, eng] 43-4282
Snow pillow overloading by slope induced creep. Richards, R.P., [1984, p.184-187, eng] 43-4332
Structural snow loads. Sack, R.L., et al, [1983, p.120-129, eng] 43-4359
Corps of Engineers Structural Engineering Conference, 1988. [1989, 2 vols., eng] 43-4406
Changes coming in snow load design criteria. Tobiasson, W., [1989, p.918-920, eng] 43-4410
Prefabricated metal buildings. Nash, S.E., [1989, p.994-1004, eng] 43-4411
Ultimate loads for corrugated-steel barrel-type shell structures. Briassoulis, D., et al, [1989, p.1038-1049, eng] 43-4413

Snow manufacturing
Manufacture and efficacy of JLJ-II type clean-snow-machine. Chang, J., [1987, p.133-140, chi] 43-499
Estimated consumptive loss from man-made snow. Eisel, L.M., et al, [1988, p.815-820, eng] 43-1557
Making artificial snow for laboratory use Sommerfeld, R.A., et al, [1988, 3p., eng] 43-1700
Snow making. Lafeuille, J., [1988, p.38-47, fre] 43-2355
State of the art in snowmaking and its application to arctic construction. Collins, J., et al, [1989, p.247-251, eng] 43-2633

See also: Artificial snow

Snow mechanics
Vibration analysis of a DEW-Line station. Haynes, F.D., et al, [1988, p.1513-1518, eng] 43-6
Acoustic emission methods applied to avalanche-formation studies. Epifanov, V.P., et al, [1988, p.232-235, eng] 43-169
On the 50th anniversary of snow avalanche studies in Khibiny and the Alps. Akif'eva, K.V., et al, [1987, p.10-14, rus] 43-221
Avalanche research. Karlén, W., [1985, p.96-100, swe] 43-365
Measurements of the mechanical properties of snow. Olsen, H.-J., [1985, p.173-178, swe] 43-372
Studies on the settlement force of snow as a generation mechanism. Nakamura, H., [1988, p.361-385, jpn] 43-458
On the zoning of snow damage in China. Hu, R., et al, [1987, p.1-12, chi] 43-476
Control the snow damage to the highways within Yili District, Xinjiang. Xu, M., [1987, p.25-26, chi] 43-478
Snow damage to highways and road maintenance, Yunnan Province. Shao, W., et al, [1987, p.45-52, chi] 43-483
Avalanche formation, movement and effects. Salm, B., ed, [1987, 686p., eng] 43-1214
Acoustic, geometric and mechanical parameters of snow. Buser, O., et al, [1987, p.61-71, eng] 43-1218
New constitutive theory for snow based on a micromechanical approach. Hansen, A.C., et al, [1987, p.87-104, eng] 43-1222
Snow mechanics: laboratory tests of snow strength. Navarre, J.P., et al, [1987, p.129-137, fre] 43-1225
Field study on snow mechanical properties with special regard to liquid water content Brun, E., et al, [1987, p.183-193, eng] 43-1229
Wind systems and snow transport in alpine topography. Meister, R., [1987, p.265-279, eng] 43-1236
Experiments on snow-avalanche dynamics Nishimura, K., et al, [1987, p.395-404, eng] 43-1248
Laboratory experiments on the dynamics of powder snow avalanches. Hermann, F., et al, [1987, p.431-440, eng] 43-1252
Mechanics of snow slab failure from a geotechnical perspective. McClung, D.M., [1987, p.475-508, eng] 43-1256
Avalanche zoning, dynamics and control. Recent work done in France. Brugnot, G., [1987, p.521-536, eng] 43-1258
Equation for calculating snow avalanche run-up against barriers. Hungr, O., et al, [1987, p.605-612, eng] 43-1266
Energy loss of snow blocks passing through a supporting structure. Bachmann, O., [1987, p.613-622, eng] 43-1267
Mechanical and physical properties of snow. Fukue, M., et al, [1987, p.11-32, eng] 43-1287
Photography of avalanches in Kanaskis Country, Alberta. DeScally, F.A., et al, [1987, p.33-58, eng] 43-1288
Instruments to measure snow characteristics in the field. Samoilov, R.S., [1987, p 261-269, rus] 43-2528
Physicomechanical properties of the snow cover in Spitsbergen. Samoilov, R.S., [1988, p.122-126, rus] 43-3315
Proceedings. Vol 2: Unclassified section. [1988, 738p., eng] 43-3428
Overview of obscuration in the cold environment. Berger, R.H., et al, [1988, p.537-555, eng] 43-3433
International Conference on Snow Engineering, 1st, July 1988. [1989, 573p., eng] 43-3544
Detecting and characterizing of avalanches in remote areas. Bedard, A.J., Jr., et al, [1989, p.267-275, eng] 43-3571
Study of ice adhesion and sintering. Shen, W., et al, [1989, p.373-382, eng] 43-3582
Perspective: past, present, future—physical modeling techniques. Cermak, J.E., [1989, p.495-498, eng] 43-3593
Perspective on mechanical properties of snow. Brown, R.L., [1989, p 502-503, eng] 43-3595
Basic snow cover formation mechanisms in Eastern Kazakhstan. Diukarev, A.D., et al, [1987, p.39-50, rus] 43-3656
Process of breaking up hard snow. Maevskii, A.A., [1987, p.60-71, rus] 43-3658
Blowing of snow by automobile traffic. Maevskii, A.A., [1987, p.72-79, rus] 43-3659
Interception and redistribution of snow in a subalpine forest. Wheeler, K., [1987, p.78-87, eng] 43-3930
Slide rule for snow fence design. Tabler, R.D., [1987, p.162-165, eng] 43-3942
Numerical simulation of snow transport, deposition, and redistribution. Tesche, T.W., [1988, p.93-104, eng] 43-4001
Characteristics of a heat exchanger with the melting of fallen snow. Aoki, K., et al, [1989, p.91-94, eng] 43-4203
Ablation rates of snow fence drifts at 2300-meters elevation in Wyoming Tabler, R.D., [1985, p.1-12, eng] 43-4263
Circulation analysis of two snowstorms. Chen, Y.L., [1986, p.199-217, eng] 43-4635

Snow melting
Mesoscale circulations forced by melting snow. Szeto, K.K., et al, [1988, p.1629-1650, eng] 43-36
Radiation balance of melting snow, Sierra Nevada, CA. Aguado, E., [1985, p.1649-1654, eng] 43-180
Snow melting on pavements by the heat of ground-water pipelines. Kumagai, M., et al, [1988, p.285-309, jpn] 43-457
Runoff forecasting and snow melting for rivers in Xinjiang. Zhang, G., et al, [1987, p.57-64, chi] 43-486
Forecasting snow-melt mudflows in the western Pamirs. Tukeev, O.V., [1988, p.78-85, rus] 43-939
Avalanche formation factors in mountain regions of the USSR. Troshkina, E.S., [1988, p.85-89, rus] 43-940
Monitoring of seasonal snow cover on glaciers. Haefner, H., et al, [1988, p.443-445, eng] 43-1526
Flood climates. Hayden, B.P., [1988, p.13-26, eng] 43-1547
Microwave propagation through the melting layer at grazing angles of incidence. Kharadly, M.M.Z., et al, [1988, p.1106-1113, eng] 43-1555
Snow density and water retention. Golubtsov, V.V., et al, [1988, p.83-85, rus] 43-1783
Snow reserves on the slopes of little studied mountain basins. Golubtsov, V.V., et al, [1988, p.86-89, rus] 43-1784
Determination of snow water equivalent of Norwegian snow cover. Kuittinen, R., [1988, 139p., eng] 43-2080
Melting layer of frozen precipitation. Klaassen, W., [1988, p.3741-3753, eng] 43-2360
Calculating the characteristics of mudflows. Stepanova, T.S., et al, [1988, p.3-10, rus] 43-2418
Implications of warm weather during Canadian Arctic winter. Gilbert, R., et al, [1988, p.395-403, eng] 43-2480
Solar radiation induced melt layers in dry snow. Beck, N., et al, [1988, p.31-40, eng] 43-2596
Surface ablation and heat transfer in the near-ground air layer. Szarejko, Z., et al, [1986, p.153-165, eng] 43-2832
Snow and ice melting in karst cavities Mavliudov, B.R., [1988, p.123-128, rus] 43-3269
Using maps to calculate glacial runoff. Zverkova, N.M., et al, [1988, p.129-134, rus] 43-3270
Ground water during snow melting in landslide area. Inaba, K., et al, [1988, p.61-75, jpn] 43-3522
Simulation to predict snow sliding and lift-off on buildings. Lepage M.F., et al, [1989, p.128-141, eng] 43-3559
Variability of snow loads on large-area flat roofs Mikitiuk, M., et al, [1989, p.142-157, eng] 43-3560
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Calculation of maximum snow load on roofs. Sandvik, R., [1989, p.317-324, eng] 43-3576
Railroad track snow-melting system. Sawase, K., et al, [1988, p.343-348, eng] 43-3820
Snow accumulation and ablation in forested and clearcut sites. Toews, D.A.A., et al, [1986, p.101-111, eng] 43-3909
Flow fingers and ice columns in a cold snowcover. Marsh, P., [1988, p.105-112, eng] 43-4002
Effect of snow cover on the climate. Cohen, J., [1988, p.27-41, eng] 43-4114
Characteristics of a heat exchanger with the melting of fallen snow Aoki, K., et al, [1989, p.91-94, eng] 43-4203
Melting of snow immersed in MgCl2 aqueous solution. Sugawara, M., et al, [1989, p.95-100, eng] 43-4204
Models of groundwater level fluctuations. Lemmela, R., et al, [1988, p.35-46, eng] 43-4381
Radiative energy budget in the cloudy and hazy Arctic. Tsay, S.C., et al, [1989, p.1002-1018, eng] 43-4402

See also: Snowmelt

Snow metal friction
See also: Metal snow friction

Snow metamorphism
See also: Metamorphism (snow)

Snow optics
Scattering of millimeter waves by snow crystals. O'Brien, S.G., et al, [1988, p.2439-2444, eng] 43-974
Propagation of polarized millimeter waves through falling snow. O'Brien, S.G., et al, [1988, p.2445-2450, eng] 43-975
Measurement of blowing snow properties using optical attenuation devices. Pomeroy, J.W., et al, [1987, p.347-388, eng] 43-1303
Optical studies of antarctic sea ice. Schlosser, E., [1988, p.289-293, eng] 43-1349
Topographic effects on light scattering from snow Rees, W.G., et al, [1988, p.161-164, eng] 43-1507
Optical properties of antarctic snow. Warren, S.G., et al, [1988, p.247-248, eng] 43-1644
Bhaskara-II satellite capability to monitor soil moisture in India. Rao, K.S., et al, [1984, p.91-96, eng] 43-1928
Diffuse solar radiation—daily and monthly values as affected by snow cover. Kierkus, W.T., et al, [1989, p.143-147, eng] 43-2310
Parameterization of snow albedo. Kondo, J., et al, [1988, p.216-224, jpn] 43-2702
Light scattering by inhomogeneous composite particles. Srivastava, V., [1989, 155p., eng] 43-2889
Physical and optical properties of falling snow. Koh, G., [1989, 22p., eng] 43-3034
Two-stream approximation to radiative transfer in falling snow. Koh, G., [1988, p.463-470, eng] 43-3429
Increased transmission through brass obscurant clouds during snowfall. Hewitt, A.D., et al, [1988, p.489-496, eng] 43-3430
Snow-smoke interaction. Hogan, A.W., et al, [1988, p.497-506, eng] 43-3431
Radiative transfer in falling snow: a two-stream approximation. Koh, G., [1989, 10p., eng] 43-3675
Proceedings. [1989, 136p., eng] 43-3871
Forward scattering and transmittance of light in snow. Bissonnette, L.R., et al, [1989, p.57-69, eng] 43-3876
Optical technique for characterizing precipitation. Koh, G., [1989, p.71-76, eng] 43-3877
Polar nephelometer for measuring snowflake phase functions. Saint-Germain, D., [1989, p.77-85, eng] 43-3878
Model of smoke concentration reduction due to scavenging by snow. Hutt, D.L., et al, [1989, p.87-98, eng] 43-3879
Light transmission through smoke screens in falling snow. Parmer, W.M., et al, [1989, p.99-111, eng] 43-3880
Extinction, transmission, and scattering measurements during SNOW IV. Koenig, G.G., et al, [1989, p.83-102, eng] 43-4305
Theory of the optical properties of snow. Bohren, C.F., et al, [1974, p.4527-4535, eng] 43-4414
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Standard targets taken with military electro-optical systems. Rice, J.E., et al, [1986, p.25-27, eng] 43-4624
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Phase function of two dimensional snow crystals. Winchester, L.W., Jr., [1986, p.101-109, eng] 43-4630
Scattering, turbulence, and refractive effects at SNOW III West. Crow, S.B., et al, [1986, p.113-127, eng] 43-4631
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Snow pellets
Parametrization of the precipitation processes in mixed and in ice clouds in numerical models. Sergeev, B.N., [1988, p.32-35, rus] 43-1078

Cross-polar radar measurements in ice and rain. Goddard, J.F.W., et al, [1988, p.235-236, eng] 43-1510

Observation of ice pellets. Kimura, T., et al, [1984, p.802-808, eng] 43-2189

Terminal velocity adjustments for plate-like crystals and graupel. Beard, K.V., et al, [1988, p.3515-3518, eng] 43-2773

Snow permeability

Thermodynamics of meltwater seepage into snow-firn cover. Kazanskiĭ, A.B., [1987, p.58-62, rus] 43-228

Influence of ice layers on the travel time of meltwater flow through a snowpack. Furbish, D.J., [1988, p.265-272, eng] 43-288

Permeability of water in snow and firn of glacier in Nepal. Murakami, S., et al, [1989, p 203-208, eng] 43-3462

Snow physics

Thermodynamics of meltwater seepage into snow-firn cover. Kazanskiĭ, A.B., [1987, p.58-62, rus] 43-228

Application of a continuum theory of multiphase mixtures to snow on the ground. Adams, E.E., [1988, 205p., eng] 43-342

Friction and sliding resistance of snow and ice. Hensvold, E., [1985, p.291-300, swe] 43-381

Temperature gradient driven vapor transport in snow. Sommerfeld, R.A., [1987, p.231-234, eng] 43-584

Snow vehicles. Barakhtanov, L.V., et al, [1986, 191p., rus] 43-715

Thermal microwave emission of the soil-snow-atmosphere system. Gershenzon, V.E., et al, [1988, p.84-89, rus] 43-817

Snow cover at the foot of Mt. Iwaki, Japan, winter of 1971-1972. Satoh, K., et al, [1979, p.102-122, eng] 43-846

Snow properties and processes. Colbeck, S.C., [1987, p.145-150, eng] 43-852

Laboratory-determined characteristics of water vapor diffusion in snow cover. Nikolenko, A.V., [1988, p.90-96, rus] 43-941

Snow cover characteristics from data of electromagnetic and contact measurements. Miagkov, S.M., et al, [1988, p.165-170, rus] 43-957

On the objective analysis of snow microstructure. Dozier, J., et al, [1987, p.49-59, eng] 43-1217

Acoustic, geometric and mechanical parameters of snow Buser, O., et al, [1987, p.61-71, eng] 43-1218

Velocity of plastic waves in snow. Sato, A., [1987, p.119-128, eng] 43-1224

Microwave sensors for measuring avalanche-critical snow parameters. Mätzler, C., [1987, p.149-160, eng] 43-1227

Snow Property Measurement Workshop, Lake Louise, Alta., Apr. 1-3, 1985. [1987, 524p., eng] 43-1286

Mechanical and physical properties of snow. Fukue, M., et al, [1987, p.11-32, eng] 43-1287

Physical properties of snow cover. Gordeĭchik, D.E., et al, [1988, p.83-97, rus] 43-1383

Synthetic aperture radar data over terrestrial ice. Rees, W.G., [1988, p.165-168, eng] 43-1508

Characteristics of coherent and incoherent waves in snow at microwave and millimeter wave frequencies. Tsang, L., [1987, 18p., eng] 43-1741

Characteristic growth processes of ice crystals on the antarctic ice sheet. Nishimura, H., et al, [1988, p.104-108, eng] 43-1953

Technology of snow and ice removal. Minsk, L.D., [1989, p.104-112, eng] 43-2093

Hardening/softening model of snow for snow-working processes. Michalowski, R.L., [1989, p.113-121, eng] 43-2094

Ice sheet surface topography, eastern Wilkes Land. Goodwin, I.D., [1988, 100p., eng] 43-2144

Instruments to measure snow characteristics in the field. Samoĭlov, R.S., [1987, p.261-269, rus] 43-2528

Snow physics, avalanches, mudflows. Bolov, V.R., ed, [1988, 132p., rus] 43-2557

Solar penetrating radiation in snow layers. Xie, Y.Q., et al, [1988, p.135-142, chi] 43-2848

Physical and optical properties of falling snow. Koh, G., [1989, 22p., eng] 43-3034

Semianalytic energy balance climate model with explicit sea ice and snow physics. Harvey, L.D.D., [1988, p.1065-1085, eng] 43-3074

Physicomechanical properties of the snow cover in Spitsbergen. Samoĭlov, R.S., [1988, p.122-126, rus] 43-3315

Compacted-snow runways: design and construction guidelines for Antarctica. Russell-Head, D.S., et al, [1989, 68p., eng] 43-3474

Microstructurally based constitutive law for snow. Brown, R.L., et al, [1989, p.335-345, eng] 43-3578

Perspective on mechanical properties of snow. Brown, R.L., [1989, p.502-503, eng] 43-3595

Process of breaking up hard snow. Maevskiĭ, A.A., [1987, p.60-71, rus] 43-3658

Electromagnetic properties of freshwater ice, sea ice, and snow. Lüdecke, C., [1986, 97p., ger] 43-4163

Remote sensing of an alpine snow cover. Davis, R., et al, [1984, p.161-164, eng] 43-4326

Estimating the coefficient of water vapor diffusion in snow cover. Fedoseeva, V.I., et al, [1988, p.132-135, rus] 43-4584

Proceedings, Vol.1. [1986, 369p., eng] 43-4621

Millimeter wave snow data collection program description. Snowman I. Green, A.H., et al, [1986, p.273-290, eng] 43-4641

Mm wave tower snow data collection program. Trostel, J.M., et al, [1986, p 291-300, eng] 43-4642

Analysis of snow ground truth data. Gimmestad, G.G., [1986, p.301-310, eng] 43-4643

Observations of the backscatter from snow at millimeter wavelengths. Berger, R.H., et al, [1986, p.311-316, eng] 43-4644

Comments on the characteristics of *in situ* snow at millimeter wavelengths. Walsh, J., et al, [1986, p.317-320, eng] 43-4645

Radar backscattering from snow-covered ice. Lin, F.C., et al, [1986, p.321-328, eng] 43-4646

Snow as an acoustically porous material. Lee, S.M., et al, [1986, p.343-352, eng] 43-4648

Forward reflection coefficient of snow at 35 GHz. Snieder, J., et al, [1986, p.353-369, eng] 43-4649

Snow pillows

Telemetric estimation of snow course water equivalent. Palmer, P.L., [1986, p 81-86, eng] 43-3906

Contribution of the SNOwpack TELemetry system. Doesken, N.J., et al, [1987, p.20-30, eng] 43-3924

Snow plasticity

Model of snow in a study of motion in universal gliding units. Ostashov, V.G., [1988, p.52-61, rus] 43-2341

Snow plastics friction

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Snow pollution

Airborne organochlorines in the Canadian High Arctic. Patton, G.W., et al, [1989, p.243-255, eng] 43-3868

Experimental study of the scavenging of aerosol particles by natural snow crystals. Sauter, D.P., et al, [1989, p.1650-1655, eng] 43-4418

Aerosol particle collection by falling ice crystals. Miller, N.L., et al, [1989, p.1656-1663, eng] 43-4419

Snow pressure

New constitutive theory for snow based on a micromechanical approach. Hansen, A.C., et al, [1987, p 87-104, eng] 43-1222

Snow recrystallization

Thermal microwave emission of the soil-snow-atmosphere system. Gershenzon, V.E., et al, [1988, p.84-89, rus] 43-817

Avalanche formation factors in mountain regions of the USSR. Troshkina, E.S., [1988, p.85-89, rus] 43-940

Laboratory-determined characteristics of water vapor diffusion in snow cover. Nikolenko, A.V., [1988, p.90-96, rus] 43-941

See also: Metamorphism (snow)

Snow removal

Operation of snow removal vehicles. Matsosaka, H., et al, [1986, p.1799-1808, jpn] 43-298

Winter maintenance of large airports. Aaro, T., [1985, p.256-261, swe] 43-376

Quebec City—a snow city. Gagnon, G., [1988, p.50-51, eng] 43-502

Equipment and salt: one, two punch for winter opponents. [1988, p.54-55, 106, eng] 43-504

Giant V-plow makes windrowing easier. Gove, A., [1988, p.74-75, eng] 43-505

Brief review of snow drifting research in south Sweden. Akerman, J., [1985, p.42-48, swe] 43-1015

Planning for winter snows. [1988, p.1,3, eng] 43-1057

ANAS snow clearing service. Zechini, Q., et al, [1988, p.32-41, ita] 43-1062

Blades and cusps in snow clearing. Gola, G.L., [1988, p.59-61, ita] 43-1063

Contribution of chemistry to road trafficability. Dalcq, P., et al, [1988, p.61-63, ita] 43-1064

Spring opening of the Gran San Bernardo Pass. Scotto, G.E., [1988, p.76-79, ita] 43-1066

Dobbiaco '78: new developments in operations and technology. Baiano, G., [1988, p.88-93, ita] 43-1067

Effect of snow on urban activities and road facilities, Tohoku District. Horii, M., [1988, p.135-142, jpn] 43-1322

U.S. airplane recovered from East Antarctica. Mathews, J.C., [1987, p.3-7, eng] 43-1669

Contracting also suitable for municipal winter road service. Rahja, J., [1988, p.13-15, 26, fin] 43-1796

Model for planning snow plowing routes and equipment. Lappalainen, H., [1988, p.7-9, fin] 43-1798

Equipment damage prevented by urethane edges for snow plows. Carlson, J., [1988, p.29, eng] 43-1850

Baltimore stresses snowfighter safety. Swank, P.R., [1988, p.31-32, eng] 43-1851

Winter operations call for advance preparation. Stellfox, E., et al, [1988, p.36-37, eng] 43-1852

Hydraulic conveying of snow 10. Development of a household snow feeder. Umemura, T., et al, [1988, p.72-79, jpn] 43-1908

Technology of snow and ice removal. Minsk, L.D., [1989, p.104-112, eng] 43-2093

Hardening/softening model of snow for snow-working processes. Michalowski, R.L., [1989, p.113-121, eng] 43-2094

Snow control on floating ice sheets. Nelson, W.G., et al, [1989, p.161-169, eng] 43-2099

Snow plowing basics. [1988, p.42-43, eng] 43-2137

Winter maintenance—learning Finland's methods. [1988, p.22-26, eng] 43-2156

Limited salt spreading on highways—effects on traffic movement and safety. Hanke, H., et al, [1988, p.392-402, ger] 43-2187

Recommendations for urban planning in snowy country. Kuriyama, H., [1986, p.30-36, jpn] 43-2191

Steel sheet roofs for snow sliding. Ueno, M., et al, [1988, p.207-215, jpn] 43-2701

Fence to protect transmission line towers from snow cornices. Nakahara, K., et al, [1988, p.225-230, jpn] 43-2703

Snow and ice control in North America. Thornes, J., [1986, 18p., eng] 43-2761

Thermal storage for preventing road-surface freezing. Ikeda, M., et al, [1989, p.791-800, eng] 43-3147

Problems in protecting railroad stations from snow drifts. Kvon, IA.D., [1988, p.199-202, rus] 43-3279

On the frozen force between snow and ethylene tetrafluoride resin. Kobayashi, S., et al, [1988, p.107-112, jpn] 43-3523

Cold room studies for snow and ice control on buildings. Lepage, M.F., et al, [1989, p.232-242, eng] 43-3568

Snow control with vortex and blower fences. Meroney, B.N., et al, [1989, p.286-296, eng] 43-3573

Wind deflection fins for the control of snow on roofs. Williams, C.J., [1989, p.307-314, eng] 43-3575

Perspective: design considerations. Mackinlay, I., [1989, p 504-506, eng] 43-3596

Railroad track snow-melting system. Sawase, K., et al, [1988, p.343-348, eng] 43-3820

Developing an effective snow plan. Nanninga, J.A., [1989, p.58-60, eng] 43-4078

Road and airport snowplows. Catalog-handbook. Shalman, D.A., et al, [1971, 121p., rus] 43-4102

Solutions to improve ice and snow control management on road, bridge, and runway surfaces. Kelley, J.R., [1988, p.152-161, eng] 43-4125

System of removal, storage and air-conditioning usage of snow. Umemura, T., et al, [1989, p.101-106, eng] 43-4205

Winter city planning in Sapporo. Shibata, K., [1988, p.207-219, eng] 43-4244

Urban snow removal and storage for air conditioning. Shirakashi, M., et al, [1989, p.375-382, eng] 43-4396

Hydraulic conveying of snow by pipes. Umemura, T., et al, [1989, p.55-63, jpn] 43-4521

Study on the development of pipe transport systems for snow. Isobe, K., et al, [1989, p.100-110, jpn] 43-4522

Changes and latest developments in roof snow removal techniques. Kimura, T., [1989, p.111-117, jpn] 43-4523

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Snow retention in a large cutblock. Nip, A.M.K., et al, [1987, p.491-496, eng] 43-1309

Snow retention in soil-conserving cultivation in Western Siberia. Cherepanov, M.E., [1988, 159p., rus] 43-2708

Average snow reserves and snow loads in the Caucasus. Aliev, I.A., et al, [1988, p 46-58, rus] 43-3834

Snow fencing to increase streamflow: preliminary results. Sturges, D.L., [1986, p.18-29, eng] 43-3900

Managing snow to extend the areal range of winter wheat production. Steppuhn, H., et al, [1986, p.30-40, eng] 43-3901

Watershed management pilot project in Alberta. Bernier, P.Y., et al, [1986, p.87-92, eng] 43-3907

Effect of clearcutting on the water balance of forest slopes. Troendle, C.A., et al, [1986, p.93-100, eng] 43-3908

Persistence of soil moisture from delayed snowmelt. MacDonald, L.H., [1986, p.146-149, eng] 43-3913

Snow roads

Recent results in improving snow roads and runways in Antarctica. Wuori, A.F., et al, [1988, p.297-307, eng] 43-629

Hard-surface runways in Antarctica. Mellor, M., [1988, 87p., eng] 43-1148

Improved techniques for construction of snow roads and airstrips. Lee, S.M., et al, [1988, 99p., eng] 43-1150

Development of methodology for improved design of snow roads and airstrips. Lee, S.M., et al, [1988, p.301-502, eng] 43-1647

Construction of snow-ice roads in the Arctic. Shabanov, P.P., et al, [1988, p.35-37, rus] 43-2231

Snow and snow-ice surfaced roads. Alekseev, V.R., et al, [1988, p.191-199, rus] 43-3278

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Snow samplers

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Hydrometeorological instrumentation and automation. Strauss, F.A., [1984, p.43-47, eng] 43-4314

Pesticides in Canadian arctic snow. Gregor, D.J., et al, [1989, p.561-565, eng] 43-4498

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Slope stability and erosion in Nepal. Kienholz, H., (1986, p.127-141, eng) 43-2830
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Research on snow cover, snowdrifts and avalanches in China. Wang, Z.L., (1988, p.273-278, chi) 43-2868
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Structural system designed to resist creep and glide forces. Albrecht, R.G., (1989, p.431-440, eng) 43-3587
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Snow stratigraphy
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Ice-core drilling for paleoclimatic information at plateau remote. Mosley-Thompson, E., et al, (1987, p.78-79, eng) 43-2743
Nitrate variability in South Pole ice sequences and fossil surface effects. Laird, C.M., et al, (1987, p.80-83, eng) 43-2745
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Snow strength
Thin sections, serial cuts and 3-D analysis of snow. Good, W., (1987, p.35-48, eng) 43-1216
Snow mechanics: laboratory tests of snow strength. Navarre, J.P., et al, (1987, p.129-137, fre) 43-1225
Some measurements of water movement and storage in snow. Kattelmann, R., (1987, p.245-254, eng) 43-1234
Snow and avalanche climates of the western USA. Armstrong, R.L., et al, (1987, p.281-294, eng) 43-1237
Snow cover stability on slopes and avalanche dynamics. Voĭtkovskiĭ, K.F., (1987, p.337-351, eng) 43-1243
Field studies on stress waves in natural snow cover. Brown, R.L., et al, (1987, p.89-110, eng) 43-1292
Snow properties in actual field conditions and stability analysis. Fukue, M., (1987, p.111-136, eng) 43-1293
Use of index measurements in studies of snow under vertical loading. Irwin, G.J., (1987, p.137-163, eng) 43-1294
Energy analysis of confined compression and shear behavior of snow. Yong, R.N., (1987, p.165-192, eng) 43-1295
Interactive processes of gliding units with snow. Sboev, V.V., et al, (1988, p.26-37, rus) 43-2340
Shear and compressive strength of snow. Alger, R.G., (1989, p.325-334, eng) 43-3577
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Snow structure
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Snow surface
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Millimeter-wave backscatter measurements of various snow forms. Narayanan, R.M., et al, (1988, p.451-452, eng) 43-1528
Radiative properties of antarctic atmosphere and snow. Yamanouchi, T., (1988, p.248-249, eng) 43-1645
Lloyd's mirror at 250 megahertz: footnote on antarctic telemetry. Bering, E.A., III, et al, (1988, p.270-273, eng) 43-1646
Turbulent transport of particles to snow-covered surfaces. Duan, B.Z., (1989, 148p , eng) 43-1924
Numerical analysis of landsat thematic mapper images of Antarctica: surface temperatures and physical properties. Orheim, O., et al, (1988, p.109-120, eng) 43-1954
Energy balance of snow fields, Colorado. Olyphant, G.A., et al, (1988, p.1962-1968, eng) 43-2023
Tundra snow disappearance as climate change indicator. Foster, J.L., (1989, p 69-70, eng) 43-2477
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NOAA data processing system. Takabe, H., et al, (1989, p.73-87, jpn) 43-3704
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Snow surface temperature
JARE glaciological research, Queen Maud Land, 1986. Nishio, F., et al, (1988, 49p , eng) 43-540
Radiative measurement of snow surface temperature. Zachek, S.I., et al, (1987, p.235-240, rus) 43-2524
Snow as a thermal background. Jordan, R., et al, (1989, p.5-24, eng) 43-3873
Thermal model for snow-covered terrain. Petzko, D.R , et al, (1989, p.25-36, eng) 43-3874
Snow crystal growth at varying surface temperatures. Colbeck, S.C., (1989, p.23-29, eng) 43-4136

Snow surveys
Winter data resources of the Swedish Meteorological and Hydrological Institute. Lindkvist, T., (1985, p.30-34, swe) 43-357
Results of evaluations of snow data collected during a 10-year period. Nilsson, B., (1985, p.115-121, swe) 43-368
Snow mapping by airborne gamma-ray spectrometer. Brandt, M., (1985, p.122-139, swe) 43-369
Eastern Snow Conference, 44th, 1987. (1987, 216p , eng) 43-383
Snow surveys. George, T.A., (1987, p.209-210, eng) 43-404
Snow and ice research—IUGG 19 General Assembly 1987, Vancouver, Canada. Shi, Y., et al, (1988, p.90-93, chi) 43-472
Snow survey data for central taiga of western Yakutia. Konstantinov, P.IA., (1988, p.70-77, rus) 43-528
Bibliography of snow and ice hazards on highways. Schweiger, A.J., comp, (1987, 110p., eng) 43-753
Alaska snow surveys and federal-state-private cooperative snow surveys. Clagett, G.P., (1988, 31p., eng) 43-777
Measurement of snowpack properties by multi-channel IR-spectroscopy. Hyvärinen, T., (1988, 68p. + append., fin) 43-789
Twelfth Northern Libraries Colloquy, 5-9 June 1988. (1988, 331p., eng) 43-792
Arctic and Arctic-related environmental sciences; Proceedings, Vol.1. (1987, 371p., eng) 43-847
Corps of Engineers research in the Arctic. Smallidge, P.D., et al, (1987, p.81-87, eng) 43-848
Snow properties and processes. Colbeck, S.C., (1987, p.145-150, eng) 43-852
Snow/ice/frozen ground properties: working group report. Sterrett, K.F., et al, (1987, p.163-166, eng) 43-855
Capabilities and problems in modeling the arctic cryosphere and clouds. Crum, T.D., (1987, p.289-292, eng) 43-863
Remote sensing of ice and snow (review). Jezek, K.C., (1987, p.51, eng) 43-919
Regime of river runoff in West Spitsbergen. Gokhman, V.V., (1988, p.96-103, rus) 43-942
Determining the long-period mean accumulation of snow along the route Mirnyy-Vostok. Korolev, P.A., (1988, p.108-110, rus) 43-944
Snow cover characteristics from data of electromagnetic and contact measurements. Miagkov, S.M., et al, (1988, p.165-170, rus) 43-957
Determining background properties of snow cover in mountains for designing winter resorts. Arkhipova, O.M., et al, (1988, p.177-182, rus) 43-959
Climatic and meteorological characteristics of glaciated areas of the Akshiyrak Range. Voloshina, A.P., (1988, p.184-193, rus) 43-960
Federal meteorological handbook, No.1. Surface observations. (1988, 12 chapters, eng) 43-981
Remote sensing of water in soil and snow cover from natural penetrating radiations. Fridman, Sh.D., ed, (1987, 86p., rus) 43-1038
Neutron irradiation technique of measuring snow water equivalence. Avdiushin, S.I., et al, (1987, p.10-18, rus) 43-1040
Errors in airborne snow surveying due to the global soil pollution with Cs-137. Pegoev, A.N., et al, (1987, p.82-85, rus) 43-1050
Numerical simulation methods for surface-layer avalanches. Yasue, T., et al, (1987, p.429-430, eng) 43-1251
Trends in snow surveying in Canada. Goodison, B.E., et al, (1987, p.231-253, eng) 43-1299
Map of snow, ice and frozen ground in China—explanation. (1988, c50p., eng) 43-1356
Arctic Science Conference, 39th, Fairbanks, AK, 1988: Abstracts. (1988, 264p , eng) 43-1373
Glaciers and the climate of Siberia. Maloletko, A.M., et al, (1987, 192p., rus) 43-1408
IGARSS '88 remote sensing: moving towards the 21st century Vol.1. (1988, 632p., eng) 43-1504
Snow survey of Great Britain, 1987-88. (1988, 22p., eng) 43-1730
Airborne gamma ray snow survey of a forest covered area with a deep snowpack. Glynn, J.E., et al, (1988, p.149-160, eng) 43-1829
Synthetic aperture radar capabilities for snow and glacier monitoring. Rott, H., (1984, p.241-246, eng) 43-1933
Application of satellite data to monitoring snow cover and runoff in Greenland. Sögaard, H., et al, (1988, p.225-236, eng) 43-2016
Nimbus-7 data product summary. Oakes, A.G., et al, (1989, 106p., eng) 43-2247
Aerial and spaceborne surveys of snow avalanches. Barbat, IU.P., (1987, p.368-375, rus) 43-2544
"Snow pole" of the Caucasus. Pogorelov, A.V., (1988, p.25-30, rus) 43-2673
Comparative analysis of data on genetic types of avalanches in the USSR. Kanaev, L.A., et al, (1988, p.35-45, rus) 43-2675
Research on snow cover, snowdrifts and avalanches in China. Wang, Z.L., (1988, p.273-278, chi) 43-2868
Review and prospect of snow and ice remote sensing in China. Zeng, Q.Z., (1988, p.352-355, chi) 43-2881
Snow and avalanche conditions in the Swiss Alps. Gliott, S., et al, (1988, p.43-104, ger) 43-3239
Snow accumulation in the Greater Caucasus. Khodakov, V.G., et al, (1988, p.13-19, rus) 43-3249
Avalanche activity in the Zailiyskiy Alatau in 1965-1987. Kolesnikov, E.I., et al, (1988, p.101-106, rus) 43-3263
Winters of the greatest avalanche hazard in the Elbrus Mountain area. Olefnikov, A.D., (1988, p.106-110, rus) 43-3264
Calculating the maximum volume of avalanches. Shnyparkov, A.L., (1988, p.110-113, rus) 43-3265
Study on snow cover dynamics from scanner space images. Laptev, M.N., et al, (1988, p.182-186, rus) 43-3276
Studies on snow cover to evaluate conditions for winter recreation. Getker, M.I., et al, (1988, p 81-89, rus) 43-3307
Physicomechanical properties of the snow cover in Spitsbergen. Samoĭlov, R.S., (1988, p.122-126, rus) 43-3315
Estimating snowpack distribution by pattern recognition. Leu, C.H., (1989, 220p., eng) 43-3611
Creating a new global snow depth climatology. Davy, R.D., (1989, p.3-4, eng) 43-3872
Centralized forecasting system for the Western United States. Shafer, B.A., et al, (1986, p.61-70, eng) 43-3904
Reliability of snow survey measurements. Powell, D.R., (1987, p.69-77, eng) 43-3929
Snow survey water supply forecasting program. Palmer, P.L., (1988, p.43-51, eng) 43-3995
Construction of a United States historical snow data base. Robinson, D.A., (1988, p.50-59, eng) 43-4116
Proceedings of the 53rd annual meeting, Boulder, CO, Apr. 16-18, 1985. (1985, 183p., eng) 43-4262
Simulation model of Boulder's alpine water supply. Brendecke, C.M., et al, (1985, p.63-71, eng) 43-4269
Transition from manual to automated systems for acquiring snow data. Crook, A.G., et al, (1984, p.165-167, eng) 43-4327
Snow pillow overloading by slope induced creep. Richards, R.P., (1984, p.184-187, eng) 43-4332
Western Snow Conference, 51st, 1983. (1983, 160p., eng) 43-4346
Snow Survey and Water Supply Forecast Activity. Barton, M., (1983, p.151-154, eng) 43-4365

Snow temperature
Snow cover at the foot of Mt. Iwaki, Japan, winter of 1966-1967. Satoh, K., et al, (1975, p.1-30, eng) 43-844
Snow cover at the foot of Mt. Iwaki, Japan, winter of 1971-1972. Satoh, K., et al, (1979, p.102-122, eng) 43-846
Characteristic growth processes of ice crystals on the antarctic ice sheet. Nishimura, H., et al, (1988, p.104-108, eng) 43-1953
Temperature in a 700 m borehole at Mizuho Station. Okuhira, M., et al, (1988, p.277-285, jpn) 43-2328
Interactive processes of gliding units with snow. Sboev, V.V., et al, (1988, p.26-37, rus) 43-2340
Modeling motion of universal gliding units. Ostashov, V.G., (1988, p.90-101, rus) 43-2342
Radiophysical determination of snow cover parameters. Erastova, N.B., et al, (1987, p.228-235, rus) 43-2523

Measurements of the properties and brightness temperature of saline ice and snow. Welsh, J.P., et al, (1988, p 623-632, eng) 43-2960
Temperature distribution in a snow cover. Samolliuk, V.I., (1988, p.145-149, rus) 43-3321
Profile observational data of snow cover in Nagaoka City (1986-1987). Ikarashi, T., (1987, 72p, jpn) 43-3466
Snow temperature profiles in the central Sierra Nevada. McGurk, B.J., (1983, p.9-18, eng) 43-4348
Thermal measurements in snow Jordan, R., et al, (1986, p.183-193, eng) 43-4634
Analysis of snow ground truth data. Gimmestad, G.G., (1986, p 301-310, eng) 43-4643

Snow thermal properties

Thermophysical properties of snow and ice on the Vavilov Dome, Severnaya Zemlya. Nikolenko, A.V., (1987, p.51-58, rus) 43-227
Field observations of thermal convection in a subarctic snow cover. Johnson, J B, et al, (1987, p.105-118, eng) 43-1223
Evaluation of new thermomechanical constitutive theory for snow; final report Brown, R.L., (1989, 43p, eng) 43-2135
Proceedings. (1989, 136p., eng) 43-3871
Snow as a thermal background. Jordan, R., et al, (1989, p.5-24, eng) 43-3873
Thermal model for snow-covered terrain. Petzko, D.R., et al, (1989, p.25-36, eng) 43-3874

Snow trenches

Braking structures and moving snow masses. Mogilevich, A.P., et al, (1987, p.311-317, rus) 43-2534

Snow vehicles

Snow vehicles. Barakhtanov, L.V, et al, (1986, 191p., rus) 43-715
Results of tests for a smaller snow vehicle Kinou, A, et al, (1988, p.218-237, jpn) 43-843
Over-snow mobility systems test of towed howitzers in Alaska. Rohe, D.R., (1988, 53p. + appends., eng) 43-1976
Design of arctic snow vehicles. Poole, P., (1988, 32p., eng) 43-2150
All terrain transport-technological vehicles. Nakoriakov, V.E., ed, (1988, 121p., rus) 43-2339
Interactive processes of gliding units with snow. Sboev, V.V., et al, (1988, p.26-37, rus) 43-2340
Model of snow in a study of motion in universal gliding units. Ostashov, V.G., (1988, p.52-61, rus) 43-2341
Modeling motion of universal gliding units. Ostashov, V.G., (1988, p.90-101, rus) 43-2342
Operation and safe driving of amphibious vehicles. Stepanov, A.P., et al, (1988, 318p., rus) 43-3065
PMT (pneumatic mattress track) vehicle system. Burmeister, F., (1989, p.44-51, eng) 43-3493

Snow water content

Design of calorimetry-type water content meter for snow. Li, W., et al, (1987, p.141-144, chi) 43-500
Alaska snow surveys and federal-state-private cooperative snow surveys. Clagett, G.P., (1988, 31p., eng) 43-777
Measurement of snowpack properties by multi-channel IR-spectroscopy. Hyvärinen, T., (1988, 68p. + append., fin) 43-789
Snow cover at the foot of Mt. Iwaki, Japan, winters of 1967-1970. Satoh, K., et al, (1978, p.12-39, eng) 43-845
Metamorphism and classification of seasonal snow crystals. Colbeck, S.C., (1987, p 3-34, eng) 43-1215
Specific weight of snow. Wold, K., (1987, p.79-84, eng) 43-1220
Field observations of thermal convection in a subarctic snow cover. Johnson, J.B., et al, (1987, p.105-118, eng) 43-1223
Microwave determination of liquid water content in snow cover. Boyne, H.S., et al, (1987, p.139-148, eng) 43-1226
Field study on snow mechanical properties with special regard to liquid water content. Brun, E., et al, (1987, p.183-193, eng) 43-1229
Some measurements of water movement and storage in snow. Kattelmann, R., (1987, p.245-254, eng) 43-1234
Runout distances of avalanches in Japan. Abe, O., et al, (1987, p 463-473, eng) 43-1255
Measuring liquid water in snow from a subalpine snowpack. Perla, R., et al, (1987, p.71-78, eng) 43-1290
Calibration of capacitive cells for measuring water in snow. Perla, R., et al, (1988, p.225-231, eng) 43-1343
Snow density and water retention. Golubtsov, V.V., et al, (1988, p.83-85, rus) 43-1783
Effect of air temperature and soil conditions on snowmelt. Strikharchuk, V.P., (1988, p.120-127, rus) 43-2393
Radiophysical determination of snow cover parameters. Erastova, N.B., et al, (1987, p.228-235, rus) 43-2523
New data on the water-vapor diffusion coefficient in snow. Voitkovskii, K.F., et al, (1988, p.76-81, rus) 43-3306
Radar backscatter characteristics of snow covered terrain at 94 gigahertz. Green, A.H., Jr., et al, (1984, p.115-119, eng) 43-3478
Microwave instrument to measure snow properties. Toikka, M., (1989, p.75-80, eng) 43-3494
Average snow reserves and snow loads in the Caucasus. Aliev, I.A., et al, (1988, p.46-58, rus) 43-3834
Accuracy and repeatability of in situ snow wetness measurements. Bergman, J.A., (1987, p.142-145, eng) 43-3937
Methods of estimating liquid water storage in snow. Kattelmann, R., (1987, p.158-161, eng) 43-3941
Water supply and snowmelt forecasting by remote sensing. Baird, G.H., (1985, p.136-147, eng) 43-4277
Dilution method for measuring liquid water in snow. Perla, R., et al, (1984, p.80-85, eng) 43-4318
Capacitance instrument for the *in-situ* measurement of snow wetness. Bergman, J.A., (1984, p.172-175, eng) 43-4329
Snow temperature profiles in the central Sierra Nevada. McGurk, B.J., (1983, p.9-18, eng) 43-4348
Record rain-on-snow flooding in North Dakota. Barnicle, R.G., et al, (1983, p.145-146, eng) 43-4363
Analysis of snow ground truth data. Gimmestad, G.G., (1986, p.301-310, eng) 43-4643

Snow water equivalent

Radiation balance of melting snow, Sierra Nevada, CA. Aguado, E., (1985, p.1649-1654, eng) 43-180
Estimating climatic characteristics of snow cover and precipitation in mountains using the mathematical model of snow reserve formation. Shentsis, I.D., et al, (1987, p.62-68, rus) 43-229
Measurement of snow: runoff, evaporation and soil water contribution. Bengtsson, L., (1985, p.101-110, swe) 43-366
Snow mapping by airborne gamma-ray spectrometer. Brandt, M., (1985, p.122-139, swe) 43-369
Estimation of water equivalent in snow with radar. Ulriksen, C.P.F., (1985, p.140-150, eng) 43-370
Clarification of criteria of WMO intercomparison of snowmelt runoff models. Cavadias, G., et al, (1988, p.369-377, eng) 43-454
Management of subalpine forests: building on 50 years of research. (1987, 253p., eng) 43-573
Influence of forests on snowpack accumulation. Meiman, J.R., (1987, p.61-67, eng) 43-574
Snow hydrology at a Colorado treeline site. Berg, N.H., (1987, p.141-144, eng) 43-578
Regime of river runoff in West Spitsbergen. Gokhman, V.V., (1988, p.96-103, rus) 43-942
Snow cover characteristics from data of electromagnetic and contact measurements. Miagkov, S.M., et al, (1988, p.165-170, rus) 43-957
Water balance of the Sary-Tor mountain glacier basin. Diurgerov, M.B., et al, (1988, p.203-207, rus) 43-963
Remote sensing of water in soil and snow cover from natural penetrating radiations. Fridman, Sh.D., ed, (1987, 86p., rus) 43-1038
Studying water resources from cosmic radiation. Avdiushin, S.I., et al, (1987, p.3-10, rus) 43-1039
Neutron irradiation technique of measuring snow water equivalence. Avdiushin, S.I., et al, (1987, p.10-18, rus) 43-1040
Calculating the neutron field of cosmic radiation near the surface of snow-covered soil. Altbaev, F.B., et al, (1987, p.18-36, rus) 43-1041
DSS-2 assembly for determining water equivalent of snow from cosmic ray neutrons. Abelentsev, V.V., et al, (1987, p.37-48, rus) 43-1042
Cosmic neutron measurements linked to automatic weather stations. Vorob'ev, A.A., et al, (1987, p.49-51, rus) 43-1043
Neutron flow, snow water reserves and soil moisture. Altbaev, F.B., et al, (1987, p.52-56, rus) 43-1044
Measurement of snow water reserves by neutron measurements at automatic stations. Avdiushin, S.I., et al, (1987, p.57-68, rus) 43-1045
Influence of soil moisture dynamics on determining snow water reserves from cosmic ray neutrons. Kolomeets, E.V., et al, (1987, p.69-72, rus) 43-1046
Influence of soil moisture dynamics on determining snow water reserves from cosmic ray neutrons. Kolomeets, E.V., et al, (1987, p 69-72, rus) 43-1046
Influence of atmospheric precipitation intensity on the neutron component of cosmic radiation. Kolomeets, E.V., et al, (1987, p.72-75, rus) 43-1047
Simultaneous measurement of water reserves in snow and the soil moisture content from the neutron component of cosmic radiation. Altbaev, F.B., et al, (1987, p.76-79, rus) 43-1048
Measurement of water reserves by ionizing cosmic radiation. Pegoev, A.N., et al, (1987, p.79-82, rus) 43-1049
Scheme for forecasting flood runoff for unstudied rivers of eastern Siberia. Petenkov, A.V., (1986, p.451-458, eng) 43-1091
Snow Property Measurement Workshop, Lake Louise, Alta., Apr. 1-3, 1985. (1987, 524p., eng) 43-1286
Trends in snow surveying in Canada. Goodison, B.E., et al, (1987, p.231-253, eng) 43-1299
Snowpack measurements in a forested environment. Daugharty, D.A., et al, (1987, p.255-284, eng) 43-1300
Snow retention in a large cutblock. Nip, A.M.K., et al, (1987, p.491-496, eng) 43-1309
Energy-budget snowmelt model for the Canadian Prairies. Gray, D.M., et al, (1988, p.1292-1303, eng) 43-1316
Microwave emission behaviour of snow Hallikainen, M.T., et al, (1988, p.437-438, eng) 43-1523
Polarisation of passive microwave signals as indicator of snow water equivalent. Dancš, Z.F., et al, (1988, p.441-442, eng) 43-1525
Water equivalent of snow in mountains using microwaves and satellite data. Rango, A., et al, (1988, p.447-448, eng) 43-1527
Estimated consumptive loss from man-made snow. Eisel, L.M., et al, (1988, p.815-820, eng) 43-1557
Maximum snow accumulations in the Transcarpathian Oblast'. Grishchenko, V.F., (1988, p 63-70, rus) 43-1773
Snow density and water retention. Golubtsov, V.V., et al, (1988, p.83-85, rus) 43-1783
Snow resources and regional runoff. Mishon, V.M., (1988, 192p., rus) 43-1886
Remote sensing based continuous hydrologic modeling. Engman, E.T., (1984, p.201-209, eng) 43-1930
Application of satellite data to monitoring snow cover and runoff in Greenland. Sögaard, H., et al, (1988, p.225-236, eng) 43-2016
Determination of snow water equivalent of Norwegian snow cover. Kuittinen, R., (1988, 139p., eng) 43-2080
Water resources of the North Slope, Alaska. Sloan, C.E., (1987, p.233-252, eng) 43-2372
Comment on "Implications of snowpack/paleo-ELA relation in western U.S.A.". Locke, W.W., (1989, p.97-101, eng) 43-2479
Snow and avalanche conditions in the Swiss Alps. Gliott, S., et al, (1988, p.43-104, ger) 43-3239
Data on snow cover in Nagaoka (11) (November 1986-April 1987). Kumagai, M., et al, (1987, 13p., jpn) 43-3465
Profile observational data of snow cover in Nagaoka City (1986-1987). Ikarashi, T., (1987, 72p., jpn) 43-3466
Hydrological yearbook 1981-1983. Leppäjärvi, R., ed, (1987, 238p., eng) 43-3492
Snow loads in mountainous terrain. Gabl, K., (1989, p.8-14, eng) 43-3546
Determination of ground and roof snow loads at a particular site. Powell, D.R., (1989, p.456-461, eng) 43-3589
Proceedings of the 54th annual meeting, Phoenix, AZ, Apr. 15-17, 1986. (1986, 198p., eng) 43-3897
Snow water equivalent for snowmelt flood forecasting. Carroll, T.R., (1986, p.1-11, eng) 43-3898
Variability of Southwest precipitation and seasonal snowpacks. Jones, R., et al, (1986, p.12-17, eng) 43-3899
Precipitation and snow water equivalent sensors: an evaluation. McGurk, B.J., (1986, p.71-80, eng) 43-3905
Telemetric estimation of snow course water equivalent. Palmer, P.L., (1986, p.81-86, eng) 43-3906
Proceedings of the 55th Western Snow Conference, 1987. (1987, 184p. + appends., eng) 43-3921
Reliability of statistical analysis of hydrological data. Salway, A.A., (1987, p.41-52, eng) 43-3926
Proceedings of the 56th annual meeting, Kalispell, Montana, Apr. 19-21, 1988. (1988, 191p., eng) 43-3990
Estimating dates of the snow accumulation season. Tabler, R.D., (1938, p.35-42, eng) 43-3994
Peakflow forecast for Payette Lake using SNOTEL data. Sarantitis, B.C., et al, (1988, p.70-77, eng) 43-3998
Snow deposition processes in a forest stand with a clearing. Troendle, C.A., et al, (1988, p.78-86, eng) 43-3999
Wyoming windshield—an evaluation after 12 years of use in Alaska. Clagett, G.P., (1988, p.113-123, eng) 43-4003
Toward correlating California's wilderness snow sensors. Brandow, C.A., et al, (1988, p.136-147, eng) 43-4005
Predicting snow course snow water equivalent. Zuzel, J.F., (1988, p.155-157, eng) 43-4007
Density of new snow in the central Sierra Nevada. McGurk, B., et al, (1988, p.158-161, eng) 43-4008
Measuring snow interception and loss from an artificial conifer. Schmidt, R.A., et al, (1988, p.166-169, eng) 43-4010
Canadian automatic snow depth sensor: a performance update. Goodison, B.E., et al, (1988, p.178-181, eng) 43-4013
Annual balance and climatic sensitivity of North Cascade, Washington glaciers. Pelto, M.S., (1988, p.13-26, eng) 43-4113
Temperature indices of snowmelt during rainfall. Kattelmann, R., (1985, p.152-155, eng) 43-4279
Determining variability of snow accumulation and ablation on western rangelands. Cooley, K.R, et al, (1985, p.156-159, eng) 43-4280
Western Snow Conference, 52nd, 1984. (1984, 192p., eng) 43-4309
Swiss improvements of the FMCW radar for snow measurements. Schmidt, R.A., et al, (1984, p.24-32, eng) 43-4312
Evaluation of the isotopic snow measurement gage. Wheeler, P.A., et al, (1984, p.48-56, eng) 43-4315
Options for harvesting timber to control snowpack accumulation. Troendle, C.A., et al, (1984, p.86-97, eng) 43-4319

Snow water equivalent *(cont.)*
Predicting time of peak snowmelt runoff from snow pillow data. Farnes, P.E., (1984, p.132-138, eng) 43-4323
Impact of automated hydrometeorological instrumentation upon data quality. Buer, S.M., et al, (1984, p.139-148, eng) 43-4324
Snow pillow overloading by slope induced creep. Richards, R.P., (1984, p.184-187, eng) 43-4332
Inexpensive remote snow-depth gauge: an assessment. Goodison, B.E., et al, (1984, p.188-191, eng) 43-4333
Western Snow Conference, 51st, 1983. (1983, 160p., eng) 43-4346
Gamma radiation snow water equivalent measurements. Carroll, T.R., et al, (1983, p.27-37, eng) 43-4350
Snowfencing for mined-land rehabilitation. Van Haveren, B.P., (1983, p.147-150, eng) 43-4364
Snow water equivalent model during rain-on-snow events. Berg, N.H., et al, (1983, p.155-158, eng) 43-4366
Estimation of snow water equivalent. Ohta, T., (1989, p.37-48, jpn) 43-4519
Intensity and duration of water yield during snowmelt at a watershed. Dobroumov, B.M., et al, (1988, p.81-90, rus) 43-4583

Snow wood friction
See also: Wood snow friction

Snowdrifts
Natural and man-induced snow-ice phenomena in Spitsbergen. Il'ina, E.A., et al, (1987, p.157-161, rus) 43-250
Snow-storm control for protecting railroad stations from drifts. Al'tshuler, Z.E., et al, (1987, p.161-165, rus) 43-251
Snow accretion on concrete poles due to snowdrift. Higashiura, M., et al, (1988, p.387-395, jpn) 43-459
Observation of relative humidity jump during snow drifting. Sato, A., et al, (1988, p.397-403, jpn) 43-460
Earthwork for snowdrift control on highways, Tian Shan Mts. Wang, C., et al, (1987, p.40-42, chi) 43-481
Snow survey data for central taiga of western Yakutia. Konstantinov, P.IA., (1988, p.70-77, rus) 43-528
Snow hydrology at a Colorado treeline site. Berg, N.H., (1987, p.141-144, eng) 43-578
Living snow fence project. (1975, 22p, eng) 43-882
Snow load data analysis, winter 1976-77. O'Rourke, M., (1977, 9p. + appends., eng) 43-931
Avalanche formation factors in mountain regions of the USSR. Troshkina, E.S., (1988, p.85-89, rus) 43-940
Brief review of snow drifting research in south Sweden. Åkerman, J., (1985, p.42-48, swe) 43-1015
Loads on roofs from snow drifting against vertical obstructions and in valleys. (1988, 12p., eng) 43-1197
Wind systems and snow transport in alpine topography. Meister, R., (1987, p.265-279, eng) 43-1236
Measurement of blowing snow properties using optical attenuation devices. Pomeroy, J.W., et al, (1987, p 347-388, eng) 43-1303
Snow-drifting: a review of the process and of modelling methods. Kind, R.J., (1987, p.411-434, eng) 43-1305
Statistical analysis of fog and snowstorms. Karpenko, V.N., (1988, p.127-136, rus) 43-1777
Methods of supplying climatic data for railroad transportation. Ziabrikov, V.IA., et al, (1988, p.137-149, rus) 43-1778
Disturbance of the homogeneity of horizontal visibility series. Kashevar, V.V., (1988, p.176-180, rus) 43-1781
Turbulent transport of particles to snow-covered surfaces. Duan, B.Z., (1989, 148p., eng) 43-1924
Bare ice field in east Queen Maud Land, Antarctica, caused by horizontal divergence of drifting snow. Takahashi, S., et al, (1988, p.156-160, eng) 43-1959
Pulse-counting technique for the measurement of drifting snow. Tüg, H., (1988, p.184-186, eng) 43-1964
Blowing snow particle detector. Brown, T., et al, (1989, p.167-174, eng) 43-2365
Protection of roads from snow cover, drifts and avalanches. Tsomaia, V.Sh., (1987, p.376-384, rus) 43-2545
Research on snow cover, snowdrifts and avalanches in China. Wang, Z.L., (1988, p.273-278, chi) 43-2868
Problems in protecting railroad stations from snow drifts. Kvon, IA.D., (1988, p.199-202, rus) 43-3279
Wind effect on the distribution of snow depth on a large dome. Sakurai, S., et al, (1989, p.51-58, eng) 43-3551
Predicting snow loading on the Toronto Skydome. Irwin, P.A., et al, (1989, p.116-127, eng) 43-3558
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Proceedings of the 55th Western Snow Conference, 1987. (1987, 184p. + appends, eng) 43-3921
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Proceedings. Vol.2: Unclassified section. (1988, 738p., eng) 43-3428
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Proceedings of the 53rd annual meeting, Boulder, CO, Apr. 16-18, 1985. [1985, 183p., engl 43-4262

Ablation rates of snow fence drifts at 2300-meters elevation in Wyoming. Tabler, R.D., [1985, p.1-12, engl 43-4263

Rainfall and snowmelt frequency in an alpine watershed. Payton, E.A., et al, [1985, p.25-36, engl 43-4265

Probability distributions of rain on snow for northcentral Oregon. Zuzel, J.F., et al, [1985, p.37-43, engl 43-4266

Analysis of water supply forecast accuracy. Schaake, J.C., Jr., et al, [1985, p.44-53, engl 43-4267

Windy Gap Project streamflow forecasting. Eckhardt, J.R., et al, [1985, p.54-62, engl 43-4268

Simulation model of Boulder's alpine water supply. Brendecke, C.M., et al, [1985, p.63-71, engl 43-4269

Acidic deposition and snowpack chemistry at a Sierra Nevada site. Berg, N., et al, [1985, p.76-87, engl 43-4271

Results of the snowmelt-runoff model in an international test. Rango, A., [1985, p.99-106, engl 43-4273

Snowmelt rate methods used in forecasting runoff from mountains. Ferner, S., et al, [1985, p.107-116, engl 43-4274

Basin division and snowmelt discharge in an alpine basin. Michaels, P.S., [1985, p.117-126, engl 43-4275

Stochastic models for forecasting snowmelt runoff. Haltiner, J.P., et al, [1985, p.127-135, engl 43-4276

Water supply and snowmelt forecasting by remote sensing. Baird, G.H., [1985, p.136-147, engl 43-4277

Temperature indices of snowmelt during rainfall. Kattelmann, R., [1985, p.152-155, engl 43-4279

Determining variability of snow accumulation and ablation on western rangelands. Cooley, K.R., et al, [1985, p.156-159, engl 43-4280

Temporal variations in snowmelt runoff from an alpine snowfield. Sarantitis, B., [1985, p.160-162, engl 43-4281

Five snowmelt models: a comparison of prediction accuracy. McGurk, B.J., [1985, p.171-174, engl 43-4284

Suspended sediments as a function of stream flow. Salway, A.A., [1985, p.175-178, engl 43-4285

Radiative energy budget in the cloudy and hazy Arctic. Tsay, S.C., et al, [1989, p.1002-1018, engl 43-4288

Western Snow Conference, 52nd, 1984. [1984, 192p., engl 43-4309

Snowmelt runoff in the upper Colorado River basin in 1983. Shafer, B.A., et al, [1984, p.1-11, engl 43-4310

Snowmelt lysimeters: design and use. Kattelmann, R.C., [1984, p.68-79, engl 43-4317

Options for harvesting timber to control snowpack accumulation. Troendle, C.A., et al, [1984, p.86-97, engl 43-4319

Snow accumulation, melt, and soil moisture in pine forest. Potts, D.F., [1984, p.98-108, engl 43-4320

Use of data logging systems in snow hydrology. Gundy, T.W., [1984, p.120-131, engl 43-4322

Predicting time of peak snowmelt runoff from snow pillow data. Farnes, P.E., [1984, p.132-138, engl 43-4323

Making observations and models agree in spring snowmelt forecasting. Bissell, V.C., et al, [1984, p.149-160, engl 43-4325

Remote sensing of an alpine snow cover. Davis, R., et al, [1984, p.161-164, engl 43-4326

Capacitance instrument for the *in-situ* measurement of snow wetness. Bergman, J.A., [1984, p.172-175, engl 43-4329

Large, adjustable tipping bucket gauge for measuring snowmelt. Wilford, D.J., [1984, p.176-179, engl 43-4330

Laser discrimination between rain and snow. Strachan, J.W., et al, [1984, p.180-183, engl 43-4331

Western Snow Conference, 51st, 1983. [1983, 160p., engl 43-4346

Snow temperature profiles in the central Sierra Nevada. McGurk, B.J., [1983, p.9-18, engl 43-4348

Monitoring a rain-on-snow event. Cooley, K.R., et al, [1983, p.19-26, engl 43-4349

Snow accumulation and melt during rainfall in forests. Harr, R.D., et al, [1983, p.38-45, engl 43-4351

Analysis of three rain on snow floods in the Sierra Nevada, California. Hall, R.L., et al, [1983, p.46-54, engl 43-4352

Snowmelt during rain on snow in coastal British Columbia. Beaudry, P., et al, [1983, p.55-66, engl 43-4353

Rain on snow: shallow, transient snowpacks with frozen soils. Zuzel, J.F., et al, [1983, p.67-75, engl 43-4354

Snow accumulation and ablation algorithms for watershed models. Huber, A.L., [1983, p.76-88, engl 43-4355

Application of a simple snowmelt-runoff model to large river basins. Rango, A., [1983, p.89-99, engl 43-4356

Influence of snowmelt in evaluating small hydropower generation potential. Tangborn, W.V., et al, [1983, p.100-108, engl 43-4357

Structural snow loads. Sack, R.L., et al, [1983, p.120-129, engl 43-4359

Rain-on-snow flood event in central Arizona. Ffolliott, P.F., et al, [1983, p.130-138, engl 43-4360

Willamette National Forest local flood prediction. Christner, J., et al, [1983, p.139-140, engl 43-4361

Hydrologic response of central Sierra Nevada snowpacks to rainfall Bergman, J.A., [1983, p.141-144, engl 43-4362

Record rain-on-snow flooding in North Dakota. Barnicle, R.G., et al, [1983, p.145-146, engl 43-4363

Snow water equivalent model during rain-on-snow events. Berg, N.H., et al, [1983, p.155-158, engl 43-4366

Comment on "Water movement into seasonally frozen soils" by Douglas L. Kane and Jean Stein. Burn, C.R., et al, [1985, p.1051-1054, engl 43-4493

Comment on "Monitoring the unfrozen water content of soil and snow using time domain reflectometry" by Jean Stein and Douglas L. Kane. Patterson, D.E., et al, [1985, p.1055-1058, engl 43-4494

Intensity and duration of water yield during snowmelt at a watershed. Dobroumov, B.M., et al, [1988, p.81-90, rus] 43-4583

Streamwater chemistry during snow-melt in a Scottish upland catchment. Abrahams, P.W., et al, [1989, p.231-248, engl 43-4618

See also: Meltwater; Snow melting

Snowmobiles

See also: Snow vehicles

Snowplows

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Snowsheds

Thaw stabilization of roadway embankments constructed over permafrost. Zarling, J.P., et al, [1986, 34p., engl 43-1816

Snow shed sheds snow slide. [1989, p.15-16, engl 43-2774

Snowshoes

Development Test II (DT II) (PQG) of snow and ice traversing equipment (SITE). Final report. Geasa, W.R., [1988. 65p. + appends., engl 43-1977

Snowstorms

Snow-storm control for protecting railroad stations from drifts. Al'tshuler, Z.E., et al, [1987, p.161-165, rus] 43-251

Construction of 35 kv overhead power lines on permafrost. Chernetskiĭ, V.I., et al, [1988, p.28-31, rus] 43-559

Prediction of winter battlefield weather effects. Ryerson, C.C., et al, [1988, p 357-362, engl 43-603

Influence of agrometeorological conditions on space photographs of agricultural regions in winter. Pichugin, A.P., et al, [1988, p.58-65, rus] 43-816

JARE-24 meteorological observations at Showa Station, 1983. Tsukamura, K., et al, [1988, p.187-210, jpn] 43-842

Snow growth by vapor deposition and aggregation. Mitchell, D.L., [1988, p.3431-3451, engl 43-1533

Statistical analysis of fog and snowstorms. Karpenko, V.N., [1988, p.127-136, rus] 43-1777

Methods of supplying climatic data for railroad transportation. Ziabrikov, V.IA., et al, [1988, p.137-149, rus] 43-1778

Disturbance of the homogeneity of horizontal visibility series. Kashevar, V.V., [1988, p.176-180, rus] 43-1781

Forecasting snowstorm avalanches in the USSR. Grishchenko, V.F., et al, [1987, p.46-57, rus] 43-2498

Hazardous meteorological events in the Arctic seas and Kola Peninsula. Polkhov, A.P., [1989, p.62-69, engl 43-3230

Blizzard of '88 in historical perspective. Ludlum, D.M., [1988, p.1-4, engl 43-4110

Megalopolitan snowstorm of 11-12 February 1983: isotopic composition of the snow. Gedzelman, S.D., et al, [1989, p.1637-1649, engl 43-4417

Vertical motion evaluation of a Colorado snowstorm from a synoptician's perspective. Dunn, L.B., [1988, p.261-272, engl 43-4432

Great Arctic outbreak and East Coast blizzard of February 1989. Kocin, P.J., et al, [1988, p.305-318, engl 43-4433

Frontogenetical forcing in the Midwest snowstorm of Jan. 1982. Moore, J.T., et al, [1988, p.2155-2171, engl 43-4577

Proceedings, Vol.1. [1986, 369p., engl 43-4621

Circulation analysis of two snowstorms. Chen, Y.L., [1986, p.199-217, engl 43-4635

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See also: Organizations

Soil aggregates

Effect of freezing and thawing on manure-treated soils. Mbagwu, J.S.C., et al, [1989, p.191-199, engl 43-2368

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Climatic impact on thermokarst development in low-temperature permafrost. Shamanova, I.I., et al, [1987, p.306-312, engl 43-134

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Formation of thermal regime in the snow cover-ground system Zviagin, V.V., et al, [1988, p.140-144, rus] 43-952

Soil temperature and advective changes in air temperature. Mietus, M., [1988, p.95-103, engl 43-2769

Surface ablation and heat transfer in the near-ground air layer. Szarejko, Z., et al, [1986, p.153-165, engl 43-2832

Soil analysis

Late-winter characteristics of the Fairbanks alluvial aquifer. Lilly, M.R., et al, [1987, p.127-140, engl 43-4429

Determining explosive residues in soil. Jenkins, T.F., et al, [1988, 46p., engl 43-4594

Soil cement

Soil cement elements of earth dams erected at subzero temperatures. Lavrinovich, E.V., et al, [1987, p.96-102, rus] 43-1184

Changes caused by heat liberation of grout injected into permafrost. Shugaeva, R.T., et al, [1987, p.106-109, rus] 43-1185

Frost susceptibility of lime and cement-stabilized soils. Kujala, K., [1989, p.809-819, engl 43-3149

Soil chemistry

Physical, chemical and mechanical bases of cryolithogenesis. Ershov, E.D., [1987, p.54-66, rus] 43-687

Decomposition of Alaska tundra soils. Linkins, A.E., [1986, 10p., engl 43-881

Soils of pine forests in the Angara depression area. Bugakov, I.P., [1986, p.56-63, rus] 43-1409

Frost weathering near Casey Station. Xie, Y., et al, [1988, p.873-884, engl 43-1468

Respiratory burst after freezing and thawing of soil: experiments with soil bacteria. Skogland, T., et al, [1988, p 851-856, engl 43-2570

Late Quaternary ice-surface fluctuations of Hatherton Glacier. Bockheim, J.G., et al, [1989, p.229-254, engl 43-3167

Acid soil processes in the Okpilak Valley, Arctic Alaska. Marrett, D.J., [1989, 194p., engl 43-3608

Late-winter characteristics of the Fairbanks alluvial aquifer. Lilly, M.R., et al, [1987, p.127-140, engl 43-4429

Determining explosive residues in soil. Jenkins, T.F., et al, [1988, 46p., engl 43-4594

Soil classification

Volcanic ash soils from Kenai Peninsula, Alaska. Shoji, S., et al, [1988, p.395-413, engl 43-2371

Origin, evolution and geography of soils in Western Siberia. Kovalev, R.V., ed, [1988, 223p., rus] 43-4610

Soil compaction

Soil freezing and thaw consolidation results for a major project in Helsinki. Vähäaho, I.T., [1988, p 219-223, engl 43-81

Experience with foundation construction in tamped trenches in East Siberia and the Far North. Matveev, V.L., et al, [1988, p.177-181, engl 43-141

Geologic origin and fill properties of the Barrow Unit materials. Mahmood, A., et al, [1984, p.1045-1058, engl 43-669

Engineering geology today: theory, practice, problems. Sergeev, E.M., ed, [1988, 293p., rus] 43-883

Resistance to compacting of treated freezing soils. Migliachenko, V.P., [1988, p.100-103, rus] 43-898

Solving the problem of the consolidation and thawing of frozen soils. Klement'ev, A.F., et al, [1988, p.463-466, engl 43-1802

Preconsolidation pressures in intertill glaciolacustrine clay near Blaine Lake, Saskatchewan. Sauer, E.K., et al, [1988, p 831-839, engl 43-1804

Strength of compacted frozen fill after thawing Graham, J., et al, [1989, p.274-281, engl 43-2109

Frozen gravel: a study of compaction and thaw-settlement behavior. Haas, W.M., et al, [1989, p.308-319, engl 43-2112

Thaw consolidation of frozen soils. Tong, C.J., [1988, p.327-331, chi] 43-2876

Thermal contraction and crack formation in frozen soil. Al-Mousawi, H.M., [1989, 243p., engl 43-2892

Finite element analysis of porous soil under asymmetric loading. Prasad, K.S.R., et al, [1989, p.699-706, engl 43-3221

Soil changes caused by pipe laying in Siberia. Korobanova, I.G., et al, [1988, p.50-57, engl 43-4261

Compaction of a layer of loose soil by artificial thawing. Volodin, G.S., et al, [1989, p.19-20, rus] 43-4464

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Microelement content in soils of south taiga. Vorotiukhina, I.I., [1987, p.342-350, rus] 43-29

Effects of land clearing on soil variability. Goldin, A., et al, [1988, p.473-477, engl 43-127

Coefficient of thermal conductivity of peat in frozen and thawed states. Aleksandrov, B.M., [1988, p.23-25, rus] 43-691

Morphology of forest soils on the Kola Peninsula. Nikonov, V.V., et al, [1988, p.68-76, engl 43-1119

Soils of pine forests in the Angara depression area Bugakov, I.P., (1986, p.56-63, rus) 43-1409
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Engineering method for predicting settlement of foundations. Tsytovich, N.A., (1988, 118p., rus) 43-2576
Origin, evolution and geography of soils in Western Siberia. Kovalev, R.V., ed, (1988, 223p, rus) 43-4610

Soil conservation
Snow retention in soil-conserving cultivation in Western Siberia. Cherepanov, M.E., (1988, 159p., rus) 43-2708
Snow Survey and Water Supply Forecast Activity. Barton, M., (1983, p.151-154, eng) 43-4365
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Soil creep
Calculation of the stress field in soils during freezing. Shen, M., et al, (1988, p.121-127, eng) 43-69
State of the art. mechanical properties of frozen soil Sayles, F.H., (1988, p.143-165, eng) 43-72
Creep formula for practical application based on crystal mechanics. Orth, W., (1988, p.205-211, eng) 43-79
Effect of frozen soil creep on stresses at the moving thaw front around a wellbore. Huneault, P., et al, (1988, p.279-284, eng) 43-88
Strength and creep testing for artificial ground freezing. Hampton, C.N., (1988, 242p, eng) 43-304
Creep and strength behavior of frozen silt in uniaxial compression. Zhu, Y., et al, (1987, 67p., eng) 43-426
Volume changes accompanying creep of frozen soil. Knutsson, S., (1987, 13p, eng) 43-1112
Sharp cone testing of creep properties of frozen soils and ice. Ladanyi, B., et al, (1989, p.232-296, eng) 43-2110
Set of constitutive models for soils under slow movement. Vulliet, L., et al, (1988, p.1022-1041, eng) 43-2204
Cryogenic creep processes of soil. Coutard, J.P, et al, (1988, p.9-28, fre) 43-2293
Solifluction dynamics in the French Alps. Van Vliet-Lanoë, B., (1988, p.29-46, fre) 43-2294
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Palynological study on solifluction flows Clet-Pellerin, M., (1988, p.65-82, fre) 43-2296
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Periglacial patterned ground, Waterton-Glacier International Peace Park, Canada and U.S.A. Butler, D.R., et al, (1989, p.43-57, eng) 43-4393

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Ecosystem disturbance in Iceland. Arnalds, A., (1987, p.508-513, eng) 43-199
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Hess Creek thermal erosion test site: frozen cut slope surface treatments. Rooney, J W, et al, (1984, p.1129-1149, eng) 43-675
Formation of gullies in the southeastern part of West Siberia. Putilin, A.F, (1988, 81p., rus) 43-714
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Proceedings of the Alaska Forest Soil Productivity Workshop, 1987. (1988, 120p., eng) 43-1142
Meltwater runoff and erosion on cultivated slopes. Azhigirov, A.A., et al, (1987, p.90-99, rus) 43-1385
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Assessment of waste containment sites in the Mackenzie Valley region. (1988, 30p. + appends, eng) 43-1971
Consequences of deforestation on mountain streams in Switzerland. (1988, 109p. + 3 maps, ger) 43-2146
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Comparison of freezing cells used in the determination of soil frost susceptibility. Hasson, P.F.X., et al, (1988, p 218-220, eng) 43-824
Hydrophysical research in the melioration of lands with water surplus. Kaliuzhnyĭ, I.L., et al, (1988, 260p., rus) 43-837
Recent research on acoustic to seismic coupling. Albert, D.G., (1987, p.223-225, eng) 43-857
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Microbiology of taiga soils. Sorokin, N.D., (1986, p.79-87, rus) 43-1410
Chilling tale: how ground freezing solved tunneling problems. Vasulka, C., et al, (1988, p.48-51, eng) 43-1449
Freezing induced soil water changes in Minnesota. Benoit, G.R., et al, (1988, p.1108-1114, eng) 43-1465
Simulation of heat and water flow during freeze/thaw cycles of soil. Pikul, J.L., Jr., (1988, 193p., eng) 43-1470
Stefan Problem simulation of thermal dynamics in frozen media. Gori, F., et al, (1988, p.229-235, eng) 43-1472
Electrical freezing potential of soils. Kelsh, D.J., et al, (1988, 9p, eng) 43-1562
Pore water pressure at an ice lens: its measurement and interpretation. Konrad, J.M., (1989, p.63-74, eng) 43-1579
Studies of mutual effect of thermosyphons on soil freezing rate. Kononenko, G.N., et al, (1988, p.29-39, rus) 43-1597
Effects of soil freezing by applying thermopiles. Gorelik, IA.B., et al, (1988, p.14-29, rus) 43-1598
Features of freezing of water-saturated soils. Gorelik, IA.B., et al, (1988, p.40-53, rus) 43-1599
Thermal regime of freezing soils in northern Kazakhstan. Zhanalinov, B.N., et al, (1985, p.67-69, rus) 43-1659
Relationship between freezing and water content in sandy loam. Black, P.B., et al, (1988, 37p., eng) 43-1843
Freezing of soil and rocks. Fremond, M., (1987, p 47-52, fre) 43-2068
Preliminary results of frost heave tests in a large cell. Konrad, J.M., et al, (1989, p.379-388, eng) 43-2118
Simplified calculation of soil freezing depth. Gusev, E.M., (1988, p.9-17, eng) 43-2125
Soil freezing under free ground water convection. Tsaplin, A.I., (1987, p.3-6, rus) 43-2260

Soil freezing *(cont.)*

Forecasting and thermal processes during mine excavation by soil freezing. Varenyshev, V.M., et al, (1987, p.14-17, rus) 43-2261

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Temperature control of frozen ground around mine shafts. Tiutiunnik, P.M., (1987, p 60-67, rus) 43-2271

Development of sagging of loess rocks of aquatic genesis. Komissarova, N.N., et al, (1987, p.28-33, eng) 43-2332

Peculiarities and regularities of river ice breakup in Yakutia. Lobovikova, Z.P., et al, (1988, p.14-21, rus) 43-2344

Effect of freezing and thawing on manure-treated soils. Mbagwu, J.S.C., et al, (1989, p.191-199, eng) 43-2368

Effect of air temperature and soil conditions on snowmelt. Strikharchuk, V.P., (1988, p.120-127, rus) 43-2393

Soil temperature and water during diurnal freezing and thawing. Pikul, J.L., Jr, et al, (1989, p.3-10, eng) 43-2577

Effect of overconsolidation on freezing of clayey silt. Konrad, J.M., (1989, p.9-21, eng) 43-2705

Two electric potential signatures of serial diurnal frost. Outcalt, S.I., et al, (1988, p 354-360, eng) 43-2827

Collective behavior of supercooled liquids in porous media. Ritter, M.B., et al, (1988, p.966-969, eng) 43-2843

Water and heat flows in frozen soils. Basic theory and operational modeling. Lundin, L.C., (1989, 49p., eng) 43-2845

Current development of the study on frost susceptibility of soils. Chen, X.B., (1988, p.319-326, chi) 43-2875

Mechanics of freezing and thawing in soils. Ladanyi, B., et al, (1989, p.73-103, eng) 43-3094

Frost heave properties of soils. Anderson, D.M., (1989, p.105-125, eng) 43-3095

Simulation of freezing-thawing of soil materials. Bondarev, E.A., (1989, p.167-183, eng) 43-3097

Freezing and thawing of soils in cylindrical coordinates. Lunardini, V.J., (1989, p.185-208, eng) 43-3098

Temperature effects on freezing and thawing of soil. Bondarev, E.A., et al, (1989, p 209-218, eng) 43-3099

Nomographs of soil annual average temperature. Chekhovskiĭ, A.L., et al, (1989, p.219-231, eng) 43-3100

Radiation index. Dysli, M, (1989, p.233-238, eng) 43-3101

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Investigation of the supercooling in clayey soils. Kozlowski, T., (1989, p.293-299, eng) 43-3106

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Artificial permafrost test plot Matala, H.J., et al, (1989, p.353-364, eng) 43-3111

Boundary value problems of crust freezing. Mikhallov, V.A., (1989, p.365-370, eng) 43-3112

Some problems of freezing the rock mass. Plesniak, I., et al, (1989, p.379-390, eng) 43-3114

Numerical solutions for freezing and thawing of soils. Shen, M., et al, (1989, p.391-400, eng) 43-3115

Physical and chemical processes in soils during freezing and thawing. Ershov, E.D., et al, (1989, p.415-424, eng) 43-3117

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Frost susceptibility of soils in Aomori province, Japan. Moroto, N., et al, (1989, p.547-556, eng) 43-3127

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Changes in grain size distribution in loess soils submitted to freezing. Wojtowicz, U.B., (1989, p 601-610, eng) 43-3132

Preventing measures against frost action in soils. Kinoshita, S., (1989, p.733-748, eng) 43-3143

Frost protection of pavements in the FRG. Bergler, H., (1989, p.771-779, eng) 43-3145

Development of frost in backfill of foundation. Hiekkanen, R., (1989, p.781-789, eng) 43-3146

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Frost susceptibility of lime and cement-stabilized soils. Kujala, K., (1989, p.809-819, eng) 43-3149

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Adfreeze strength of soils. Sadovskiĭ, A.V., (1989, p.917-929, eng) 43-3157

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Control of frost heave in geotechnical engineering. Chen, X.B., et al, (1989, p.739-742, eng) 43-3225

Characteristics of soil freezing under open system conditions. Zhestkova, T.N., (1987, p.124-133, rus) 43-3377

Microstructural change from freeze-thaw of cohesive soils. Aoyama, K., et al, (1988, p.131-138, jpn) 43-3526

Benzene transport in groundwater under freezing conditions. Lilly, M.R., (1989, p.175-187, eng) 43-3667

Subsurface transport of oil pollutants under freezing conditions. Zukowski, M.D., et al, (1989, p.189-198, eng) 43-3668

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Problems of phase change in polar engineering. Aguirre-Puente, J., (1989, 23p., fre) 43-4028

Influence of the freeze depth of ground on the rise in ground water. Zinov'ev, M.L., (1988, p.25-31, rus) 43-4040

Soil freezing and thawing in the middle taiga of the European USSR. Deriugin, A.A., (1989, p.76-82, rus) 43-4067

Creating artificial permafrost underground with heat pumps. Sawada, S., (1989, p.273-278, eng) 43-4222

Measurement of frost depth. McCool. D.K., et al, (1984, p.33-42, eng) 43-4313

Role of freezing and thawing processes in thinning of soils. Sapozhnikov, T.M., et al, (1987, p.17-21, eng) 43-4426

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Physical processes during freeze-thaw cycles in clayey silts. Konrad, J.M., (1989, p.291-303, eng) 43-4449

Chemical aspects of soil freezing. Henry, K., (1988, 8p., eng) 43-4596

Some mathematical models for permafrost. Grigorian, S., et al, (1989, p.429-439, eng) 43-4601

Soil mechanics

Tunnel displacements under freezing and thawing conditions. Meissner, H., (1988, p.285-293, eng) 43-89

Handbook of soil mechanics and foundation engineering. (1982, 1505p., jpn) 43-299

Recent research on acoustic to seismic coupling. Albert, D.G., (1987, p.223-225, eng) 43-857

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Class A prediction of Arctic caisson performance. Hicks, M.A., et al, (1988, p.589-612, eng) 43-1469

Soil deformation due to loads and stresses. Rais, P.P., et al, (1985, p.97-104, rus) 43-1664

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Ice content and thermal properties of cryoturbated soils. Van Vliet-Lanoë, B., (1988, p.119-135, fre) 43-2299

Engineering method for predicting settlement of foundations. Tsytovich, N.A., (1988, 118p., rus) 43-2576

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Current research in the geological sciences in Canada, May 1987-April 1988. Bolton, T.E., comp, (1988, 101p. (pertinent p.26-39), eng) 43-3528

Thermo-physical studies of the cryolithozone of Siberia. Pavlov, A.V., ed, (1983, 213p., rus) 43-3862

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Soils and quaternary geology: a handbook for field scientists. Catt, J.A., (1986, 267p., eng) 43-3530

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Ecology and practice. Ivantsov, O.M., (1988, p 28-32, rus) 43-566

Time variations of the pollutant concentration background in different natural objects. Evseev, A.V., (1988, p.72-78, rus) 43-686

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Snow cover and lawn soil pollution in northern cities. Lepneva, O.M., et al, (1988, p.17-20, rus) 43-1121

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TNT in a terrestrial plant. Palazzo, A.J., et al, (1986, 17p., eng) 43-1200

Analytical method for determining tetrazene in soil. Walsh, M.E., et al, (1988, 22p., eng) 43-1397

Absorption of crude oil and petroleum products by peat soils. Brattsev, A.P., (1988, p.29-35, rus) 43-1537

Low temperature thermal treatment of volatile organic compounds. Nielson, R.K., et al, (1988, p.187-202, eng) 43-1810

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Ice-water partition coefficients for RDX and TNT. Taylor, S., (1989, 10p., eng) 43-3869

Microbial biomass and activity in a subarctic soil ten years after crude oil spills. Sparrow, S.D., et al, (1988, p.304-309, eng) 43-4375

Determining explosive residues in soil. Jenkins, T.F., et al, (1988, 46p., eng) 43-4594

Low concentration measurement capability in trace analysis. Grant, C.L., et al, (1989, 21p., eng) 43-4607

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Some results of *in-situ* measurement of freezing pressure and earth pressure in frozen shafts. Su, L., (1988, p.295-301, eng) 43-90

Field investigation of heaving pressure and frost heaving. Furmonavicius, L., et al, (1989, p.491-502, eng) 43-3122

Measurement of pore pressures in freezing and thawing soils. Eigenbrod, K.D., et al, (1989, p.943-952, eng) 43-3791

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Genetic features of the sod-podzolic soils of the Tobol'sk upland. Karetin, L.N., (1988, p.29-39, eng) 43-1118

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Soils and quaternary geology: a handbook for field scientists. Catt, J.A., (1986, 267p., eng) 43-3530

Origin, evolution and geography of soils in Western Siberia. Kovalev, R.V., ed, (1988, 223p, rus) 43-4610

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Silicification of loess soils. Volianik, N.V., ed, (1985, 94p., rus) 43-41

Shaft lining and freeze wall deformation. Auld, F.A., (1988, p.263-272, eng) 43-86

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Alkalinization—the new chemical method of stabilizing water—saturated loess and clayey soils. Volkov, F.E., et al, (1988, p.15-29, rus) 43-599

Foundation stabilization of an on-grade structure. Gill, J.D., (1984, p.1091-1099, eng) 43-672

Embankment settlement and stability analyses. Johnson, E.G., et al, (1988, p.93-113, eng) 43-769

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Frost susceptibility of soils in Aomori province, Japan Moroto, N., et al, (1989, p.547-556, eng) 43-3127
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Freeze-thaw related stability problems for a road in a steep silt slope. Brorsson, I., et al, (1989, p.645-654, eng) 43-3135
Frost susceptibility of lime and cement-stabilized soils. Kujala, K., (1989, p.809-819, eng) 43-3149

Soil strength

Strength and bearing capacity of thawing soil. Knutsson, S., (1985, p.262-280, swe) 43-379
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Arctic mobility problems. Abele, G., (1987, p.267-269, eng) 43-860
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Soil structure

Thixotropy of water-saturated soils, its nature and the determining factors (scientific review). Osipov, V.I., (1988, p.3-31, rus) 43-597
Freeze-thaw effects on granular structure of soils. Pawluk, S., (1988, p.485-494, eng) 43-701
Erosion and diagnostics of eroded soils in Siberia. Panfilov, V.P., ed, (1988, 117p, rus) 43-1561
Landscape development after forest fires during glacial periods. Van Vliet-Lanoë, B., (1988, p.21-26, fre) 43-2024
Solifluction of striated soils. Van Vliet-Lanoë, B., et al, (1988, p.47-64, fre) 43-2295
Increase of frost heave in clays due to changes in soil microstructure. Kumor, M.K., (1989, p 535-545, eng) 43-3126
Microstructural changes in clays due to freezing. Stepkowska, E.T., et al, (1989, p.573-582, eng) 43-3130
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Soil changes caused by pipe laying in Siberia. Korobanova, I.G., et al, (1988, p.50-57, eng) 43-4261

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Frozen strength characterization of NH&S test sites in Montana. Chamberlain, E.J., et al, (1988, var. p., eng) 43-3638

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Thermal characteristics of fine-grained soils Ershov, E.D., et al, (1988, p.135-140, eng) 43-71
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Nonsteady computed temperatures of the permafrost beds of structures with a cold basement. Gokhman, M.R., (1988, p.199-203, eng) 43-146
Near-surface mean annual ground temperature, Mayo, Yukon Territory. Burn, C.R., et al, (1988, p.99-104, eng) 43-177
Aerial thermography—a tool in municipal energy planning. Boberg, A., (1985, p.111-114, swe) 43-367
Economic development impact on permafrost conditions in river basins. Pozdniakov, I.V., (1988, p.29-36, rus) 43-522
Heat balance structure of forest landscapes in West Siberia. Abdullaev, A.A., (1988, p.321-326, rus) 43-568
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Pile foundations in Arctic areas. Goff, R.D., (1974, 26p., eng) 43-1733
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Solid-state greenhouses and their implications for icy satellites. Matson, D.L., et al, (1989, p 67-81, eng) 43-2325
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Annual variation of soil temperature in Spitsbergen. Mietus, M., (1988, p.87-94, eng) 43-2768
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Soil water

Ground freezing in non-saturated soil conditions using liquid nitrogen (LN) Martak, L.V., (1988, p.367-376, eng) 43-98
Earth hummocks (thufur). Schunke, E., et al, (1988, p.231-245, eng) 43-329
Measurement of snow: runoff, evaporation and soil water contribution. Bengtsson, L., (1985, p.101-110, swe) 43-366
Strength and bearing capacity of thawing soil. Knutsson, S., (1985, p.262-280, swe) 43-379
Thixotropy of water-saturated soils, its nature and the determining factors (scientific review). Osipov, V.I., (1988, p.3-31, rus) 43-597
Freeze-thaw effects on granular structure of soils. Pawluk, S., (1988, p.485-494, eng) 43-701
Influence of water content on compressive strength of frozen sands. Enokido, M., et al, (1987, p.148-152, eng) 43-1025
Studying water resources from cosmic radiation. Avdiushin, S.I., et al, (1987, p.3-10, rus) 43-1039
Neutron flow, snow water reserves and soil moisture. Altbaev, F.B., et al, (1987, p.52-56, rus) 43-1044
Calculating winter temperature conditions in a pile of loam. Kuznetsov, G.I., et al, (1987, p.36-44, rus) 43-1182
Influence of cooling rate on ice lens formation temperature. Konrad, J.M., (1989, p.25-36, eng) 43-1576
Frozen ground physics. Lelkam, A.B., et al, (1988, p.65-71, rus) 43-1602
Analysis of frozen ground composition and phases by NMR. Podenko, L.S., et al, (1988, p.71-76, rus) 43-1603
Construction of the Kemerovo regional breeding station on sagging soils Kemerov, V.D., (1985, p.85-88, rus) 43-1662
Impact of urban wastewater reuse in cold regions on land treatment systems. Iskandar, I.K., (1976, 32p., eng) 43-1830
Determining nitroaromatics and nitramines in water. Jenkins, T.F., et al, (1988, 36p., eng) 43-1841
Relationship between freezing and water content in sandy loam. Black, P.B., et al, (1988, 37p., eng) 43-1843
Unfrozen water content of soils. Smith, M.W., et al, (1988, 11p, eng) 43-1844
Soil bacterial changes upon snowmelt. Thompson, I.P., et al, (1987, p.269-274, eng) 43-1867
Simultaneous heat and water model of a snow-residue-soil system. Flerchinger, G.N., (1988, 161p., eng) 43-1917
Productivity and nutrient cycling of Alaskan tundra. Chapin, F.S., III, et al, (1988, p 693-702, eng) 43-1926
Bhaskara-II satellite capability to monitor soil moisture in India. Rao, K.S., et al, (1984, p.91-96, eng) 43-1928
Remote sensing based continuous hydrologic modeling. Engman, E.T., (1984, p.201-209, eng) 43-1930
Drying of frozen soils. De Jong, E., et al, (1988, p.807-811, eng) 43-1996
Unfrozen water contents of six antarctic soil materials. Anderson, D.M., et al, (1989, p.353-365, eng) 43-2116
Effect of air temperature and soil conditions on snowmelt. Strikharchuk, V.P., (1988, p.120-127, rus) 43-2393
Geographic distribution of intensity and frequency of freeze-thaw cycles. Lienhart, D.A., (1988, p.465-469, eng) 43-2475
Soil temperature and water during diurnal freezing and thawing. Pikul, J.L., Jr., et al, (1989, p.3-10, eng) 43-2577
Water and heat flows in frozen soils. Basic theory and operational modeling. Lundin, L.C., (1989, 49p., eng) 43-2845
Hydrological cycle as simulated by an atmospheric general circulation model. Mitchell, J.F.B., (1983, p.429-446, eng) 43-3039
Simulation of freezing-thawing of soil materials. Bondarev, E.A., (1989, p.167-183, eng) 43-3097
Depression of soil moisture freezing point as a thermodynamic parameter. Fedorov, V.I., (1989, p.239-249, eng) 43-3102
New method of the unfrozen water content prediction in frozen soils. Kozlowski, T., (1989, p 283-291, eng) 43-3105
Unfrozen water content of Finnish soils measured by NMR. Kujala, K., (1989, p.301-310, eng) 43-3107
Effect of freeze thaw cycles on soil mass and heat transfer. Kurilko, A.S., et al, (1989, p.311-321, eng) 43-3108
Heat and moisture properties in frozen sandy soil; measurements and modeling. Lemmela, R., et al, (1989, p.323-340, eng) 43-3109
Frost susceptibility of soils in Aomori province, Japan. Moroto, N., et al, (1989, p.547-556, eng) 43-3127
Porosity and related properties of frost susceptible tills. Nieminen, P., (1989, p.557-564, eng) 43-3128
Persistence of soil moisture from delayed snowmelt. MacDonald, L.H., (1986, p.146-149, eng) 43-3913
Simultaneous heat and water model of freezing soils, parts 1 & 2. Flerchinger, G.N., et al, (1989, p.565-578, eng) 43-3972
Snow accumulation, melt, and soil moisture in pine forest. Potts, D.F., (1984, p.98-108, eng) 43-4320
Snowfencing for mined-land rehabilitation. Van Haveren, B.P., (1983, p.147-150, eng) 43-4364
Chemical aspects of soil freezing. Henry, K., (1988, 8p., eng) 43-4596
Evaluating trafficability. McKim, H.L., (1986, p.237-239, eng) 43-4637

See also: Ground water; Unfrozen water content

Soil water migration

Water migration in unsaturated freezing soils. Gao, W., et al, (1988, p.59-64, eng) 43-61
Thermal and hydraulic conductivity of unsaturated frozen sands. Van Loon, W.K.P., et al, (1988, p 81-90, eng) 43-64
Pingos: an overview of the present state of knowledge. Pissart, A., (1988, p.279-297, eng) 43-331

Soil water migration *(cont.)*

Tracking freezing front movement using boundary element method. Hromadka, T.V., II, (1987, 58p., eng) 43-428

On the frost heave distribution along depth. Zhu, Q., et al, (1988, p.1-7, chi) 43-461

Peculiarities of ice needle formation under high altitude conditions. Ukhnalev, V.A., (1988, p.84-90, rus) 43-530

Experimental studies of heat- and mass-transfer kinetics in salinized, freezing disperse rocks. Ershov, E.D., et al, (1988, p.39-41, rus) 43-552

Study of moisture migration in frozen ground. IAnitskiĭ, P.A., (1988, p 53-58, rus) 43-600

Investigation of permafrost and climate change—Phase 3. (1987, 159p., eng) 43-779

Hydrophysical research in the melioration of lands with water surplus Kaliuzhnyĭ, I.L., et al, (1988, 260p., rus) 43-837

Formation of loess structure, and settlement. Komissarova, N.N., et al, (1988, p.186-194, rus) 43-885

Behavior of water saturated sand-clay ground under dynamic conditions. Nikolaeva, S.K., et al, (1988, p.207-215, rus) 43-886

Regularities governing water crystallization in disperse rocks. Golubev, V.N., (1988, p.31-36, rus) 43-933

Calculating moisture transfer in frozen peat. Gamaiunov, N.I., et al, (1987, p.17-19, rus) 43-1022

Simultaneous measurement of water reserves in snow and the soil moisture content from the neutron component of cosmic radiation. Altbaev, F.B., et al, (1987, p.76-79, rus) 43-1048

Migration of tritium into permafrost near Mayo, Yukon Territory. Burn, C.R., et al, (1988, p.909-915, eng) 43-1130

Design of hydraulic earth structures and methods of determining soil properties Kartelev, B.G., ed, (1987, 120p., rus) 43-1178

Freeze-thaw of soils, by air flow, when the initial temperature is different from that of phase transformations. Mukhetdinov, N.A., (1987, p.31-36, rus) 43-1181

Freezing induced soil water changes in Minnesota. Benoit, G.R., et al, (1988, p.1108-1114, eng) 43-1465

Simulation of heat and water flow during freeze/thaw cycles of soil. Pikul, J.L., Jr., (1988, 193p., eng) 43-1470

Changes of landscape and geochemical structure due to geological surveys. Tentiukov, M.P., (1988, p.12-28, rus) 43-1536

Features of freezing of water-saturated soils. Gorelik, IA.B., et al, (1988, p.40-53, rus) 43-1599

Movement of meltwater in small basins. Bengtsson, L., (1988, p.237-244, eng) 43-2017

Preliminary results from simulation of retaining wall displacement by frost action. Li, Y., et al, (1989, p.389-396, eng) 43-2119

Simplified calculation of soil freezing depth. Gusev, E.M., (1988, p.9-17, eng) 43-2125

Driving forces of moisture migration with cryogenic deformation. Lebedenko, IU.P., (1988, p.3-13, rus) 43-2414

Diurnal frost-heave activity in the Sör-Rondane Mountains, Antarctica. Matsuoka, N., et al, (1988, p.422-428, eng) 43-2483

Effect of overconsolidation on freezing of clayey silt. Konrad, J.M., (1989, p.9-21, eng) 43-2705

Development of apparatus used for water migration test in soil. Xu, X.Z., et al, (1988, p.189-196, chi) 43-2852

Hydraulic conductivity measurements of partially frozen soil by needle probe method. Fukuda, M., et al, (1989, p 251-266, eng) 43-3103

Modeling of thermal soil behaviour. Duquennoi, C., et al, (1989, p.895-915, eng) 43-3156

Nature of the water migration mechanism in freezing soils. Sakharov, I.I., (1989, p.116-119, rus) 43-3175

Moisture migration characteristics of frozen, dispersed soils. Lebedenko, IU.P., et al, (1987, p.150-157, rus) 43-3380

Moisture transfer in thawed and freezing ground. Fel'dman, G.M., (1988, 257p., rus) 43-4492

Comment on "Water movement into seasonally frozen soils" by Douglas L. Kane and Jean Stein. Burn, C.R., et al, (1985, p.1051-1054, eng) 43-4493

Comment on "Monitoring the unfrozen water content of soil and snow using time domain reflectometry" by Jean Stein and Douglas L. Kane. Patterson, D.E., et al, (1985, p.1055-1058, eng) 43-4494

Soils

Geographic interpretation of satellite survey data. Vasil'ev, L.N., ed, (1988, 132p., rus) 43-108

Geographic interpretation of remote sensing data on river estuaries and shelf zones. Krasnozhon, G.F., (1988, p.41-58, rus) 43-109

Remote sensing of water in soil and snow cover from natural penetrating radiations. Fridman, Sh.D., ed, (1987, 86p, rus) 43-1038

Calculating the neutron field of cosmic radiation near the surface of snow-covered soil. Altbaev, F.B, et al, (1987, p.18-36, rus) 43-1041

Volcanic ash soils from Kenai Peninsula, Alaska. Shoji, S., et al, (1988, p.395-413, eng) 43-2371

Nutrient capacity for vegetation in swamps. Ivanov, K.E., (1988, p.3-22, rus) 43-2462

Soil formation and soil properties in Spitsbergen. Klimowicz, Z., et al, (1988, p.61-72, eng) 43-2767

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Solar radiation

Albedo of break-up ice covers Prowse, T.D., (1987, p.197-202, eng) 43-402

Radiation properties of some natural and disturbed ground covers in the Yamal Peninsula. Sergeev, B.P., (1988, p 61-70, rus) 43-527

Energy balance on outlet glaciers from the Inland Ice, West Greenland. Knudsen, N.T., et al, (1987, p.99-105, eng) 43-752

Radiative effects of Arctic haze during pollution episode, spring 1983. Wendling, P., et al, (1985, p.2181-2193, eng) 43-1002

Thermal abrasion of sea coasts (Part I). Aré, F.E., (1988, p.3-86, eng) 43-1035

Estimating south slope irradiance in the Arctic. Gardner, C.L., et al, (1988, p.227-240, eng) 43-1072

Monitoring atmospheric precipitation and the length of snow persistence in the Arctic. Briazgin, N.N., et al, (1988, p.96-105, rus) 43-1176

Climate of the Vestfold Hills. Streten, N.A., (1986, p.141-164, eng) 43-1190

Dependence of snow melting on forest structure. Otterman, J., et al, (1988, p.1-8, eng) 43-1377

Optical properties of antarctic snow. Warren, S.G., et al, (1988, p.247-248, eng) 43-1644

Effect of the microstructure of supercooled clouds on albedo and radiation. Kondrat'ev, K.IA., et al, (1988, p.583-587, rus) 43-1905

Penetration of solar radiation in the snow-firn layer on Vavilov Glacier (Severnaya Zemlya Archipelago, October Revolution Island). Nazarov, V.D., et al, (1989, p 64-70, eng) 43-2048

Diffuse solar radiation—daily and monthly values as affected by snow cover. Kierkus, W.T., et al, (1989, p.143-147, eng) 43-2310

Impact of ice-supersaturated layers on atmospheric radiance. Cutten, D.R., (1989, p.179-193, eng) 43-2407

Analysis of long-period changes in some climate-forming factors of the northern European basin Dement'ev, A.A., et al, (1988, p.107-117, rus) 43-2411

Solar radiation induced melt layers in dry snow. Beck, N., et al, (1988, p.31-40, eng) 43-2596

Cloud and fog dissipation by solar heating of a surface with nonhomogeneous albedo. Khvorost'ianov, V.I., (1988, p 62-72, rus) 43-2716

Air temperature variations over different surfaces in the West Gulkana Glacier valley. Brazel, A.J., et al, (1988, p.81-91, eng) 43-2795

Solar penetrating radiation in snow layers. Xie, Y.Q., et al, (1988, p.135-142, chi) 43-2848

Semianalytic energy balance climate model with explicit sea ice and snow physics. Harvey, L.D.D., (1988, p.1065-1085, eng) 43-3074

Radiation studies in the Arctic Valero, F.P.J., et al, (1988, p 271-276, eng) 43-3075

Effects of Arctic aerosols on a GCM simulation. Blanchet, J.P., (1988, p.373-383, eng) 43-3076

Radiation index. Dysli, M., (1989, p.233-238, eng) 43-3101

Modeling solar radiation during snowmelt in a deciduous forest. Rowland, J.D., et al, (1988, p.203-207, eng) 43-4132

Temporal variations in snowmelt runoff from an alpine snowfield. Sarantitis, B., (1985, p.160-162, eng) 43-4281

Radiative energy budget in the cloudy and hazy Arctic. Tsay, S C., et al, (1989, p.1002-1018, eng) 43-4288

Influences of snow persistence on subalpine forest. Daly, C., (1984, p.109-119, eng) 43-4321

Solar radiative transfer in cirrus clouds Pt. I and Pt. II. Takano, Y., et al, (1989, p.3-36, eng) 43-4420

Seasonal variation of photosynthetically active radiation in a lake. Rowe, T.G., (1987, p.95-103, eng) 43-4428

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See also: Liquid solid interfaces

Solid phases

Theory of freezing for monatomic systems. Laird, (1988, 167p., eng) 43-2890

High pressure ice. Klein, M.L., et al, (1989, p.441-454, eng) 43-3248

New model for supercooling and superheating effects. Visintin, A., (1986, p.141-157, eng) 43-3481

Solifluction

Solifluction effluents at the Yamal Peninsula. Grigor'ev, N.F., et al, (1988, p.43-46, rus) 43-524

Problems of rational use, management and preservation of geological media. Golodkovskaia, G.A., et al, (1988, p.103-116, rus) 43-737

Radio-carbon dated solifluction lobe in Labrador. Evans, D.J.A., et al, (1988, p.657-662, eng) 43-2000

Cryogenic creep processes of soil. Coutard, J.P., et al, (1988, p.9-28, fre) 43-2293

Solifluction dynamics in the French Alps. Van Vliet-Lanoë, B., (1988, p.29-46, fre) 43-2294

Solifluction of striated soils. Van Vliet-Lanoë, B., et al, (1988, p.47-64, fre) 43-2295

Palynological study on solifluction flows. Clet-Pellerin, M., (1988, p.65-82, fre) 43-2296

Forecasting technique for anthropogenic changes in cryogenic conditions. Garagulia, L.S., (1985, 224p., rus) 43-3073

Solutions

Cryo-oscillations. Belousov-Zhabotinskii (BZ) oscillations in frozen and undercooled solution. Vajda, T., et al, (1988, p.661-665, eng) 43-831

Brillouin light scattering in low temperature water-ethanol solutions. Benassi, P., et al, (1988, p.4469-4477, eng) 43-1029

Process of making calcium acetate deicing agents. Gancy, A.B., (1984, 10 col., eng) 43-1070

Rheological properties of ice with the addition of surfactants. Dediulia, I.V., et al, (1987, p.485-489, eng) 43-1138

Dielectric properties of supercooled glycerol-water solutions. Huck, J.R., et al, (1988, p 627-638, eng) 43-1315

Vapor pressures of HNO3/H2O solutions at low temperatures. Hanson, D., et al, (1988, p.6167-6170, eng) 43-1357

Activity of concentrated NaCl solutions at low temperature. Thurmond, V.L., et al, (1988, p 411-414, eng) 43-1567

Freezing of aqueous solutions containing gases. Wojciechowski, B., et al, (1988, p.843-848, eng) 43-1570

Solvent freezing point depression in swollen rubber gels. Honiball, D., et al, (1988, p 2413-2431, eng) 43-1693

Water activity change in aqueous solutions at subfreezing temperatures. Chen, C.S., (1988, p.256-258, eng) 43-1826

Ice surface hydrolysis of diisopropylfluorophosphate (DFP). Leggett, D.C., (1987, p 809-815, eng) 43-1876

Viscosity of nonfreezing electrolyte solutions between ice and silicates. Dediulia, I.V., et al, (1988, p.204-207, eng) 43-2034

Phase transition of ice precipitated in an aqueous ionic glassy matrix. Carmona, P., et al, (1989, p.11-20, eng) 43-2775

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Low-frequency transmission loss in the Arctic SOFAR channel for shallow sources and receivers. Yang, T.C., (1989, p.1139-1147, eng) 43-2838

Blast noise propagation research. Raspet, R., (1987, p.251-252, eng) 43-3297

Acoustic propagation across the East Greenland marginal ice zone. Gallagher, C.J., (1989, 82p., eng) 43-3366

Polar Floats Program Manley, T.O., et al, (1989, p.186-194, eng) 43-3514

Observations of low-frequency acoustic-to-seismic coupling in the summer and winter. Albert, D.G., et al, (1989, p.352-359, eng) 43-4500

Sound waves

Operation "Bangavalanches". The sonic boom effect on avalanches. Perroud, P., et al, (1987, p.215-222, eng) 43-1231

Blast noise propagation research. Raspet, R., (1987, p.251-252, eng) 43-3297

Detecting and characterizing of avalanches in remote areas. Bedard, A.J., Jr., et al, (1989, p.267-275, eng) 43-3571

Inexpensive remote snow-depth gauge: an assessment. Goodison, B.E., et al, (1984, p.188-191, eng) 43-4333

Sounding

Structure of the Davydov glacier from data of radar echo sounding and thermal drilling. Vasilenko, E.V., et al, (1988, p.208-215, rus) 43-964

Modern coherent radar for ice-sheet sounding. Moore, R.K., (1987, p 83-84, eng) 43-2746

Probing lake-effect snowbands using a portable radiosonde unit. Byrd, G.P., et al, (1988, p.7-12, eng) 43-4112

Electromagnetic pulse sounding for geological surveying. Moffatt, D.L., et al, (1973, 169p., eng) 43-4164

Coastal subsea permafrost and bedrock observations using dc resistivity. Sellmann, P.V., et al, (1989, 13p., eng) 43-4386

Electric sounding using transitional processes in geocryological mapping. Nim, IU.A., (1989, p.105-111, rus) 43-4615

See also: Echo sounding; Radio echo soundings

South Atlantic Ocean

Iceberg distribution in the Atlantic sector of the southern ocean. Kovalev, A.D., et al, (1988, p.73-78, rus) 43-2227

South Georgia
Glacier fluctuations and environmental changes on South Georgia. Clapperton, C.M., et al, [1989, p.210-228, eng] 43-3166
South Pacific Ocean
Anomalous development of the Pacific and Balleny ice massifs during the 1986 cruise. Lutsenko, E.I., [1988, p.58-62, rus] 43-2223
Station climatic summaries, Antarctica, Australia and Oceania. Sjoberg, W.F., [1987, 48p., eng] 43-3520
Spaceborne photography
Geographic interpretation of satellite survey data. Vasil'ev, L.N., ed, [1988, 132p., rus] 43-108
Geographic interpretation of remote sensing data on river estuaries and shelf zones. Krasnozhon, G.F., [1988, p.41-58, rus] 43-109
Studies and mapping of forests using spaceborne scanner imagery obtained in winter. Kravtsova, V.I., et al, [1988, p.56-65, rus] 43-586
Transversal jets detected on satellite images in marginal ice zones. Ginzburg, A.I., [1988, p.3-10, rus] 43-588
Aerial and spaceborne monitoring of natural naled geosystems. Topchiev, A.G., [1988, p.50-57, rus] 43-589
Monitoring giant antarctic icebergs. Rutledge, G.K., [1988, p.663-665, eng] 43-786
Ice information obtained from meteorological satellites Provorkin, A.V., et al, [1988, p.141-148, rus] 43-812
Influence of agrometeorological conditions on space photographs of agricultural regions in winter. Pichugin, A.P., et al, [1988, p.58-65, rus] 43-816
Detection and identification of Arctic landforms. Dean, K.G., et al, [1988, p.363-371, eng] 43-832
Landsat data of the Hubbard Glacier region, Alaska. Walker, K.M., et al, [1988, p.373-376, eng] 43-833
Disintegration of the Larsen Ice Shelf in Antarctica. Zakharov, V.G., et al, [1988, p.105-108, rus] 43-943
Large-scale regularities governing snow cover dynamics in Hindu Kush. Tsarev, B.K., [1988, p.136-139, rus] 43-951
Digitization of remote images of hydrological objects. Grumăzescu, H., et al, [1986, p 29-35, eng] 43-1206
Spectral reflectance of snow-covered/snow-free terrain. Rott, H., et al, [1987, p.115-121, eng] 43-1677
Quantitative use of satellite SAR imagery of sea ice Fily, M., et al, [1987, p.323-326, eng] 43-1794
Constrained cluster analysis and image understanding. Banfield, J.D., [1988, 105p., eng] 43-1912
Observation of snow melting process from remotely sensed data. Sakai, T, et al, [1984, p.231-234, eng] 43-1931
Use of satellite images in snowmelting runoff forecasts in Chile. Araya F., M., [1984, p.235-240, eng] 43-1932
Determination of snow water equivalent of Norwegian snow cover. Kuittinen, R., [1988, 139p., eng] 43-2080
Evidence of central morphostructures in the formation of cloud cover and ice cover over bodies of water. Ezhov, B.V., [1988, p.124-128, rus] 43-2201
Nimbus-7 data product summary. Oakes, A.G., et al, [1989, 106p., eng] 43-2247
Aerial and spaceborne surveys of snow avalanches. Barbat, IU.P., [1987, p.368-375, rus] 43-2544
Review and prospect of snow and ice remote sensing in China. Zeng, Q.Z., [1988, p.352-355, chi] 43-2881
Aerospace monitoring of naleds. Topchiev, A.G., [1988, p.120-123, rus] 43-3268
Study on snow cover dynamics from scanner space images. Laptev, M.N., et al, [1988, p.182-186, rus] 43-3276
Interpretation of aerospace photographs of glaciers and sea ice. Kravtsova, V.I., [1988, p.156-160, rus] 43-3323
Photointerpreting naled features on the northern Central Siberian plateau. Gienko, A.IA., et al, [1987, p.152-161, rus] 43-3663
Problems in monitoring the cryolithozone Mel'nikov, P.I., et al, [1987, p.103-106, rus] 43-4231
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Factors affecting fast-ice consolidation in southeastern Hudson Bay, Canada. Larouche, P., et al, [1989, p.367-375, eng] 43-4562
See also: LANDSAT
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Swath altimetry of oceans and terrain. Rapley, C.G., et al, [1987, p.319-322, eng] 43-1793
Ice-motion determination by means of satellite positioning systems. Hinze, H., et al, [1988, p 36-41, eng] 43-1941
Technological limitations on satellite glaciology. Rees, W.G., et al, [1989, p.7-22, eng] 43-2002
Nimbus-7 data product summary. Oakes, A.G., et al, [1989, 106p., eng] 43-2247
Polar orbiting satellites improve polar communications. Hathaway, R.G., [1986, p.372-375, eng] 43-2330
AVHRR mosaic image of Antarctica. Merson, R.H., [1989, p.669-674, eng] 43-4065
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Recent and Pleistocene local glaciation in Spain—a review. Nyberg, R., [1985, p.49-55, swe] 43-1016
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Specific heat measurement in the temperature range 100-300 K. Rajeswari, M., et al, [1988, p.1017-1022, eng] 43-1369
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Spectra
Solid-liquid interface layer of growing ice crystals. Halter, P.U., et al, [1988, p.2622-2629, eng] 43-419
Brillouin light scattering in low temperature water-ethanol solutions. Benassi, P., et al, [1988, p 4469-4477, eng] 43-1029
Red emission from pulse irradiated H2O ice. Quickenden, T.I., et al, [1988, p.403-412, eng] 43-1135
Kolmogorov Constants for temperature, humidity, and refractive index spectra. Andreas, E.L., [1988, p.2399-2406, eng] 43-1278
Optical studies of antarctic sea ice. Schlosser, E., [1988, p.289-293, eng] 43-1349
Applied programs for spectral analysis of permafrost. *Levkovich, V.R., et al, [1988, p.58-65, rus]* 43-1601
Preliminary observations of polar sea ice with the special *sensor microwave imager. Cavalieri, D.J., [1988,* p.1693-1694, eng] 43-1898
Optical test methods for buildings and structures. Testing the quality of thermal insulation. IAlyshev, F.Kh., [1988, 80p., rus] 43-2575
Polarized Raman spectra for ices. Devlin, J.P, [1989, p.1322-1329, eng] 43-2904
Spectra and cospectra of atmospheric turbulence over snow. Andreas, E.L., [1986, p.219-233, eng] 43-4636
Spectroscopy
Snow mapping by airborne gamma-ray spectrometer. Brandt, M., [1985, p.122-139, swe] 43-369
Single fiber measurements for remote optical detection of TNT. *Zhang, Y., et al, [1989, 7p., eng]* 43-3870
Evaporation preconcentration of trace elements in rainwater for inductively coupled plasma emission *spectrometry. Nishikawa, M., et al, [1985, p 659-664,* jpn] 43-4190
See also: Ice spectroscopy; Infrared spectroscopy
Spheres
Permittivity of dielectric spheres. Sihvola, A., et al, [1989, p.37-60, eng] 43-4421
Spillways
Water flow over and through concrete dams during construction. Sokolov, i.B., et al, [1987, p.4-9, rus] 43-1194
Spongy ice
Observations on the formation of spongy ice from fresh water. Lock, G.S.H., et al, [1989, p.129-133, eng] 43-4210
Sporadic permafrost
Geocryological features of sporadic permafrost in West Siberia. Trofimov, A.V., et al, [1988, p.149-160, rus] 43-1614
Spray
See also: Sea spray
Springs (water)
See also: Hot springs
Stability
Aircraft motion with tailplane icing. Karlsen, L.K, et al, [1983, 47p, eng] 43-1053
Stability of structures on frozen ground. Sal'nikov, P.I., [1985, p.3-8, rus] 43-1649
Effect of frost heave on the stability of pile structures. Sobin, G.P, et al, [1985, p 60-66, rus] 43-1658
DYE-2 and DYE-3—a 30 year engineering history. Osgood, S., et al, [1989, p.11-26, eng] 43-2085
In-situ plate-load tests of frozen silt and gravel. Speck, R.C., et al, [1989, p.252-261, eng] 43-2107
Strength and stability of framing for ice strengthening. Daley, C., et al, [1988, 37p., eng] 43-2147
Freeze-thaw related stability problems for a road in a steep silt slope. Brorsson, I., et al, [1989, p 645-654, eng] 43-3135
See also: Slope stability; Snow cover stability; Static stability
Stabilization
See also: Channel stabilization; Snow stabilization; Soil stabilization
Standards
System of standards in engineering geology Baulin, V V, et al, [1988, p.104-108, rus] 43-598
State standards index of the USSR, 1988. [1987, 4 vols., rus] 43-1143
Canada readying platform codes as development nears. Adams, P.F., [1988, p 42-43, eng] 43-1738
Standards for snow loads. Apeland, K., [1989, p.385-402, eng] 43-3583
Developing the Eurocode. Judge, C.J., [1989, p.403-412, eng] 43-3584
Changes coming in snow load design criteria. Tobiasson, W., [1989, p.413-418, eng] 43-3585
Snow loads on roofs in East European standards. Zuranski, J.A., [1989, p.419-428, eng] 43-3586
Architectural design in regions of snow and cold. Mackinlay, I., [1989, p.441-455, eng] 43-3588
Codes and standards: perspective. O'Rourke, M., [1989, p.507-509, eng] 43-3597
See also: Building codes; Design criteria; Work time standards
Starters
See also: Engine starters
Static loads
On the calculation of static pressure due to expansion of ice on a reservoir. Zhang, D., [1987, p 83-91, chi] 43-490
Soil deformation due to loads and stresses. Rais, P.P., et al, [1985, p.97-104, rus] 43-1664
Stations
Evolution of onshore facilities of the U.S. Antarctic Research Program. *Splettstoesser, J.F., et al, [1988,* p.287-295, eng] 43-628
Exploration base in the high Arctic; discussion and case study. Ammendrup, H., et al, [1988, p.309-318, eng] 43-630
Environmental effects of Polish Polar Station at Svalbard. Krzyszowska, A., [1986, p.227-246, eng] 43-1207
Review and prospects of Tian Shan glaciological station. Kang, E.S., [1988, p.290-295, chi] 43-2871
Building the Swedish antarctic research station Wasa, Jan. 1989. Haugum, D., et al, [1989, p.983-990, eng] 43-3795
See also: Drift stations; Weather stations
Statistical analysis
Probability of smooth operation of excavation systems at low temperatures. Zudov, G.IU., et al, [1987, p.50-55, rus] 43-115
Experience on wintertime road accidents. Peltola, H., et al, [1987, p.11-14, fin] 43-1007
Statistical model for local avalanche forecasting. Navarre, J.P., et al, [1987, p.571-580, fre] 43-1262
Statistical assessment of ice jam formation in Canadian rivers. Sarraf, S., [1988, p.327-344, eng] 43-2179
Glacier-climate relationship in Switzerland. Müller, P., [1988, 228p., ger] 43-2217
Numerical indicator of similarity in the surface of glaciers. Kuz'michenok, V.A., [1988, p.110-117, rus] 43-2391
Analysis of long-period changes in some climate-forming factors of the northern European basin. Dement'ev, A.A., et al, [1988, p.107-117, rus] 43-2411
Temporal statistics: an application in snowfall climatology. Harrington, J.A., Jr., et al, [1988, p.337-353, eng] 43-2826
Avalanche accidents outside the Swiss Alps. Gliott, S., [1988, p.137, ger] 43-3241
Reliability of statistical analysis of hydrological data. Salway, A.A., [1987, p.41-52, eng] 43-3926
Sea ice thickness data: the many vs the few. Eicken, H., et al, [1989, p.495-498, eng] 43-4431
Topography as a fundamental element of glacial systems. Kuhle, M., [1988, p.545-568, eng] 43-4568
Relation of deep sea oxygen isotopic record to global ice volume history. Prentice, M.L., [1989, 567p., eng] 43-4575
Steam curing
See also: Concrete curing
Steel structures
Problems of using tie-rods in overlapping metallic bridge spans. Vladimirskiĭ, S.R., et al, [1988, p.14-15, rus] 43-25
Physical and mechanical aspects of working capacity of equipment designed for the North. Larionov, V.P., ed, [1987, 91p, rus] 43-112
Welding of metallic structures in freezing weather. Savvinov, I.T., [1987, p.39-45, rus] 43-114
Operation of steel structures in industrial buildings of the North. Filippov, V.V., [1987, p.78-82, rus] 43-116
Mechanical strength of construction steels at subzero temperatures. Berezhnov, K.P., et al, [1987, p.82-86, rus] 43-117
Characteristic features of the embedment of steel-tube piles in permafrost of the Tyumen oblast. Targulian, IU.O., et al, [1987, p.92-95, rus] 43-212
Ways of improving structural-technological methods of preventing brittle failure of steel structure junctions and elements. Kudrin, V.G., et al, [1988, p.5-9, rus] 43-564
Behaviour of steel at low temperatures: state of the art. Gowda, S.S., [1988, p.733-748, eng] 43-658
Fracture mechanics approach to various Arctic steel structures and their reliability analysis. Hagiwara, Y., et al, [1988, p.757-768, eng] 43-660
Effects of steel composition on its cold resistance. Teplukhin, G.N., [1987, p.20-26, rus] 43-2451
Effects of low temperatures on deformation and destruction of steels. Larionov, V.V., et al, [1987, p.37-43, rus] 43-2453
Fracture resistance of main pipelines made of 14G2AF-U steel. Basko, E.M., [1987, p.73-78, rus] 43-2456
Brittle destruction of reservoirs and improvement of their durability Rozenshtein, I M., et al, [1987, p 94-99, rus] 43-2457

Steel structures *(cont.)*
Low-temperature strength of steel truss junctions. Kozlov, A.G., et al, [1987, p.106-111, rus] 43-2459
Steel sheet roofs for snow sliding. Ueno, M., et al, [1988, p.207-215, jpn] 43-2701
Ice forces on framed structure. Tatsuta, M., et al, [1988, p.385-394, eng] 43-2938
Arctic cast steels look good in tests. [1988, p.54, eng] 43-3867
Ultimate loads for corrugated-steel barrel-type shell structures. Briassoulis, D., et al, [1989, p.1038-1049, eng] 43-4413

Steels
Composite steel-concrete-wood piles designed for permafrost. Fedorovich, D.I., et al, [1988, p.171-176, eng] 43-140
Ways of improving structural-technological methods of preventing brittle failure of steel structure junctions and elements. Kudrin, V.G., et al, [1988, p.5-9, rus] 43-564
Growth and closure of cracks in steels at low and high temperatures. Ogura, K., et al, [1988, p.1267-1272, eng] 43-980
Development of high-strength steel plates for low-temperature use. Nakano, Y., et al, [1988, p.171-176, eng] 43-1276
Large-heat input steel weldability for low temperature service. Horii, Y., et al, [1988, p.1-9, eng] 43-1845
Local corrosion of welds of high-strength steels for icebreakers. Inoue, T., et al, [1988, p.52-58, eng] 43-1846
Design of an icebreaker hull. Baudin, M., et al, [1987, p.103-106, fre] 43-2072
Behavior of bolted flanged connectors in low temperatures. Biriulev, V.V., et al, [1988, p.9-14, rus] 43-2432
Strength of metals used at low temperatures. Solntsev, IU.P., ed, [1987, 168p., rus] 43-2447
Development of composite cold-resistant and durable steels. Volchok, I.P., et al, [1987, p.5-10, rus] 43-2448
Technical demands of cold-resistant cast steel for payloader's wheels. Gol'dbukht, E.E., et al, [1987, p.10-12, rus] 43-2449
Improved cold-resistant steel. Bernshtein, M.L., et al, [1987, p.12-20, rus] 43-2450
Cold-resistance of spring steel 60S2KhA. Bruk, B.I., et al, [1987, p.34-37, rus] 43-2452
Study of cold resistance of cemented steel for gears. Shchadrichev, E.V., et al, [1987, p 60-65, rus] 43-2454
Determination of the effect of elastic energy factor on steel destruction. Bernshtein, S.V., et al, [1987, p.66-72, rus] 43-2455
Resistance to destruction of steel pipes due to temperature and loads. Krasovskiĭ, A.IA., et al, [1987, p.100-105, rus] 43-2458
Temperature effect on steel crack resistance. Kashtalian, IU.A., et al, [1987, p.111-115, rus] 43-2460
Adfreeze strength of sea ice to steel pipe piles. Ohtsuki, F., et al, [1988, p 281-293, eng] 43-2929
Problems of design and service of machinery and structures for polar regions. Larionov, V., et al, [1989, p.820-830, eng] 43-3780
Extra high strength structural steels for ice breakers. Nordén, R., [1989, p.839-851, eng] 43-3782
Arctic cast steels look good in tests. [1988, p.54, eng] 43-3867

Stefan problem
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Studying the stable and unstable growth of crystals in a mathematical model of heat transfer in two-phase media. Gulbe, M.L., et al, [1988, p.25-27, rus] 43-557
Frost penetration and thermal regime in dry gravel. McKeown, S., et al, [1988, p.111-123, eng] 43-872
Quasistationary model of thermal interaction between a pipeline and frozen ground. Bronfenbrener, L.E., et al, [1987, p.68-73, rus] 43-1019
Simple solution for thawing of multi-layered soil systems. Kuhlemeyer, R.L., [1988, p 673-688, eng] 43-1332
Stefan Problem simulation of thermal dynamics in frozen media. Gori, F., et al, [1988, p.229-235, eng] 43-1472
Displacement of the crystallization front in the ice-water system. Potapenko, V.IU., et al, [1989, p.109-113, eng] 43-2054
Approximate solution to the problem of freezing-thawing of rocks given a surface layer of insulation. Komarov, I.A., et al, [1987, p.260-280, rus] 43-2429
Temperature effects on freezing and thawing of soil Bondarev, E.A., et al, [1989, p.209-218, eng] 43-3099
Phase changes following the initiation of a hot turbulent flow over a cold solid surface. Huppert, H.E., [1989, p.293-319, eng] 43-3292
Supercooling and superheating effects in phase transitions. Visintin, A., [1985, p.233-256, eng] 43-3480
New model for supercooling and superheating effects. Visintin, A., [1986, p.141-157, eng] 43-3481

Stereomapping
Polar microwave brightness temperatures from Nimbus-7 SMMR. Comiso, J.C., et al, [1989, 82p., eng] 43-4155

Stereoscopy
On the objective analysis of snow microstructure. Dozier, J., et al, [1987, p.49-59, eng] 43-1217
Acoustic, geometric and mechanical parameters of snow. Buser, O., et al, [1987, p.61-71, eng] 43-1218
Snow microstructure measurements using stereology. Dozier, J., et al, [1987, p.59-69, eng] 43-1289

Storage
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Storage tanks
Heat transfer and observed values of a refrigerated LPG underground tank. Goto, S., et al, [1988, p.331-337, eng] 43-94
Determination of the effect of elastic energy factor on steel destruction. Bernshtein, S.V., et al, [1987, p 66-72, rus] 43-2455
Bases and foundations for storage tanks. Ivanov, IU.K., et al, [1989, 223p. (pertinent p.188-214), rus] 43-3629
Study on keeping of underground fire cistern from freezing. Inaba, H., et al, [1989, p.303-308, eng] 43-4227
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Storms
Stormflow and forest treatment. Hibbert, A.R., et al, [1987, p.189-194, eng] 43-582
Some advantages of using polarisation diversity illustrated through the analysis of radar data from a storm in Central Alberta. Holt, A.R., et al, [1988, p.237-240, eng] 43-1511
Hail problem and some studies of hailstorms in China. Wang, A.S., [1987, p.361-364, eng] 43-2256
Synoptic meteorology, crystal habit, and snowfall rates in Northeastern snowstorms. Ryerson, C.C., et al, [1989, p.335-345, eng] 43-3214
Precipitation types in winter storms. Stewart, R.E., [1985, p.597-609, eng] 43-4415
Winter storm structure and melting-induced circulations. Stewart, R.E., et al, [1989, p.5-23, eng] 43-4459
Modeling winter storms during CASP. Mailhot, J., et al, [1989, p 24-58, eng] 43-4460
On the nature of rapidly deepening Canadian East Coast winter storms. Stewart, R.E., et al, [1989, p.87-107, eng] 43-4461
On the precipitation regions within two storms affecting Atlantic Canada. Donaldson, N.R., et al, [1989, p.108-129, eng] 43-4462
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Strain measuring instruments
Use of foil strain gauges in ice over a wide loading rate. Sinha, N.K., [1989, p.145-158, eng] 43-2363
Field instrument for fracture toughness testing of ice. Stehn, L., et al, [1989, p.300-310, eng] 43-3735

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Strain tests
Classification and laboratory testing of artificially frozen ground (1987). Discussion and author's closure. Youssef, H., [1988, p.137-140, eng] 43-874
Effects of temperature and structure of ice on its flexural strength. Gow, A.J., et al, [1988, 43p., eng] 43-1399
Relation to describe rate-dependent material failure. Voight, B., [1989, p.200-203, eng] 43-2315
Use of foil strain gauges in ice over a wide loading rate. Sinha, N.K., [1989, p.145-158, eng] 43-2363
Primary creep of polycrystalline ice under constant stress. Azizi, F., [1989, p.159-165, eng] 43-2364
C-axis orientation and flow rate of ice. Azuma, N., et al, [1988, p 67-76, eng] 43-2910
Assessment of the effect of length and orientation of a multi-year ridge on the force acting on conical structures. Abdelnour, R., [1988, p.59-75, eng] 43-3024

Strains
Cyclic thermal strain and crack formation in frozen soils. Andersland, O.B., et al, [1988, p.167-172, eng] 43-73
Gulf of Bothnia—a testing area for Arctic offshore installations. Högbom, T., et al, [1988, p.249-260, eng] 43-625
Compressive strength, deformation and Poisson's ratio of iceberg ice. Sinha, N.K., et al, [1987, p.413-429, eng] 43-918
Constitutive model for ice as a damaging visco-elastic material. Sjölind, S.-G., [1987, 3p, eng] 43-1107
New constitutive theory for snow based on a micromechanical approach. Hansen, A.C., et al, [1987, p.87-104, eng] 43-1222
Stresses and strains in underground structures, Kolyma hydro-power plant. Kuznetsov, V.S., et al, [1987, p.51-57, rus] 43-1393
Crack-enhanced creep in polycrystalline material. Sinha, N.K., [1988, p.4415-4428, eng] 43-1792
Comparison of results from transit satellite tracking. McDonald, J., et al, [1988, p 83-88, eng] 43-1949
Strength of compacted frozen fill after thawing. Graham, J., et al, [1989, p.274-281, eng] 43-2109
Influence of ground ice variability on settlement in thawing permafrost. Collins, P.M., et al, [1989, p.297-307, eng] 43-2111
Crack nucleation in polycrystalline ice under compressive stress states. Kalifa, P., et al, [1989, p.13-21, eng] 43-2604
Mechanics of the fracture of equiaxed freshwater ice. Nixon, W.A., et al, [1989, p.23-29, eng] 43-2605
Comparing the creep behaviour of spray ice and polycrystalline freshwater ice. Shields, D.H., et al, [1989, p.235-245, eng] 43-2632
Flow of Rutford Ice Stream and Carlson Inlet. Frolich, R.M., et al, [1989, p.51-56, eng] 43-3334
Isotropic and anisotropic flow relations for ice dynamics. Jacka, T.H., et al, [1989, p 81-84, eng] 43-3338
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Stratification
Origins of stratified layers of ground ice. Danilov, I.D., [1987, p.72-83, rus] 43-3372
Facies models to delineate spatial trends in glacial sediments. Anderson, M.P., [1989, p.501-511, eng] 43-4619
See also: Firn stratification; Snow stratigraphy

Stratigraphy
Stratigraphy of peat bogs. Usova, L.I., [1988, p.70-81, rus] 43-2467
Quaternary paleoceanography of the Atlantic Ocean. Barash, M.S., [1988, 270p., rus] 43-2811
Rock glacier stratigraphy in Colorado. Morris, S., [1987, p.107-125, eng] 43-3049
Sea level changes and the Delaware coast. Kraft, J.C., et al, [1987, p.129-143, eng] 43-3401
Back-barrier response to sea-level rise, eastern shore of Virginia. Finkelstein, K., et al, [1987, p.145-155, eng] 43-3402
Sea level and tidal- and wave-dominated coastal sequences. Davis, R.A., Jr., et al, [1987, p.167-178, eng] 43-3404
Sea level fluctuations of Louisiana continental shelf. Suter, J.R., et al, [1987, p.199-219, eng] 43-3406
Stratigraphic record of Quaternary sea levels. Demarest, J.M., II, et al, [1987, p.223-239, eng] 43-3407
Transgressive stratigraphy at sequence bounding unconformities. Nummedal, D., et al, [1987, p.241-260, eng] 43-3408
Lacustrine deposits and lake evolution in Kunlun Mountains. Li, S.J., et al, [1989, p.169-176, eng] 43-3457
Soils and quaternary geology: a handbook for field scientists. Catt, J.A., [1986, 267p., eng] 43-3530
Late Cenozoic history of the interior basins of Alaska and the Yukon. Carter, L.D., ed, [1989, 114p., eng] 43-4478
Structural features of the northern Pleistocene in relation to the stratigraphy problem. Astakhov, V.I., [1984, p.3-11, rus] 43-4501
Glacial geology of western Hudson Strait, Canada, with reference to Laurentide Ice Sheet dynamics. Laymon, C.A., [1989, 345p., eng] 43-4572
See also: Firn stratification; Snow stratigraphy

Stratosphere
Airborne lidar studies of Arctic polar stratospheric clouds. Poole, L.R., [1988, 237p., eng] 43-341
Small, solid particles above the frost point of Arctic PSCs. Poole, L.R., et al, [1988, p.867-870, eng] 43-1553

Stream flow
Streamflow modelling in the Tobique Basin. Jobin, D.I., et al, [1987, p.90-107, eng] 43-393
Stormflow and forest treatment. Hibbert, A.R., et al, [1987, p.189-194, eng] 43-582
Predicting flowrates in an ice covered stream. Santeford, H.S., et al, [1984, p.1031-1043, eng] 43-668
Ice cover and stream flow in the Yukon River, 1985/86. Alford, M.E., et al, [1988, 36p., eng] 43-1440
Flood geomorphology in the glaciated terrain, New England. Patton, P.C., [1988, p.261-277, eng] 43-1550
Calibration of a water-balance model for small watersheds in eastern Oregon. Higgins, D.A., et al, [1988, p.347-360, eng] 43-1556
Short-term forecasting of snowmelt runoff using ARMAX models. Haltiner, J.P., et al, [1988, p.1083-1089, eng] 43-1558
Using turbidity to predict total suspended solids in mined streams in interior Alaska. Mack, S.F., [1988, 48p., eng] 43-1687
Water quality in placer mining areas in Alaska, Summer 1986. Mack, S.F., et al, [1988, 73p., eng] 43-1689
Reconnaissance of surface-water resources in the Houston area, Alaska, 1985-86. Collazzi, E.J., et al, [1988, 19p., eng] 43-1690
Computing stream discharge for ice-affected periods Melcher, N.B., [1988, p.241-253, eng] 43-2175
Stream flow under ice conditions. Pelletier, P.M., [1988, p.255-282, eng] 43-2176
Water resources of the North Slope, Alaska. Sloan, C.E., [1987, p.233-252, eng] 43-2372

Stream discharge during ice-affected periods. Melcher, N.B., (1988, p.293-303, eng) 43-3002
Use of new SSARR model automatic updating procedure. Orwig, C.E., et al, (1988, p.52-57, eng) 43-3996
Seasonal stream-flow forecasting of the upper Rio Grande basin. Perkins, T.R., (1988, p.58-69, eng) 43-3997
Effect of evaporation on snow distribution in partially clear-cut forests. Swanson, R.H., (1988, p.87-92, eng) 43-4000
Predicting snow course snow water equivalent. Zuzel, J.F., (1988, p.155-157, eng) 43-4007
Snow hydrology in the upper Yamuna basin, India. Malhotra, R.V., et al, (1988, p 84-93, eng) 43-4119
Snowmelt runoff processes in a small precambrian watershed. Shibatani, R., et al, (1988, p.94-107, eng) 43-4120
Results from international intercomparisons of snowmelt runoff model performance. Rango, A., et al, (1988, p.121-128, eng) 43-4122
Snow hydrology of the Waimakariri catchment, South Island, New Zealand. Moore, R.D., et al, (1988, p 44-68, eng) 43-4258
Accuracy of hydrologic forecasts. Dracup, J.A., et al, (1985, p.13-24, eng) 43-4264
Windy Gap Project streamflow forecasting. Eckhardt, J.R., et al, (1985, p 54-62, eng) 43-4268
Results of the snowmelt-runoff model in an international test. Rango, A., (1985, p.99-106, eng) 43-4273
Basin division and snowmelt discharge in an alpine basin. Michaels, P.S., (1985, p.117-126, eng) 43-4275
Stochastic models for forecasting snowmelt runoff. Haltiner, J.P., et al, (1985, p.127-135, eng) 43-4276
Temperature indices of snowmelt during rainfall. Kattelmann, R., (1985, p.152-155, eng) 43-4279
Suspended sediments as a function of stream flow. Salway, A.A., (1985, p.175-178, eng) 43-4285
Snowmelt runoff in the upper Colorado River basin in 1983. Shafer, B.A., et al, (1984, p.1-11, eng) 43-4310
Hydrometeorological instrumentation and automation. Strauss, F.A., (1984, p.43-47, eng) 43-4314
Predicting time of peak snowmelt runoff from snow pillow data. Farnes, P.E., (1984, p.132-138, eng) 43-4323
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Transition from manual to automated systems for acquiring snow data. Crook, A.G., et al, (1984, p.165-167, eng) 43-4327
Laser discrimination between rain and snow. Strachan, J.W., et al, (1984, p.180-183, eng) 43-4331
Snow temperature profiles in the central Sierra Nevada. McGurk, B.J., (1983, p.9-18, eng) 43-4348
Snowmelt during rain on snow in coastal British Columbia. Beaudry, P., et al, (1983, p.55-66, eng) 43-4353
Application of a simple snowmelt-runoff model to large river basins. Rango, A., (1983, p.89-99, eng) 43-4356
Influence of snowmelt in evaluating small hydropower generation potential. Tangborn, W.V., et al, (1983, p.100-108, eng) 43-4357
Rain-on-snow flood event in central Arizona. Ffolliott, P.F., et al, (1983, p.130-138, eng) 43-4360
Willamette National Forest local flood prediction. Christner, J., et al, (1983, p.139-140, eng) 43-4361
Hydrologic response of central Sierra Nevada snowpacks to rainfall. Bergman, J.A., (1983, p.141-144, eng) 43-4362
Snow Survey and Water Supply Forecast Activity. Barton, M., (1983, p.151-154, eng) 43-4365
Continuous-distribution expression for velocity in ice-covered channels. Tsai, W.F., (1989, p.99-106, eng) 43-4395

See also: River flow; Runoff

Streams
Consequences of deforestation on mountain streams in Switzerland. (1988, 109p. + 3 maps, ger) 43-2146
Rock glacier stream discharge in Canadian Rockies. Gardner, J.S., et al, (1987, p.161-174, eng) 43-3053
Effect of placer gold mines on streams in Alaska. Van Maanen, J.L., et al, (1988, 105p, eng) 43-3216
Stream types and floods in the Kunlun Mountains. Ai, S.T., (1989, p.123-127, eng) 43-3451
Stream chemistry during snowmelt runoff. Wels, C., et al, (1988, p 60-73, eng) 43-4117
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Streamwater chemistry during snow-melt in a Scottish upland catchment. Abrahams, P.W., et al, (1989, p.231-248, eng) 43-4618

Streets
Design of climate-adapted arctic settlements. Zrudlo, L., (1988, p.85-109, eng) 43-4239
Reykjavik, Iceland: a northern capital. Thorvaldsson, T.S., et al, (1988, p.191-204, eng) 43-4243

Strength
Development of composite cold-resistant and durable steels. Volchok, I.P., et al, (1987, p.5-10, rus) 43-2448
Improved cold-resistant steel. Bernshtein, M.L., et al, (1987, p.12-20, rus) 43-2450
Effects of low temperatures on deformation and destruction of steels. Larionov, V.V., et al, (1987, p.37-43, rus) 43-2453

See also: Bearing strength; Concrete strength; Flexural strength; Frozen ground strength; Frozen rock strength; Ice cover strength; Ice strength; Impact strength; Shear strength; Snow strength; Soil strength; Ultimate strength

Stress relaxation

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Stress strain diagrams
State of the art: mechanical properties of frozen soil. Sayles, F.H., (1988, p.143-165, eng) 43-72
Creep and strength behavior of frozen silt in uniaxial compression. Zhu, Y., et al, (1987, 67p., eng) 43-426
Strength and stress-strain characteristics of a glacial till soil. Atkinson, J.H., et al, (1988, p.428-439, eng) 43-704
Calculation of ice-structure loads. Jordaan, I.J., (1987, p.193-232, eng) 43-907
Performance of laminated composites in cold. Dutta, P.K., et al, (1988, p.269-281, eng) 43-1037
Constitutive modelling of brittle and ductile ice. Pulkkinen, E., (1987, ca20p, eng) 43-1105
Mechanical and physical properties of snow. Fukue, M., et al, (1987, p.11-32, eng) 43-1287
Generation, multiplication and motion of dislocations in ice crystals. Fukuda, A., et al, (1988, p.69-96, eng) 43-1417
Calculation of the strain and stress rates of a dome-shaped glacier. Potapenko, V.IU., (1989, p.124-128, eng) 43-2057
Uniaxial tension/compression tests on ice—preliminary results. Cole, D.M., et al, (1989, p.37-41, eng) 43-2607
Calculation of ice sheet stress-strain state by numerical method. Kozin, V.M., et al, (1989, p.315-318, eng) 43-2641
Failure criteria for multi year ice. Masterson, D.M., et al, (1988, p.227-251, eng) 43-2925
MV *Arctic* structural performance. Final report. Glen, I.F., et al, (1985, var. p., eng) 43-3365
Stress and strain instruments developed for field measurements of ice. Duckworth, R., et al, (1989, p.159-165, eng) 43-3511
Frozen strength characterization of NH&S test sites in Montana. Chamberlain, E.J., et al, (1988, var. p., eng) 43-3638
Strength and deformation of spray ice. Chen, A.C.T., et al, (1989, p.681-693, eng) 43-3768
Transition of stresses in frozen alcohol specimens dried in vacuum. Reszka, J., et al, (1989, p.113-116, eng) 43-4207
Forecasting thermo-mechanical conditions of perennially frozen massif. Izakson, V.IU., et al, (1989, 103p., rus) 43-4490

Stresses
Calculation of the stress field in soils during freezing. Shen, M., et al, (1988, p.121-127, eng) 43-69
Effect of frozen soil creep on stresses at the moving thaw front around a wellbore. Huneault, P., et al, (1988, p.279-284, eng) 43-88
Static and dynamic ice loads on the Yamachiche Bend lightpier, 1984-86. Frederking, R., et al, (1986, p.115-126, eng) 43-265
Evaluation of ice pressure and strain sensors in a large test basin. Croasdale, K.R., et al, (1986, p.213-225, eng) 43-270
Dynamics of ship/ice interaction. Jebaraj, C., et al, (1988, p.89-100, eng) 43-614
Ice loads on Adams Island, Canada. Wessels, E., et al, (1988, p.679-690, eng) 43-654
Field studies of the solidity of tall concrete structures. Durcheva, V.N., (1988, 120p, rus) 43-740
Strength of thawed and frozen dam soils under stress. Vasil'ev, I.M., et al, (1988, p.27-33, eng) 43-1087
Field studies on stress waves in natural snow cover. Brown, R.L., et al, (1987, p.89-110, eng) 43-1292
Stresses and strains in underground structures, Kolyma hydro-power plant. Kuznetsov, V.S., et al, (1987, p.51-57, rus) 43-1393
Behavior of concrete dams in severe climate. Durcheva, V.N., et al, (1987, p.57-63, rus) 43-1394
Stresses in hydraulic structures, Sayan-Shushenskaya hydroelectric power plant. Baryshkov, N.K., et al, (1987, p.71-74, rus) 43-1396
Rock stress measurements by wire stressmeter at high temperatures. Dutta, P.K., et al, (1987, p.43-56, eng) 43-1484
Soil deformation due to loads and stresses. Rais, P.P., et al, (1985, p.97-104, rus) 43-1664
Calculation of stresses and deformations in flat foundations. Mirenkov, V.E., et al, (1985, p.104-110, rus) 43-1665
Strength of compacted frozen fill after thawing. Graham, J., et al, (1989, p.274-281, eng) 43-2109
Load formation on shaft supports in permafrost and frozen ground. Zvonarev, N.K., et al, (1987, p.23-26, rus) 43-2264
Visco-plasticity of soils and design of structures. Zaretskiĭ, IU.K., (1988, 349p., rus) 43-2281
Crack nucleation in polycrystalline ice under compressive stress states. Kalifa, P., et al, (1989, p.13-21, eng) 43-2604
Gamma Tower for Northern Norway. Des Déserts, L., et al, (1989, p.147-154, eng) 43-2621
Estimate of the size of the damage zone beneath an indenter on ice. Parsons, B.L., (1989, p.411-417, eng) 43-2652
Proceedings. (1988, 64p., eng) 43-3495
Limit force loads and measurements of pack ice driving forces in the Beaufort Sea. Croasdale, K.R., et al, (1988, p.5-11, eng) 43-3496
Global and local ice loads for structure design. Allyn, N., (1988, p.13-22, eng) 43-3497
New results in ice load predictions using the fracture mechanics approach. Wierzbicki, T., (1988, p.23-27, eng) 43-3498
Ice stress measurements around offshore structures. Johnson, J.B., (1988, p.55-59, eng) 43-3504

See also: Shear stress; Strength; Tensile properties; Thermal stresses

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Structural analysis
MV *Arctic* structural performance. Final report. Glen, I.F., et al, (1985, var. p., eng) 43-3365

Structural changes
Heat transfer and structure formation during processes of freezing the eutectic-forming systems. Brazhnikov, S.M., et al, (1988, p.44-46, rus) 43-549

Structures
Numerical design of the ice expansive pressure. Xu, B., (1987, p.73-78, chi) 43-488
Seminar on Applied Ice Mechanics, Narvik, Sep. 8-9, 1987. (1987, var.p., eng) 43-1099
Techniques for using ice as base material in structures. (1987, 15p, eng) 43-1108
Adhesiveness of ice on polymer materials. Andersson, A., (1987, 16p., eng) 43-1113
Short introduction to snow simulation. Jansson, B.-O., (1987, 3p., eng) 43-1114
Atmospheric and sea spray icing. Andersson, A., (1987, 6p., eng) 43-1115
Frazil ice formation on water intake. Andersson, A., et al, (1987, 11p., eng) 43-1116
Energy loss of snow blocks passing through a supporting structure. Bachmann, O., (1987, p 613-622, eng) 43-1267
On the probabilistic collapse analysis of transmission line structures. Murotsu, Y., et al, (1987, p.53-64, eng) 43-1586
Framing arrangements using pressure-stabilized beams. Krainski, W.J., Jr., (1988, 101p., eng) 43-1864
Working group on ice forces. 4th state-of-the-art report. Timco, G.W., ed, (1989, 385p., eng) 43-2812
Failure mechanisms for laboratory, first-year and multi-year ice. Blanchet, D., et al, (1989, p.77-124, eng) 43-2815
Dynamic ice loads on compliant structures. Frederking, R., (1989, p.167-187, eng) 43-2817
Ice-induced vibrations of structures. Sodhi, D.S., (1989, p.189-221, eng) 43-2818
Ice-induced vibrations of structures-self-excitation. Määttänen, M., (1989, p.223-230, eng) 43-2819
Ice forces on fixed and floating conical structures. Wessels, E., et al, (1989, p.231-257, eng) 43-2820
Ice load question: some answers. Sanderson, T.J.O., (1989, p.377-385, eng) 43-2825
Design ice force estimating system for a structure-level ice interaction. Kato, K., (1988, p.361-370, eng) 43-2936
Probabilistic treatment of ice loads on columnar structures. Izumiyama, K., et al, (1988, p.395-404, eng) 43-2939
Dual rigidity of an anti-ice structure. Wang, Q.J., (1988, p.561-569, eng) 43-2954
Construction and creep test of a 15-meter-span ice dome. Kokawa, T., (1988, p.390-399, eng) 43-3011
Numerical model of ice accretion on structures. Svensson, U., et al, (1988, p.436-445, eng) 43-3015
Ice retardant pavements and the importance of stationary winter maintenance. Johannes, H.P., (1989, p.27-29, eng) 43-3485
Snow data analysis for structural safety. Harris, J.R., (1989, p.15-24, eng) 43-3547
Characteristics of snow and snow-induced building damage in Japan. Suzuya, J., et al, (1989, p.59-68, eng) 43-3552
Thermal characteristics of a double roof. Baumgartner, A.M., et al, (1989, p.107-117, eng) 43-3557
Predicting snow loading on the Toronto Skydome. Irwin, P.A., et al, (1989, p.118-127, eng) 43-3558
Cold room studies for sliding snow. Sack, R.L., et al, (1989, p.199-209, eng) 43-3565
Wind tunnel modeling of snow drifting—applications to snow fences. Isyumov, N., et al, (1989, p.210-226, eng) 43-3566
Developing the Eurocode. Judge, C.J., (1989, p.403-412, eng) 43-3584
Architectural design in regions of snow and cold. Mackinlay, I., (1989, p.441-455, eng) 43-3588

Structures *(cont.)*
Heavy snow failures in the Sierra Nevada Mountains of California. Coen, C.C., et al, [1987, p.146-149, eng] 43-3938

See also: Buildings; Concrete structures; Floating structures; Hydraulic structures; Inflatable structures; Offshore structures; Pile structures, Steel structures; Subsurface structures; Superstructures; Underground facilities; Undersnow facilities; Wooden structures

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Glacier flow in the presence of subglacial cavitation. Fowler, A.C., [1986, p.147-170, eng] 43-182
Englacial and subglacial hydrology: a qualitative review. Hooke, R.L., [1988, 21p, eng] 43-1869
Enhanced radar scattering from water inclusions in ice. Bamber, J.L., [1988, p.293-296, eng] 43-1984
Snow and ice melting in karst cavities Mavliudov, B.R., [1988, p.123-128, rus] 43-3269

Subglacial drainage
Capacity of ice-covered canals. Gladkov, E.G., et al, [1987, p 539-542, eng] 43-137
Englacial and subglacial drainage, Storglaciären, Sweden Seaberg, S.Z., et al, [1988, p 217-227, eng] 43-167
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Internal geometry and evolution of moulins, Storglaciären, Sweden. Holmlund, P., [1988, p.242-248, eng] 43-171
Glaciological studies at Juan Carlos I base, 1987-1988. Eraso, A., [1988, 4p., spa] 43-414
Electromagnetic reflection survey 1986 at the Inland Ice margin of the Pâkitsoq basin, central West Greenland. Thorning, L., et al, [1987, p.87-95, eng] 43-750
Glaciological studies at Juan Carlos I. base, 1987-1988. [1988, 3p., eng] 43-1055
Ice-rock interfaces and subglacial erosion. Vivian, R., [1988, p 207-218, fre] 43-1165
Reservoir site selection in glaciated terrain. Davis, E., et al, [1988, p.123-142, eng] 43-1326
Preliminary results of marine geologic investigations, Marguerite Bay. Kennedy, D.S., et al, [1988, p.149-151, eng] 43-1632
Englacial and subglacial hydrology: a qualitative review. Hooke, R.L., [1988, 21p, eng] 43-1869
Mathematical analysis of glacier surges. Fowler, A.C., [1989, p.246-263, eng] 43-2131
Columbia Bay, Alaska: an 'upside down' estuary. Walters, R.A., et al, [1988, p.607-617, eng] 43-2696
Subglacial drainage system in Switzerland. Sharp, M., et al, [1989, p.119-134, eng] 43-3085
Dynamics of a Svalbard ice cap. Dowdeswell, J.A., et al, [1989, p.37-45, eng] 43-3332
Quaternary history and ice dynamics of the late Wisconsin Rainy and Superior lobes, central Minnesota. Mooers, H.D., [1989, 262p, eng] 43-3613
Ice shelf response to ice stream discharge, III. MacAyeal, D.R., [1989, p.38-42, eng] 43-4138
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Operations for an under-ice ecology program. Bolsenga, S.J., et al, [1988, p.372-376, eng] 43-821
Sverdrup wave propagation in ice-free water and under ice. Legen'kov, A.P., [1987, p.53-58, rus] 43-889
Spectral analysis of Canada Basin under-ice thickness data. Key, J.R., et al, [1988, p.1117-1120, eng] 43-1459
Effects of river plume on sea-ice meiofauna in Hudson Bay. Grainger, E.H., [1988, p.131-141, eng] 43-1487
Search for microfossils beneath the Greenland and west antarctic ice sheets. Harwood, D.M., [1988, p.105-106, eng] 43-1621
Surface scattering of acoustic waves by the Arctic Ocean ice cover. McClanahan, T.P., [1988, 117p., eng] 43-1922
Mesoscale interaction of ocean and atmosphere in the Greenland Sea. Bogorodskiĭ, P.V., et al, [1987, p.54-58, eng] 43-2021
Measuring ice motion—from below. Belliveau, D.J., et al, [1989, p.10-14, eng] 43-2571
Ice-penetrating sonobuoy system breaks the High Arctic barrier. Barrette, J.R., et al, [1988, p.63-67, eng] 43-2572
Measuring the complex shear modulus of ice using the Fitzgerald apparatus. Clark, J.H., et al, [1989, p.31-35, eng] 43-2606
Ice thickness and subglacial topography of the Tuyuksu Glacier. Bobrova, L.I., et al, [1988, p.73-76, rus] 43-3258
Radio echo surveys of the Abramov Glacier by low-frequency radar. Vasilenko, E.V., et al, [1988, p.174-182, rus] 43-3275
Thickness and subglacial topography of Chongce Ice Cap. Zhu, G.C., [1989, p.7-14, eng] 43-3435
Underwater observations of ice/structure interactions in small-craft harbors. Wortley, C.A., et al, [1989, p.930-942, eng] 43-3790
Beaufort Sea current measurements, Mar.-Aug. 1987. McCullough, D., et al, [1988, 42p., eng] 43-4035
Ice/bed interface of Svalbard ice masses. Bamber, J.L., [1989, p 30-37, eng] 43-4137
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Ecology of mass accumulations of colonial diatom algae under drifting arctic ice. Mel'nikov, I.A., et al, [1987, p 233-236, eng] 43-4339
Till and glacial landforms in a dry, polar region. Lundqvist, J., [1989, p.27-41, eng] 43-4392
Subglacial geology of ice stream B, West Antarctica. Rooney, S.T., [1988, 165p., eng] 43-4524
Map of antarctic isostatic rise after deglaciation. Lazarev, G.E., et al, [1989, p.30-33, rus] 43-4540

Subgrade soils
Freezing degree-days and frost penetration under roads: a field study. Haas, W.M., et al, [1984, p.1151-1165, eng] 43-676
Modification on frost action in subgrade soils. Kettle, R.J., [1989, p.511-521, eng] 43-3124

Subgrades
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Subgrades and foundations on frozen ground. Sal'nikov, P.I., ed, [1985, 117p., rus] 43-1648
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Interaction of foundations with frost-susceptible subgrades. Zheleznïak, I.I., [1985, p.37-43, rus] 43-1654
Maintenance of unheated warehouses on frost-heaving soils in Chita. Makarov, A.P., et al, [1985, p.43-47, rus] 43-1655
Dynamic properties of thawed soils. Moĭseĭchik, E.K., [1985, p.79-85, rus] 43-1661
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Maintenance of a railway grade over permafrost in Canada. Hayley, D.W., [1988, p.43-48, eng] 43-1723
Sand and gravel as canal subgrade to prevent frost heave. Zhu, Q., et al, [1988, p.400-408, chi] 43-2854
Experience from dimensioning frost protection in roads by VTI method. Stenberg, L., et al, [1989, p.839-844, eng] 43-3152

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Sublimation
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Transition of stresses in frozen alcohol specimens dried in vacuum. Reszka, J., et al, [1989, p.113-116, eng] 43-4207
Redistribution and sublimation loss of the snowpack in the alpine watershed. James, E.D., et al, [1985, p.148-151, eng] 43-4278
Melting of snowflakes below freezing level in the atmosphere. Matsuo, T., et al, [1981, p.10-25, eng] 43-4416

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Subsea permafrost
Conquered permafrost. Denisov, G.V., et al, [1988, 143p., rus] 43-40
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Morphology of glacial dislocations on the Kara Sea coast. Smirnov, V.M., [1987, p.273-278, eng] 43-131
Some stability criteria in fluid and solid mechanics. Song, J.C., [1988, 115p., eng] 43-309
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Thermal cross section for the permafrost and hydrate stability zones in the Kuparuk and Prudhoe Bay oil fields. Lachenbruch, A.H., et al, [1988, p.48-51, eng] 43-511
Studies of frozen strata and cryogenic phenomena. Klimovskiĭ, I.V., ed, [1988, 153p, rus] 43-518
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Cryomorphogenesis in topographic evolution of river estuaries in Holocene. Grigor'ev, M.N., [1988, p.22-28, rus] 43-521
Physical, chemical and mechanical bases of cryolithogenesis. Ershov, E.D., [1987, p.54-66, rus] 43-687
Intensification of placer exploration on the Arctic shelf and plains. Tarakanov, L.V., et al, [1988, p.103-107, rus] 43-689
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Engineering-geological studies of subsea permafrost. Zhigarev, L.A., [1988, p.51-59, rus] 43-818
Marine science atlas of the Beaufort Sea. geology and geophysics. Pelletier, B.R., ed, [1987, 43p., eng] 43-870
Thermal abrasion of sea coasts (Part I). Aré, F.E., [1988, p.1-86, eng] 43-1035
Electrical mapping of permafrost beneath the Beaufort Sea. Edwards, R.N., et al, [1988, p.265-290, eng] 43-1458
Permafrost on Arctic coasts of North America. Hunter, J.A., [1988, p.27-34, eng] 43-1721
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Implications of Mackenzie Delta permafrost regime for climatic history. Allen, D.M., et al, [1988, p.3-13, eng] 43-2321
Constraint to the Wisconsinan glacial history, Canadian Arctic Archipelago. Taylor, A., [1988, p.15-18, eng] 43-2322
Permafrost temperatures from a geotechnical hole in the Beaufort Sea. Taylor, A., et al, [1989, p.119-123, eng] 43-2842
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Coastal subsea permafrost and bedrock observations using dc resistivity. Sellmann, P.V., et al, [1989, 13p., eng] 43-4386

Subsidence
Environmental consequences of 1964 Alaska earthquake in Portage, Alaska. Ovenshine, A.T., et al, [1974, p.3-9, eng] 43-829
Glaciological research in southern Chile, 1986. Reed, D.J., et al, [1988, p.392-405, eng] 43-2003

Substrates
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Subsurface investigations
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Subsurface structures
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Effect of the microstructure of supercooled clouds on albedo and radiation Kondrat'ev, K.IA., et al, (1988, p.583-587, rus) 43-1905
Snow crystal growth in supercooled cloud tunnel. Takahashi, T., et al, (1988, p.841-855, eng) 43-2356
Cable rime accretion measurements on a Laurentian Mountain. McComber, P., et al, (1989, p.427-434, eng) 43-2654
Three-dimensional time-dependent microphysical numerical model of artificial crystallization and dispersal of fog and low clouds. Khvorost'ianov, V.I., (1988, p.50-62, rus) 43-2715
Remote sensor observations of supercooled liquid water. Viswanathan, R., (1989, 63p., eng) 43-3607
Ice phase evolution in supercooled clouds. Halfett, J., et al, (1980, p.317-324, eng) 43-3951
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Ice-forming activity of AgI and PbI2 pyrotechnic nucleants. Aksenov, M.IA., et al, (1988, p 41-47, rus) 43-4585

Supercooled fog
Modeling artificial crystallization and dissipation of supercooled fogs and low clouds Khvorost'ianov, V.I., (1988, p.82-90, rus) 43-1080
Three-dimensional time-dependent microphysical numerical model of artificial crystallization and dispersal of fog and low clouds. Khvorost'ianov, V.I., (1988, p.50-62, rus) 43-2715
Growth and precipitation of ice crystals in supercooled fog. Pashchenko, A.E., et al, (1988, p.75-77, eng) 43-2905
Nonmonotonic kinetics of heterogeneous nucleation of ice crystals in a supercooled fog. Gorbunov, B.Z., et al, (1989, p.1017-1022, eng) 43-4379
Freezing of supercooled water drops in ionized air. Dubrovich, N.A., (1988, p.851-855, eng) 43-4548

Supercooling
Cryo-oscillations. Belousov-Zhabotinskii (BZ) oscillations in frozen and undercooled solution. Vajda, T., et al, (1988, p.661-665, eng) 43-831
Features of supercooled raindrops during mid-winter in Arctic Canada. Kajikawa, M., et al, (1988, p.393-398, eng) 43-1170
Dielectric properties of supercooled glycerol-water solutions. Huck, J.R., et al, (1988, p 627-638, eng) 43-1315
Formation of a solid nucleus in supercooled liquid, 1. Alexiades, V., et al, (1988, p.281-300, eng) 43-1446
Expression of ice nuclei in bacteria and the nature of the ice nucleation site. Phelps, P.A., (1988, 253p., eng) 43-1471
Activity of concentrated NaCl solutions at low temperature. Thurmond, V.L., et al, (1988, p.411-414, eng) 43-1567
Water activity change in aqueous solutions at subfreezing temperatures. Chen, C.S., (1988, p.256-258, eng) 43-1826
Microdynamic behavior of water in clay gels below the freezing point. Fripiat, J., et al, (1984, p.279-286, eng) 43-1832
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Droplet accretion, rime growth, and secondary ice crystal formation. Dong, Y.Y., et al, (1989, p.127-142, eng) 43-2159
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Collective behavior of supercooled liquids in porous media. Ritter, M.B., et al, (1988, p.966-969, eng) 43-2843
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On the supercooling during freezing of water saturated porous media. Chellaiah, S., et al, (1989, p.163-172, eng) 43-3283
Supercooling and superheating effects in phase transitions Visintin, A., (1985, p.233-256, eng) 43-3480
New model for supercooling and superheating effects. Visintin, A., (1986, p.141-157, eng) 43-3481
Macroscopic crystallization theory of supercooled liquids. Kabanov, A.S., (1989, 72p., rus) 43-3631
International Symposium on Cold Regions Heat Transfer, 1989. (1989, 314p., eng) 43-4193
Cooling and freezing process of water. Narumi, A., et al, (1989, p.73-78, eng) 43-4200
Fundamental research on supercooling phenomenon on heat transfer surfaces. Saito, A., et al, (1989, p.79-84, eng) 43-4201
Study on freezing of undercooled solution. Hayashi, Y., et al, (1989, p.85-90, eng) 43-4202
Dynamics of freezing and liquid instability Bagchi, B., (1987, p.29-33, eng) 43-4338
Nucleation process and solidification rate of supercooled water. Bertolini, D., et al, (1988, p.404-407, eng) 43-4378
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Designing mine supports in permafrost. Izakson, V.IU., et al, (1988, 122p., rus) 43-4037
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Suprapermafrost ground water
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Wind systems and snow transport in alpine topography. Meister, R., (1987, p.265-279, eng) 43-1236
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Standards for snow loads. Apeland, K., (1989, p.385-402, eng) 43-3583
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Ice sheet surface topography, eastern Wilkes Land. Goodwin, I.D., (1988, 100p., eng) 43-2144
Snow surface drag of air movement on the Antarctic Plateau. Pt.1. Inoue, J., (1989, p.2207-2217, eng) 43-2491
Snow surface drag of air movement on the Antarctic Plateau, Pt.2. Inoue, J., (1989, p.2219-2224, eng) 43-2492
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Bibliography of needle ice. Lawler, D.M., (1988, p.295-310, eng) 43-1350
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Marine geology. Naidu, A.S., et al, [1988, p.11-27, eng] 43-2427
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Sediment transport during snowmelt in periglacial environments. Rehn, F.K.J., [1985, p.56-68, swe] 43-1017
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Man-induced activation of exogenic processes in taiga. Evseeva, N.S., [1987, p.292-299, eng] 43-133
Carbon balance of Alaskan tundra and taiga ecosystems: past, present and future. Billings, W.D., [1987, p.165-177, eng] 43-435
Heat balance structure of forest landscapes in West Siberia. Abdullaev, A.A., [1988, p.321-326, rus] 43-568
Studies and mapping of forests using spaceborne scanner imagery obtained in winter. Kravtsova, V.I., et al, [1988, p.56-65, rus] 43-586
Renewal of forest resources in eastern Transbaikal. Bobrinev, V.P., et al, [1988, 113p., rus] 43-717
Microbiology of taiga soils. Sorokin, N.D., [1986, p.79-87, rus] 43-1410

Soil freezing and thawing in the middle taiga of the European USSR. Deriugin, A.A., (1989, p.76-82, rus) 43-4067

Thermal regime of frozen soils in burned-out forests of northern Yakutia. Stepanov, G.M., (1988, p 67-71, rus) 43-4068

Microbial biomass and activity in a subarctic soil ten years after crude oil spills. Sparrow, S.D., et al, (1988, p.304-309, eng) 43-4375

Tailings

Study to model the effects of uranium mine tailings on a permafrost environment. Woo, M.K., et al, (1988, 41p., eng) 43-1970

Ice buildup in tailing basins. Barr, D.W., (1989, p.202-214, eng) 43-2103

Design and monitoring of earth embankments over permafrost. Dufour, S., et al, (1988, p.1001-1010, eng) 43-2319

Cyanide effluent control by freeze/thaw processing. Meech, J.A., (1985, p.80-94, eng) 43-3896

Taliks

Present state of the Ponneurgen dam Biianov, G F., et al, (1988, p 36-40, rus) 43-561

Classification of cryogenic strata according to distribution Fotiev, S.M., (1988, p.63-72, rus) 43-593

Interaction between permafrost and groundwater Wang, B.L., et al, (1988, p.143-150, chi) 43-2849

Talus

On the formulation of basal debris drag for the case of sparse debris. Shoemaker, E.M., (1988, p.259-264, eng) 43-1978

Displacement of periglacial pebbles in the French Alps. Manté, C., et al, (1988, p.87-117, fre) 43-2298

Rock glaciers. Giardino, J.R., ed, (1987, 355p., eng) 43-3041

Rock glaciers: a review of the knowledge base. Vitek, J.D., et al, (1987, p.1-26, eng; 43-3042

Rock glacier response to abrupt changes in talus production. Olyphant, G.A., (1987, p.55-64, eng) 43-3046

Rock glacier debris systems and flows. Johnson, P.G., (1987, p.175-192, eng) 43-3054

Tanker ships

Technical operation of sea port structures. Kostiukov, V.D., ed, (1987, 128p., rus) 43-756

Structures built of ice for unloading liquid cargo. Ignat'ev, S.V., (1987, p.85-88, rus) 43-757

Tanks (combat vehicles)

Studies of combat vehicle mobility. Eriksson, A., (1985, p.301-310, swe) 43-382

Antitank obstacles for winter use. Richmond, P.W., (1988, 11p., eng) 43-1997

Use and application of PRESTO in Snow-III West. Stallings, E.S., et al, (1986, p.11-24, eng) 43-4623

SMART measurements at SNOW III West. Bean, B.L., et al, (1986, p.141-176, eng) 43-4633

Tanks (containers)

Multifrequency passive microwave observation of saline ice grown in a tank. Grenfell, T.C., et al, (1988, p.1687-1690, eng) 43-1896

Anaerobic filter treatment of septic tank effluent at low temperatures. Viraraghavan, T., et al, (1989, p.131-140, eng) 43-2096

See also: Storage tanks

Tectonics

Geotechnical investigations of glaciotectonic deformation in central and southern Alberta. Tsui, P.C., (1988, 7p, eng) 43-121

Geocryology of the European USSR. Ershov, E.D., ed, (1988, 357p., rus) 43-3067

Recent relative sea-level change in eastern North America. Braatz, B.V., et al, (1987, p.29-46, eng) 43-3394

Holocene neotectonics and fault zone sea level anomaly Newman, W.S., et al, (1987, p.97-111, eng) 43-3399

Late Cenozoic history of the interior basins of Alaska and the Yukon. Carter, L.D., ed, (1989, 114p., eng) 43-4478

Telecommunication

Polar orbiting satellites improve polar communications Hathaway, R.G., (1986, p.372-375, eng) 43-2330

See also: Data transmission; Radio communication

Telemetering equipment

Vibration analysis of a DEW Line station. Haynes, F.D., et al, (1988, p.1513-1518, eng) 43-6

Automated information system for determining avalanche danger. Belima, A.S., et al, (1987, p.167-170, rus) 43-252

Automation of snow avalanche observations. Agishev, V.S., et al, (1987, p.140-150, rus) 43-2512

Diurnal fluctuations in remote precipitation gage readings. Cooley, K.R., et al, (1987, p.10-19, eng) 43-3923

Contribution of the SNOwpack TELemetry system. Doesken, N.J., et al, (1987, p.20-30, eng) 43-3924

Transition from manual to automated systems for acquiring snow data. Crook, A.G., et al, (1984, p.165-167, eng) 43-4327

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Temperature

Kolmogorov Constants for temperature, humidity, and refractive index spectra. Andreas, E.L., (1988, p.2399-2406, eng) 43-1278

Photosynthesis of tundra mosses, Philip Smith Mountains, Alaska. Harley, P.C., et al, (1989, p.251-259, eng) 43-4074

International Symposium on Cold Regions Heat Transfer, 1989. (1989, 314p., eng) 43-4193

See also: Air temperature; Frozen ground temperature; Frozen rock temperature; Ice temperature; Low temperature research, Low temperature tests, Snow surface temperature; Snow temperature; Soil temperature; Surface temperature; Thermal properties; Threshold temperatures; Water temperature

Temperature distribution

Evaluation of frost data of various soils in a nation-wide observation network. Furugård, G., (1985, p.151-172, swe) 43-371

Techniques suitable for forecasting precipitation types using NWP model output. Koclas, P., (1987, p.8-18, eng) 43-385

Temperature control of frozen ground around mine shafts. Tiutiunnik, P.M., (1987, p.60-67, rus) 43-2271

Englacial temperature distribution in summer polar ice cap. Greuell, W., et al, (1989, p.289-303, eng) 43-3190

Temperature distribution in a snow cover Samoliuk, V.I., (1988, p.145-149, rus) 43-3321

Natural and surface tension driven convection in open cavities. Tokura, I., et al, (1989, p.215-220, eng) 43-4215

Snow temperature profiles in the central Sierra Nevada. McGurk, B.J., (1983, p.9-18, eng) 43-4348

Phase change heat transfer around cylindrical heat source. Sasaguchi, K., et al, (1989, p.43-49, eng) 43-4373

Temperature effects

Sandwich panels at low temperature. Hassinen, P., et al, (1988, p.749-756, eng) 43-659

Hess Creek thermal erosion test site: frozen cut slope surface treatments. Rooney, J.W., et al, (1984, p.1129-1149, eng) 43-675

Growth and closure of cracks in steels at low and high temperatures. Ogura, K., et al, (1988, p.1267-1272, eng) 43-980

Influence of thermal cycling on fiber composites Dutta, P.K., et al, (1988, p.141-147, eng) 43-1213

Glaciers of the Austrian Alps, 1985-1986 Patzelt, G., (1987, p.173-189, ger) 43-1683

Environmental Quality R&D Symposium, 13th, Nov. 1988. (1988, 575p., eng) 43-1809

Low temperature thermal treatment of volatile organic compounds. Nielson, R.K., et al, (1988, p.187-202, eng) 43-1810

Comprehensive study of cold climate airport pavement cracking. Haas, R., et al, (1987, p.198-245, eng) 43-1863

Mechanical properties of bitumen. Rosengren, A., (1986, 60p. + appends., swe) 43-1878

Glacier variations caused by climatic changes. Oerlemans, J., (1988, p.333-341, eng) 43-1990

Preliminary results from simulation of retaining wall displacement by frost action. Li, Y., et al, (1989, p.389-396, eng) 43-2119

Evaluation of new thermomechanical constitutive theory for snow; final report. Brown, R.L., (1989, 43p., eng) 43-2135

Geocryological studies on the passing of gas pipelines through river valleys. Kondrat'ev, V.G., (1988, 192p., rus) 43-2153

2-D modelling of river ice thermal melting. Sarraf, S., et al, (1988, p.417-433, eng) 43-2183

Ice control with thermal/bubbler plumes: line source configuration. Baddour, R.E., (1988, p.435-445, eng) 43-2184

Influence of the temperature range on the stress-deformed condition of the permafrost massif of the "Kuvet" formation. Kovlekov, I.I., (1987, p 48-50, rus) 43-2289

Behavior of bolted flanged connectors in low temperatures. Biriulev, V.V., et al, (1988, p.9-14, rus) 43-2432

Resistance to destruction of steel pipes due to temperature and loads. Krasovskiĭ, A.IA., et al, (1987, p.100-105, rus) 43-2458

Temperature effect on steel crack resistance. Kashtalian, IU.A., et al, (1987, p.111-113, ru 43-2460

Open water in lake ice due to submerged power plant outlet. Tesaker, E., et al, (1988, p.72-80, eng) 43-2981

Ice formation during the development of ravine thermal erosion. Poznanin, V.L., (1988, p.53-58, rus) 43-3256

Approximation methods for calculating the thermal effect of snow cover Romanovskiĭ, V.E., (1987, p.183-188, rus) 43-3383

Study on deformation features of frozen coarse sand. Shusherina, E.P., et al, (1987, p.227-237, rus) 43-3387

Heat-engineering calculation of permafrost bases of buildings and structures. Gokhman, M.R., (1988, p.158-161, eng) 43-3664

Engineering geophysics. Liakhovitskiĭ, F.M., et al, (1989, 251p., rus) 43-3706

Bond behaviour of reinforced concrete at low temperature. Van der Veen, C., et al, (1989, p.852-861, eng) 43-3783

Effects of low temperatures on biological systems. Grout, B.W.W., ed, (1987, 500p., eng) 43-3979

Physico-chemical principles in low temperature biology. Taylor, M.J., (1987, p.3-71, eng) 43-3980

Low temperature and biological electron microscopy. Skaer, H.B., (1987, p.177-233, eng) 43-3982

Higher plants at freezing temperatures. Grout, B.W.W., (1987, p.293-314, eng) 43-3983

Changes in summer pine needles at freezing. Rodionov, V.S., et al, (1989, p.238-244, rus) 43-4158

Characteristics of a heat exchanger with the melting of fallen snow. Aoki, K., et al, (1989, p.91-94, eng) 43-4203

Thermal effect on high-rise buildings in cold regions. Lee, Y., et al, (1989, p.117-122, eng) 43-4208

Five snowmelt models: a comparison of prediction accuracy. McGurk, B.J., (1985, p.171-174, eng) 43-4284

Fluctuating nature of permafrost boundary movements. Mel'nikov, P.I., et al, (1989, p.412-415, rus) 43-4383

Forecasting thermo-mechanical conditions of perennially frozen massif. Izakson, V.IU., et al, (1989, 103p., rus) 43-4490

Arctic sea-ice extent and anomalies, 1953-1984. Mysak, L.A., et al, (1989, p.376-405, eng) 43-4563

Temperature gradients

Temperature gradient driven vapor transport in snow. Sommerfeld, R.A., (1987, p.231-234, eng) 43-584

Foundation stabilization of an on-grade structure. Gill, J.D., (1984, p.1091-1099, eng) 43-672

Permafrost temperatures related to climate warming. Osterkamp, T.E., et al, (1987, 21p., eng) 43-1729

Ice loads on hydraulic structures in the Volga River. Semenov, IU.A., (1988, p.165-171, rus) 43-1780

Preliminary results of frost heave tests in a large cell. Konrad, J.M., et al, (1989, p.379-388, eng) 43-2118

Heat flow profile across the Sverdrup Basin, Canadian Arctic Islands. Jones, F.W., et al, (1989, p.171-180, eng) 43-4604

Temperature inversions

Atmospheric remote sensing in arctic regions. Felde, G.W., et al, (1987, p.319-326, eng) 43-867

Experimental investigation of Arctic haze at Alert, N.W.T., March 1985. Trivett, N.B.A., et al, (1988, p.341-376, eng) 43-1427

Environmental factors in average rock temperatures in Yakutia. Zamolotchikova, S.A., (1987, p.94-108, rus) 43-3374

Temperature measurement

Aerial thermography—a tool in municipal energy planning. Boberg, A., (1985, p.111-114, swe) 43-367

Design of calorimetry-type water content meter for snow. Li, W., et al, (1987, p.141-144, chi) 43-500

Errors in freezing index values calculated from monthly average temperatures. Haas, W.M., (1984, p.1075-1089, eng) 43-671

Measuring temperature of the surface water layer. Cherniak, A.V., (1987, p.91-99, rus) 43-891

Measuring liquid water in snow from a subalpine snowpack. Perla, R., et al, (1987, p.71-78, eng) 43-1290

Specific heat measurement in the temperature range 100-300 K. Rajeswari, M., et al, (1988, p.1017-1022, eng) 43-1369

Errors in temperature measurements in shallow boreholes. Deviatkin, V.N., et al, (1988, p.101-110, rus) 43-1608

Ice temperature measurement in deep holes of Antarctica using a heat sensor embedded in the hole bottom. Vostretsov, R.N., et al, (1989, p.129-136, eng) 43-2058

Seafloor temperature and thermal conductivity. Sellmann, P.V., et al, (1989, 19p., eng) 43-2123

Radiative measurement of snow surface temperature. Zachek, S.I., et al, (1987, p.235-240, rus) 43-2524

Installation of automatic well temperature measuring system. Judge, A., et al, (1989, p.89-94, eng) 43-2591

Thermal analysis of automatic well temperature measuring system. Taylor, A., et al, (1989, p.95-101, eng) 43-2592

Use of a radiosonde method in fog temperature measurements. Kuzenkov, A.F., (1988, p.114-118, rus) 43-2720

Satellite and airborne infrared sensing of sea surface temperature. Rychkova, I.A., et al, (1988, 222p., rus) 43-2858

Accuracy and repeatability of in situ snow wetness measurements. Bergman, J.A., (1987, p.142-145, eng) 43-3937

Polar microwave brightness temperatures from Nimbus-7 SMMR. Comiso, J.C., et al, (1989, 82p., eng) 43-4155

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Glaciers of the Austrian Alps, 1985-1986. Patzelt, G., (1987, p.173-189, ger) 43-1683

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Is Alaska's permafrost melting. Esch, D.C., [1988, 2p., eng] 43-1824
Variations in infrared radiation from snow and ice cover. Bordonskiĭ, G.S., et al, [1988, p.83-87, rus] 43-2196
Temperatures of rock walls and frost shattering Francou, B., [1988, p.159-180, fre] 43-2301
Study on typical thermal conditions in a rock wall Manté, C., et al, [1988, p.181-220, fre] 43-2302
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Soil temperature and advective changes in air temperature Mietus, M., [1988, p.95-103, eng] 43-2769
Valley wall longwave flux contributions, West Gulkana Glacier, Alaska. Henderson, J.P., et al, [1988, p.63-80, eng] 43-2794
Air temperature variations over different surfaces in the West Gulkana Glacier valley. Brazel, A.J., et al, [1988, p.81-91, eng] 43-2795
Quaternary paleoceanography of the Atlantic Ocean. Barash, M.S., [1988, 270p., rus] 43-2811
Seasonally and perennially frozen rock distribution in the USSR and their temperature variations. Kondrat'eva, K.A., et al, [1987, p.83-93, rus] 43-3373
Environmental factors in average rock temperatures in Yakutia. Zamolotchikova, S.A., [1987, p.94-108, rus] 43-3374

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ngth of thawed and frozen dam soils under stress asil'ev, I.M., et al, [1988, p.27-33, eng] 43-1087
in sections, serial cuts and 3-D analysis of snow. Jood, W., [1987, p.35-48, eng] 43-1216
Nonlinear method of designing foundation platforms for elevators. Vysokovskiĭ, V.L., et al, [1985, p.88-97, rus] 43-1663
Tensile strength of ice containing cracks, final report Schulson, E.M., [1988, 7p., eng] 43-1701
Tensile strength of cracked ice. Schulson, E.M., et al, [1989, p.303-311, eng] 43-2242
Tensile strength test for multi-year sea ice. Sinha, N.K., [1989, p.1-6, eng] 43-2602
Uniaxial tension/compression tests on ice—preliminary results. Cole, D.M., et al, [1989, p.37-41, eng] 43-2607
Experimental results on the tensile strength of atmospheric ice Druez, J., et al, [1989, p.405-410, eng] 43-2651
IAHR Symposium on Ice, 9th, 1988. [1988, 3 vols., eng] 43-2906
Continuum damage mechanics approach to describe the uniaxial microcracking of ice. Santaoja, K., [1988, p.138-151, eng] 43-2917
Strain energy failure criterion for S2 freshwater ice in flexure. Cole, D.M., [1988, p.206-215, eng] 43-2923
Failure criteria for multi year ice. Masterson, D.M., et al, [1988, p.227-251, eng] 43-2925
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Terrain identification
Detection and identification of Arctic landforms. Dean, K.G., et al, [1988, p.363-371, eng] 43-832
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Ice model basin at Nagasaki Research and Development Center. Takekuma, K., et al, [1988, p.44-49, eng] 43-971
Model simulation of ramming tests conducted with the USCGC *Polar Star*. Comfort, G., [1988, 146p. + appends., eng] 43-1879
Effect of parallel midbody on the resistance of ships in level ice. Baker, D.N., et al, [1988, 83p. + appends., eng] 43-1925
Model tests of the Louis S. St. Laurent original bow fitted with strakes. Carter, D., [1988, 13p. + appends., eng] 43-1974
Development of apparatus used for water migration test in soil. Xu, X.Z., et al, [1988, p.189-196, chi] 43-2852

Tests
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Brittle fracture of thin solids under compression Gol'dshteĭn, R.V., et al, [1987, p.150-159, eng] 43-605
Norwegian ice testing laboratory. Senneset, K., et al, [1988, p.629-645, eng] 43-650
Ice model basin test data processing and evaluation. Ionov, B.P., [1985, 7p., eng] 43-2695
Research of ice-going qualities of river icebreakers. Tronin, V.A., et al, [1988, p.686-696, eng] 43-2965
Ship trials for the Soviet antarctic research ship *Akademik Fedorov* Haapanen, M.E., [1989, p.975-982, eng] 43-3794
Introduction to testing methods session. Frederking, R., [1988, p.135-141, eng] 43-4178
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Thaw consolidation of frozen soils. Tong, C.J., [1988, p.327-331, chi] 43-2876
Thaw consolidation of frozen clays of post-glacial origin in Helsinki. Vähäaho, I., et al, [1989, p.583-600, eng] 43-3131

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Models for improving engineering and geocryological research. Mel'nikov, V.P., et al, [1988, p.3-13, rus] 43-1596
Effect of seasonal freezing on melt pools beneath buildings. Pichuev, V.V., [1985, p.31-37, rus] 43-1653
Frost heave in relation to the active layer depth. Ivin, I.A., [1985, p.48-53, rus] 43-1656
Modified Berggren method—a review. Zarling, J.P., et al, [1989, p.262-273, eng] 43-2108
Influence of ground ice variability on settlement in thawing permafrost. Collins, P.M., et al, [1989, p.297-307, eng] 43-2111
Diurnal frost-heave activity in the Sör-Rondane Mountains, Antarctica. Matsuoka, N., et al, [1988, p.422-428, eng] 43-2483
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Thermo-physical aspects of developing mineral resources. Arens, V.Zh., et al, [1988, 336p., rus] 43-3066
Frost protection in design and construction. Nordal, R.S., et al, [1989, p.127-163, eng] 43-3096
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Thawing rate
Estimating the thawing rate of ice-saturated porous deposits. Buĭskikh, A.A., et al, [1988, p.73-78, rus] 43-3863
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Density functional theory for the freezing of Lennard-Jones binary mixtures. Rick, S.W., et al, [1989, p.1188-1199, eng] 43-1820
Dynamic transport of river ice. Shen, H.T., et al, [1988, p.147-156, eng] 43-3028
Snow-smoke interaction. Hogan, A.W., et al, [1988, p.497-506, eng] 43-3431
Wave interaction between two floating bodies. Björkenstam, U., et al, [1989, p.627-637, eng] 43-3763
Scale effects in ice-structure interaction: analytical aspects. Jordaan, I.J., [1988, p.161-181, eng] 43-4181
Review of pure conduction with freezing. Lunardini, V.J., [1989, p.27-32, eng] 43-4195
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Startup from the frozen state and performance of heat pipes. Jang, J.H., [1988, 217p., eng] 43-2891
Thermal analysis of heated lockwalls for ice control. Nakato, T., et al, [1988, p.23-33, eng] 43-2976
Thermo-mechanically coupled ice sheets. Hindmarsh, R.C.A., et al, [1989, p.57-69, eng] 43-3335
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Thermal balance
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Thermal conductivity
Thermophysical properties of snow and ice on the Vavilov Dome, Severnaya Zemlya. Nikolenko, A.V., [1987, p.51-58, rus] 43-227
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Measuring thermophysical properties of conducting materials at low temperatures. Buravoĭ, S.E., et al, [1988, p.92-96, rus] 43-694
Experimental study of frozen fringe characteristics. Akagawa, S., [1988, p.209-223, eng] 43-1342
Thermal conductivity of wet porous media. Azizi, S., et al, [1988, p.2305-2317, fre] 43-1380
Theory of the thermal conductivity of wet porous materials. Moyne, C., et al, [1988, p.2319-2330, fre] 43-1381
Stefan Problem simulation of thermal dynamics in frozen media. Gori, F., et al, [1988, p.229-235, eng] 43-1472
Measuring instrument for heat flow and temperatures in soils. Silifonkin, V.I., et al, [1988, p.95-101, rus] 43-1607
Frost protection and thermal insulation of shallow-laid pipelines. Mäkelä, H., [1982, 78p., fin] 43-1823
Ice sheet temperature distribution and surface paleotemperature changes. Putikov, O.F., [1989, p.28-36, eng] 43-2044
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Paleoclimatic interpretation of the results of thermometry of holes to a depth of 900 m at Vostok Station. Vostretsov, R.N., et al, [1989, p.119-123, eng] 43-2056
Modified Berggren method—a review. Zarling, J.P., et al, [1989, p.262-273, eng] 43-2108
Preliminary results from simulation of retaining wall displacement by frost action. Li, Y., et al, [1989, p.389-396, eng] 43-2119
Seafloor temperature and thermal conductivity. Sellmann, P.V., et al, [1989, 19p., eng] 43-2123
Alternate interpretation of the conductivity of HCl-doped ice. Devlin, J.P., [1988, p.5967-5968, eng] 43-2188
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Nomographs of soil annual average temperature. Chekhovskiĭ, A.L., et al, [1989, p.219-231, eng] 43-3100
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Reservoirs and water-containing structures. Dotsenko, T.P., ed, [1989, 190p. (pertinent, p.140-149), rus] 43-3628

Review of pure conduction with freezing. Lunardini, V.J., (1989, p.27-32, eng) 43-4195
Climate and energy balance model for the arctic tundra. Szilder, K., et al, (1989, p.263-271, eng) 43-4221
Optimizing ice stowing in underground mining in permafrost. Mikhailov, IU.V., et al, (1989, p.260-263, eng) 43-4469

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Double-diffusive convection under sea ice. Atkinson, J.F., et al, (1988, p.89-95, eng) 43-149
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Frost penetration and thermal regime in dry gravel. McKeown, S., et al, (1988, p.111-123, eng) 43-872
New diffusion chamber for detecting ice-forming nuclei on membrane filters or substrata. Bogdanova, S.L., (1988, p.95-105, rus) 43-2718

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Structure of the Davydov glacier from data of radar echo sounding and thermal drilling. Vasilenko, E.V., et al, (1988, p.208-215, rus) 43-964
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Thermal properties of well casings. Zimin, L.B., et al, (1987, p.75-80, rus) 43-2273
Optical test methods for buildings and structures Testing the quality of thermal insulation. IAlyshev, F.Kh., (1988, 80p., rus) 43-2575
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Architectural design in regions of snow and cold. Mackinlay, I., (1989, p.441-455, eng) 43-3588
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Stability of structures on permafrost Babello, V.A., et al, (1985, p 25-31, rus) 43-1652
Thermal regime of freezing soils in northern Kazakhstan. Zhanalinov, B.N., et al, (1985, p.67-69, rus) 43-1659
Regulation of the thermal regime in northern mines and pits; resource-saving systems. Shuvalov, IU.V., (1988, 192p., rus) 43-2152
Forecasting and control of the thermal regime in mine shafts. Galkin, A.F., ed, (1987, 67p., rus) 43-2284
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Thermo-physical studies of the cryolithozone of Siberia. Pavlov, A.V., ed, (1983, 213p., rus) 43-3862
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Dynamics and thermal conditions of rivers. Rossinskif, K.I., (1987, p.3-16, eng) 43-3886
Thermal regime of water in power plant reservoir. Sokol'nikov, N.M., (1987, p.34-38, eng) 43-3889
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Heat calculations of complex systems of underground pipelines (recommendations). Danielian, IU.S., et al, (1987, 70p, rus) 43-4491
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International Congress on Experimental Mechanics, 6th, 1988. (1988, 1278p. (2 vols.), eng) 43-977
Stress intensity factors of cracked plates under thermal load. Matsumoto, E., et al, (1988, p 65-70, eng) 43-978
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Dynamics of phase boundaries between ice and water, Pt. 3. Alts, T., et al, (1983, p.301-329, eng) 43-1572
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Continuum description of phase boundary thermodynamics of ice and water pt.4. Alts, T., et al, (1989, p.1-22, eng) 43-2241
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Thin sections of indented ice. Nadreau, J.P., et al, (1988, p.149-152, eng) 43-4180
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Thixotropy
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Engineering geology today: theory, practice, problems. Sergeev, E.M., ed, (1988, 293p., rus) 43-883
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Characteristics of debris flow caused by outburst of glacial lake in Boqu River, Xizang, China, 1981. Xu, D., (1988, p.569-580, eng) 43-4569
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Tires
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Current Army environmental operational support. Chesley, C.H., et al, (1986, p.241-247, eng) 43-4638

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Periglacial topography of Brooks Range and Alaskan Arctic Slope. Schunke, E., (1987, p.149-171, ger) 43-407
Role of frost-related processes in topographic changes. Liubtsova, E.M., (1988, p.55-61, rus) 43-526
Morphometric maps of the antarctic bedrock. Berliant, A.M., et al, (1988, p.62-65, rus) 43-795
Surface waveforms on the Ellesmere Island ice shelves and ice islands. Holdsworth, G., (1987, p.385-403, eng) 43-916
Suspected glacial cirque form in central Sweden. Agrell, H., (1985, p.26-27, swe) 43-1012
Snow cover to alter terrain signatures on radar images. Geile, W., (1988, p.455-457, eng) 43-1530
Ice sheet surface topography, eastern Wilkes Land. Goodwin, I.D., (1988, 100p., eng) 43-2144
Historical ice jam flood data. Stanley, S., et al, (1988, p.115-137, eng) 43-2168
Ice shelf topography and structure from space imagery. Stephenson, S.N., et al, (1989, p.162-169, eng) 43-3353
Determination of ground and roof snow loads at a particular site. Powell, D.R., (1989, p 456-461, eng) 43-3589
Identification of ancient glacier marks using AVHRR imagery. Johnston, A.C., et al, (1989, p.917-929, eng) 43-4106
Topography as a fundamental element of glacial systems. Kuhle, M., (1988, p.545-568, eng) 43-4568
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Topographic maps
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Terrain models—a tool for natural hazard mapping. Toppe, R., (1987, p 629-638, eng) 43-1270
Glacier and climate studies, West Gulkana Glacier and environs, Alaska, Vol.I. Marcus, M.G., ed, (1988, 142p, eng) 43-2788
Mass balance of West Gulkana Glacier based on topographic maps. Chambers, F.B., et al, (1988, p.19-25, eng) 43-2790
Mapping the topography of continental ice. Remy, F., et al, (1989, p.98-107, eng) 43-4146

Topographic surveys
Oscillations of the Davydov and Sary-Tor glaciers from topographic surveys. Kuz'michenok, V.A., (1988, p.193-198, rus) 43-961
Bedrock topography beneath Greenland ice sheet. Fisher, E., et al, (1989, p 2874-2882, eng) 43-2394

Topography
Laboratory investigation of ice jam topography in a sinuous channel. Yoon, S.E., et al, (1988, p.168-179, eng) 43-3030

Towers
Portable ten-meter instrument mast. Jairell, R.L., et al, (1984, p.168-171, eng) 43-4328

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Tracked vehicles
Snow vehicles. Barakhtanov, L.V., et al, (1986, 191p., rus) 43-715
Mobility: working group report. Blaisdell, G.L., et al, (1987, p.273-274, eng) 43-862
Improving the negotiating ability of all-terrain vehicles. Kuliashov, A.P., et al, (1987, p.13-14, rus) 43-1021
Effects of caterpillar-tracked transportation on permafrost thawing. Gladkov, V.P., (1988, p 36-48, rus) 43-1538
International Conference on Air Cushion Technology, Montreal, 1987. (1988, 381p., eng) 43-1747
Tractive requirements for off-road ACV's. Yong, R.N., et al, (1988, p.23-51, eng) 43-1750
PMT (pneumatic mattress track) vehicle system. Burmeister, F., (1989, p.44-51, eng) 43-3493

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Traction
Mobility of different forest machines in snow. Sirén, M., et al, (1985, p 229-239, swe) 43-375
Mobility in snow due to tires and snow chains. Bernhardsson, S., (1985, p.240-248, swe) 43-376
Tracks for increased mobility under winter conditions. Granlund, D., (1985, p.249-255, swe) 43-377
Vehicle mobility over snow. Blaisdell, G.L., (1987, p.265-266, eng) 43-859
Instrumented vehicle for the measurement of mobility parameters. Blaisdell, G.L., (1988, p 377-388, eng) 43-2667
Radial tire and traction aid performance on ice and in snow. Rogers, T., et al, (1986, 20p., eng) 43-4590

Tractors
Analyzing the trends in the improvement of mounted rippers. Khmara, L.A., et al, (1988, p.108-112, rus) 43-591
Productivity of bulldozer-ripper assemblies under winter conditions. Kaliuzhnyĭ, M.I., et al, (1988, p.11-13, rus) 43-1018
Cold-resistance of spring steel 60S2KhA. Bruk, B I, et al, (1987, p.34-37, rus) 43-2452
Study of cold resistance of cemented steel for gears. Shchadrichev, E.V., et al, (1987, p.60-65, rus) 43-2454

Trafficability
Trafficability in snow and ice in Sweden. Wangel, G., (1985, p.72-74, swe) 43-362
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Studies of combat vehicle mobility. Eriksson, A., (1985, p.301-310, swe) 43-382
Snow vehicles. Barakhtanov, L.V., et al, (1986, 191p., rus) 43-715
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Contribution of chemistry to road trafficability. Dalcq, P., et al, (1988, p 61-63, ita) 43-1064
Shear and compressive strength of snow. Alger, R.G., (1989, p.325-334, eng) 43-3577
Strength profiles of Dakshin Gangotri Ice Shelf. Sharma, S S, (1989, p.289-299, eng) 43-3734
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Transmission
Proceedings. Vol.2: Unclassified section. (1988, 738p., eng) 43-3428
Impact of wet snow on visible, infrared and millimeter wave attenuation. Bates, R.E., et al, (1988, p.523-535, eng) 43-3432
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Peatland disturbances along hydroelectric transmission corridors in Canada. Magnusson, B., et al, (1987, p.470-478, eng) 43-195
Expert system countermeasures for snow accretion on transmission lines. Nara, K., et al, (1988, p.1052-1058, eng) 43-1317
Effect of voltage polarity on ice accretions on short string insulators. Farzaneh, M., et al, (1989, p.419-426, eng) 43-2653
Cable rime accretion measurements on a Laurentian Mountain. McComber, P., et al, (1989, p.427-434, eng) 43-2654
Analysis of overhead transmission structures by probabilistic methods. Krishnasamy, S.G., (1987, p.417-425, eng) 43-3482
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SNOW III WEST field experiment report. Volume 1. Lacombe, J., et al, (1988, 170p., eng) 43-2121
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Basic characteristics and the elements of adaptive simulation of transportation processes on the Northern Sea Route. Arikainen, A.I., et al, (1987, p 20-33, rus) 43-314
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Ways of decreasing construction terms and man-hours for electrical substations. Gaft, S.IA, et al, (1988, p 43-44, rus) 43-3v2
Russian joint venture in western Siberia. Pokonov, N.Z., et al, (1988, p.19-21, rus) 43-696
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Air cushion vehicles for Arctic operation. Koleser, J., et al, (1988, p.59-71, eng) 43-1425
Technological damage to tundra vegetation during exploratory drilling. Chalysheva, L.V., (1988, p.49-56, rus) 43-1539
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Various applications of hydraulic jets (Bertin & Cie). Cayla, J., (1988, p 67-91, eng) 43-1751
Problems of mobile buildings in the North. (1986, 112p., rus) 43-2195
Special winter road for the transport of pontoon units. Zavizion, V.G., et al, (1988, p.37-38, rus) 43-2232
Transport of freezing cargoes: a handbook. Noskov, IU.A., ed, (1988, 206p., rus) 43-2895
Freezing and defrosting of cargo. Lepnev, M.I., et al, (1988, 141p., rus) 43-3063
Transport and unloading of ballast materials during subzero temperatures. Terekhin, L.N, et al, (1989, p.28-29, rus) 43-3535
Unloading of the *Mikhail Somov* near Mirnyy Station in the absence of shore ice. Grigor'ev, IU A., et al, (1988, p.98-102, rus) 43-3842
Airships in the Arctic: past, present and future. Castellani, A., (1989, 7p., fre) 43-4026
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Traverses
JARE glaciological research, Queen Maud Land, 1986. Nishio, F., et al, (1988, 49p., eng) 43-540
JARE wintering party activities, 1986-1987. Naito, Y., (1988, p.163-186, jpn) 43-841
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Finding frost hardiness of *Eucalyptus* by diffusate in freezing chamber. Hallam, P.M., et al, (1988, p.595-600, eng) 43-296
Proceedings of the Alaska Forest Soil Productivity Workshop, 1987. (1988, 120p., eng) 43-1142
Dependence of snow melting on forest structure. Otterman, J., et al, (1988, p.1-8, eng) 43-1377
Climatic variability and tree response within the forest-alpine tundra ecotone. Hansen-Bristow, K.J., et al, (1988, p.505-519, eng) 43-1670
Field guide for predicting snow damage to ponderosa pine plantations. Megahan, W.F., et al, (1988, 9p., eng) 43-1710
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Reykjavik, Iceland: a northern capital Thorvaldsson, T.S., et al, (1988, p.191-204, eng) 43-4243
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Carbon balance of Alaskan tundra and taiga ecosystems: past, present and future. Billings, W.D., (1987, p.165-177, eng) 43-435
Special peat formations in Svalbard. Låg, J., (1980, p.205-210, eng) 43-451
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High arctic landscapes: comparison and reflexions. Rudberg, S., (1983, p.255-264, eng) 43-928
Palynology in a polar desert, eastern North Greenland Funder, S., et al, (1988, p.195-207, eng) 43-1034
Effects of all terrain vehicles on tundra. Racine, C., et al, (1988, 12p., eng) 43-1340
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Effects of geological exploration on the environment of Bol'shezemel'skaya Tundra. Brattsev, A.P., ed, (1988, 128p., rus) 43-1534
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Planning surface transportation in northern Canada. Hume, V., (1988, p.17-21, eng) 43-1749
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High-humus illuvial-metamorphic soils of western Chukotka. Bystriakov, G.M., (1988, p.1-12, eng) 43-2022
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Disruption of tundra from recovery of stray logs on river banks. Alekseenko, L.N., et al, (1988, p.181-190, eng) 43-2579
Soil formation and soil properties in Spitsbergen. Klimowicz, Z., et al, (1988, p 61-72, eng) 43-2767
Methane: the hidden greenhouse gas. Pearce, F., (1989, p 37-41, eng) 43-3284
Seed bank as source of colonizers on tundra disturbance. Ebersole, J.J., (1989, p.466-471, eng) 43-3988
Photosynthetic response of *Sphagnum* mosses, Philip Smith Mountains, AK. Murray, K.J., et al, (1989, p.244-250, eng) 43-4073
Photosynthesis of tundra mosses, Philip Smith Mountains, Alaska. Harley, P.C., et al, (1989, p.251-259, eng) 43-4074
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Summer energy balance of alpine tundra in Canadian Rockies. Bowers, J.D., et al, (1989, p.135-143, eng) 43-4087
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Unfrozen water content of undisturbed frozen silt. Tice, A.R., et al, (1988, 17p., eng) 43-1998
Soil heat flux in permafrost: characteristics and accuracy of measurement. Halliwell, D.H., et al, (1987, p.571-584, eng) 43-2037
Unfrozen water contents of six antarctic soil materials. Anderson, D.M., et al, (1989, p.353-366, eng) 43-2116
Experimental results on the tensile strength of atmospheric ice. Druez, J., et al, (1989, p.405-410, eng) 43-2651
New method of the unfrozen water content prediction in frozen soils. Kozlowski, T., (1989, p 283-291, eng) 43-3105
Unfrozen water content of Finnish soils measured by NMR. Kujala, K., (1989, p.301-310, eng) 43-3107
Heat and moisture properties in frozen sandy soil; measurements and modeling. Lemmelä, R., et al, (1989, p.323-340, eng) 43-3109
Porosity and related properties of frost susceptible tills. Nieminen, P., (1989, p.557-564, eng) 43-3128
Modeling of thermal soil behaviour Duquennoi, C., et al, (1989, p.895-915, eng) 43-3156
Study on deformation features of frozen coarse sand. Shusherina, E.P., et al, (1987, p.227-237, rus) 43-3387
Capacitance instrument for the *in-situ* measurement of snow wetness. Bergman, J.A., (1984, p.172-175, eng) 43-4329

United Kingdom
Snow survey of Great Britain, 1987-88. (1988, 22p., eng) 43-1730

—Cairngorm Mountains
Trace-element studies in a Scottish upland catchment, Pt1. Abrahams, P.W., et al, (1988, p.255-271, eng) 43-820

—Scotland
Modification of landscapes by ice sheets, northern Scotland. Hall, A.M., et al, (1987, p.531-542, eng) 43-703

—Wales
Ice detection system in Wales. Symons, L., et al, (1986, 11p., eng) 43-2763

United States
Snowfall amounts and snow depths in Germany and NE USA. Bates, R.E., et al, (1988, p.107-117, eng) 43-602
U.S. contribution to the world glacier inventory. Brown, C.S., (1989, p.103-108, eng) 43-3178
Surficial deposits of the United States. Hunt, C.B., (1986, 188p., eng) 43-4162

—Alaska
Concreting in Alaska. Pekar, J.W., (1988, p.28-30, eng) 43-348
Alaska snow surveys and federal-state-private cooperative snow surveys. Clagett, G.P., (1988, 31p., eng) 43-777
Alaska synthetic aperture radar (SAR) facility project. Carsey, F., et al, (1987, p.593-596, eng) 43-781
Proceedings of the Alaska Forest Soil Productivity Workshop, 1987. (1988, 120p., eng) 43-1142
Using turbidity to predict total suspended solids in mined streams in interior Alaska. Mack, S.F., (1988, 48p., eng) 43-1687
Water quality in placer mining areas in Alaska, Summer 1986. Mack, S.F., et al, (1988, 73p., eng) 43-1689
Evaluation of ground-water quality monitoring in Alaska. Maynard, D.L., (1988, 39p., eng) 43-1691
Use of stream-drainage samples for gold detection in Alaska. Wiltse, M.A., (1988, 13p., eng) 43-1692
Permafrost temperatures related to climate warming. Osterkamp, T.E., et al, (1987, 21p., eng) 43-1729
U.S. Geological Survey ground-water studies in Alaska. Zenone, C., (1988, 2p., eng) 43-1825
Bibliography of engineering-geologic literature of northern Alaska. Galloway, J.P., (1988, 34p., eng) 43-1866
Hydrology of Arctic wetlands. Robertson, S.B., (1988, p.262-269, eng) 43-2238
Placer gold mining in southeastern Alaska. Hoekzema, R., et al, (1987, p.267-289, eng) 43-3084
Alaska geothermal bibliography. Liss, S.A., et al, (1989, 44p., eng) 43-3234
Variations in flow velocity of an Alaskan glacier. Walters, R.A., (1989, p.187-191, eng) 43-3356
Anthropogenic warming in North Alaska? Michaels, P.J., et al, (1988, p.942-945, eng) 43-3469
Investigations of dielectric properties of some frozen materials Arcone, S.A., et al, (1989, 18p., eng) 43-3476
Proceedings. (1989, 199p., eng) 43-3665
Red Dog Mine. Hargrave, W.R., (1989, p.34-36, eng) 43-3699
Alaska climate summaries, 2nd edition. Leslie, L.D., comp, (1989, 478p., eng) 43-3846
Late Cenozoic history of the interior basins of Alaska and the Yukon. Carter, L.D., ed, (1989, 114p., eng) 43-4478

—Alaska—Alaska Peninsula
Volcanic ash-derived soils on Aleutian Is. and Alaska Peninsula. Ping, C.L., et al, (1988, p.455-462, eng) 43-125

—Alaska—Aleutian Islands
Volcanic ash-derived soils on Aleutian Is. and Alaska Peninsula. Ping, C.L., et al, (1988, p.455-462, eng) 43-125

—Alaska—Anchorage
Environmental impact of snow disposal in Anchorage. Cross, J.E., et al, (1989, p.43-54 + 1 append., eng) 43-3666

—Alaska—Arctic National Wildlife Refuge
Oil production in the Arctic National Wildlife Refuge. (1989, 123p., eng) 43-2590

—Alaska—Barrow
Geologic origin and fill properties of the Barrow Unit materials. Mahmood, A., et al, (1984, p.1045-1058, eng) 43-669
Aerosol pollution sources at Barrow, Alaska during winter 1979-80. Lowenthal, D.H., et al, (1985, p.2011-2024, eng) 43-984
Winter variability in arctic haze aerosols at Barrow, Alaska. Halter, B.C., et al, (1985, p.2033-2037, eng) 43-986
Some antecedents of Arctic haze episode, Mar. 1983. Raatz, W.E., (1985, p.2121-2126, eng) 43-994
Air mass characteristics in the vicinity of Barrow, Alaska, 9-19 March 1983. Raatz, W.E., et al, (1985, p.2127-2134, eng) 43-995

—Alaska—Big Lake
Seasonal variation of photosynthetically active radiation in a lake. Rowe, T.G., (1987, p.95-103, eng) 43-4428

—Alaska—Brooks Range
Periglacial topography of Brooks Range and Alaskan Arctic Slope. Schunke, E., (1987, p.149-171, ger) 43-407
Rock glaciers of central Brooks Range, Alaska, U.S.A. Calkin, P.E., et al, (1987, p 65-82, eng) 43-3047
Biogeochemical survey of streams in Alaskan mountains and foot-hills. Lock, M.A., et al, (1989, p.499-521, eng) 43-4603

—Alaska—Chilkat River
Hydrologic reconnaissance of the Chilkat River basin, southeast Alaska. Bugliosi, E.F., (1988, 28p., eng) 43-776

—Alaska—Columbia Bay
Columbia Bay, Alaska. an 'upside down' estuary. Walters, R.A., et al, (1988, p.607-617, eng) 43-2696
—Alaska—Columbia Glacier
Bed topography and mass balance of Columbia Glacier, AK. Rasmussen, L.A., (1988, p.208-216, eng) 43-166
—Alaska—Cook Inlet
Offshore development in Cook Inlet, Alaska. Visser, R.C., (1989, p.435-442, eng) 43-2655
—Alaska—Copper River
Late glacial history of Copper River Basin, Alaska. Connor, C.L., (1984, 135p, eng) 43-1814
Glacial Lake Atna, Copper River Basin, Alaske. Ferrians, O.J., Jr., (1989, p.85-88, eng) 43-3625
—Alaska—Denali National Park
Effect of placer gold mines on streams in Alaska. Van Maanen, J.L., et al, (1988, 105p., eng) 43-3216
—Alaska—Glacier Bay
Holocene glaciolacustrine sedimentation in Muir Inlet and ice advance in Glacier Bay, Alaska, U.S.A. Goodwin, R.G., (1988, p.55-69, eng) 43-13
—Alaska—Great Kobuk Sand Dunes
Niveo-aeolian deposits and denivation forms in northwestern Alaska. Koster, E.A., et al, (1988, p.153-170, eng) 43-3531
—Alaska—Gulf of Alaska
Outer Continental Shelf Environmental Assessment Program; comprehensive bibliography. (1988, 746p., eng) 43-1833
Climatic atlas of Alaskan coastal regions and shelf waters. Brower, W.A., Jr., et al, (1988, 3 vols., eng) 43-4476
—Alaska—Gulkana Glacier
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—Alaska—Houston
Water-well data from the Houston area, Matanuska-Susitna Borough, Alaska. Maynard, D.L., (1988, 14p., eng) 43-1685
Reconnaissance of surface-water resources in the Houston area, Alaska, 1985-86. Collazzi, E.J., et al, (1988, 19p., eng) 43-1690
—Alaska—Hubbard Glacier
Hubbard Glacier flow and closure of Russel Fiord, Alaska Mayo, L.R., (1988, p.4-17, eng) 43-510
Landsat data of the Hubbard Glacier region, Alaska. Walker, K.M., et al, (1988, p.373-376, eng) 43-833
—Alaska—Juneau
Water-quality investigations in Juneau, Alaska. Motyka, R.J., (1988, 20p, eng) 43-1688
—Alaska—Kenai Peninsula
Volcanic ash soils from Kenai Peninsula, Alaska. Shoji, S., et al, (1988, p.395-413, eng) 43-2371
—Alaska—Kodiak Island
Postglacial pollen record from western Kodiak Island, Alaska. Nelson, R.E., et al, (1988, p.59-63, eng) 43-157
—Alaska—Kuparuk River
Facility designs in the Arctic for the Kuparuk Pipeline System. Manikian, V, et al, (1983, p.84-107, eng) 43-3415
—Alaska—Marsh Creek
Hydrocarbons in permafrost ice, Marsh Creek area, Alaska. Cunningham, K I., et al, (1988, 18p. + tables, eng) 43-676
—Alaska—McBride Glacier
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—Alaska—Nenana
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—Alaska—North Slope
Planting willow for moose habitat restoration on the North Slope of Alaska. Densmore, R.V., et al, (1987, p.537-543, eng) 43-204
Plant succession on disturbed sites, North Slope, Alaska, U.S.A. McKendrick, J.D., (1987, p.554-565, eng) 43-207
Detection and identification of Arctic landforms. Dean, K.G., et al, (1988, p.363-371, eng) 43-832
Water resources of the North Slope, Alaska. Sloan, C.E., (1987, p.233-252, eng) 43-2372
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—Alaska—Prudhoe Bay
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—Alaska—Redoubt Mountain
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Glacial geologic history of the Salmon Lake area, Seward Peninsula. Kaufman, D.S., et al, (1988, p.91-94, eng) 43-512
—Alaska—Summit Lake
Glacier and climate studies, West Gulkena Glacier and environs, Alaska, Vol.1. Marcus, M.G., ed, (1988, 142p., eng) 43-2788
Aspects of wind on West Gulkana Glacier, Alaska Brazel, A.J., et al, (1988, p.93-105, eng) 43-2796
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—Alaska—Tanana River
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—Alaska—Toolik Lake
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Microbially mediated Mn(II) oxidation in an oligotrophic Arctic lake. Johnston, C.G., et al, (1988, p.1440-1445, eng) 43-1788
—Alaska—Variegated Glacier
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Relation between surface and basal velocity variations in glaciers. Balise, M.J., (1988, 228p., eng) 43-1910
Structure and deformation in a propagating surge front. Pfeffer, W.T., (1988, 159p., eng) 43-1911
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—Alaska—West Gulkana Glacier
Glacier and climate studies, West Gulkana Glacier and environs, Alaska, Vol.1. Marcus, M.G., ed, (1988, 142p., eng) 43-2788
Determining volumetric changes from digital data on West Gulkana Glacier Thompson, L.S., et al, (1988, p.11-18, eng) 43-2789
Mass balance of West Gulkana Glacier based on topographic maps. Chambers, F B., et al, (1988, p.19-25, eng) 43-2790
Two-year mass balance of West Gulkana Glacier, Alaska. Chambers, F.B., et al, (1988, p 27-34, eng) 43-2791
Recent glaciation of West Gulkana Glacier, Alaska. Kidder, S D., (1988, p.35-46, eng) 43-2792
Summer radiation balance, West Gulkana Glacier. Miller, T.A., (1988, p.47-61, eng) 43-2793
Valley wall longwave flux contributions, West Gulkana Glacier, Alaska. Henderson, J.P., et al, (1988, p 63-80, eng) 43-2794
Air temperature variations over different surfaces in the West Gulkana Glacier valley. Brazel, A.J., et al, (1988, p 81-91, eng) 43-2795
Aspects of wind on West Gulkana Glacier, Alaska. Brazel, A.J., et al, (1988, p.93-105, eng) 43-2796
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Summer field season weather observations, West Gulkana Glacier and environs: 1986, 1987. Brazel, A.J., et al, (1988, p.123-142, eng) 43-2799
—Alaska—Wrangell, Mount
Radar imaging of glaciovolcanic stratigraphy. Clarke, G.K.C, et al, (1989, p.7237-7249, eng) 43-3960
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Stormflow and forest treatment. Hibbert, A.R., et al, (1987, p.189-194, eng) 43-582
Variability of Southwest precipitation and seasonal snowpacks. Jones, R., et al, (1986, p.12-17, eng) 43-3899
—California—Sierra Nevada
Radiation balance of melting snow, Sierra Nevada, CA. Aguado, E., (1985, p.1649-1654, eng) 43-180
Dynamics of supercooled water in wintertime storms over the Sierra Nevada. Heggli, M.F., et al, (1988, p.989-1015, eng) 43-2398
Snow accumulation patterns in the Sierra Nevada. Aguado, E., (1986, p.172-175, eng) 43-3920
—California—Tahoe, Lake
Mountain-top riming at sites in California and Nevada, U.S.A. Berg, N.H., (1988, p.429-447, eng) 43-2484
—Colorado
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—Colorado—Blanka Massif
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Rock glaciers and site characteristics in Colorado. Parson, C.G., (1987, p.127-143, eng) 43-3050
—Colorado—Colorado River
Runoff in the Upper Colorado River Basin, water years 1983-85. Wahl, K.L., et al, (1987, p.31-40, eng) 43-3925
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—Colorado—Front Range
Vegetation mapping in the Rocky Mountains with Landsat Thematic Mapper. Frank, T.D., (1988, p.1727-1734, eng) 43-2312
Differential movement across rock glacier in Colorado. White, S E., (1987, p.145-149, eng) 43-3051
—Colorado—Niwot Ridge
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—Colorado—Rio Grande
Seasonal stream-flow forecasting of the upper Rio Grande basin Perkins, T.R., (1988, p.58-69, eng) 43-3997
—Delaware
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Temperature and ice in Mississippi River near a nuclear power station. Schwarz, J., et al, (1973, 17p. + tables, eng) 43-420
—Louisiana
Sea level and delta sedimentation in Louisiana. Wells, J.T., (1987, p.157-166, eng) 43-3403
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—Maine
Late Quaternary sea-level changes in Maine. Belknap, D.F., et al, (1987, p.71-85, eng) 43-3397
—Minnesota
Quaternary history and ice dynamics of the late Wisconsin Rainy and Superior lobes, central Minnesota. Mooers, H.D., (1989, 262p., eng) 43-3613
—Mississippi River
Climatic influence on upper Mississippi Valley floods. Knox, J.C., (1988, p 279-300, eng) 43-1551
—Monongahela River
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—Utah
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—Vermont—Connecticut River
Study of dynamic ice breakup on the Connecticut River near Windsor, Vermont. Ferrick, M.G., et al, (1987, p.163-177, eng) 43-399
—Virginia
Back-barrier response to sea-level rise, eastern shore of Virginia. Finkelstein, K., et al, (1987, p.145-155, eng) 43-3402
—Washington
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—Washington—Blue Glacier
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—Washington—South Cascade Glacier
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United States *(cont.)*
—Wyoming—Carbon County
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Unloading
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Technical operation of sea port structures. Kostiukov, V.D., ed, [1987, 128p., rus] 43-756
Structures built of ice for unloading liquid cargo. Ignat'ev, S.V., [1987, p.85-88, rus] 43-757
Transport of freezing cargoes: a handbook Noskov, IU.A., ed, [1988, 206p., rus] 43-2895
Freezing and defrosting of cargo. Lepnev, M.I., et al, [1988, 141p., rus] 43-3063
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Fast ice conditions during unloading operations at Soviet stations. Grigor'ev, IU.A., et al, [1988, p.93-98, rus] 43-3841
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Unsteady flow
Framework for control of dynamic ice breakup by river regulation. Ferrick, M.G., et al, [1989, 14p., eng] 43-4385

Upwelling
Climate feedback mechanism involving oceanic upwelling, atmospheric CO2 and water vapour. Flohn, H., [1983, p.403-418, eng] 43-3037

Urban planning
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Forecasting changes in geological media caused by technical operations. Mironenko, V.A., et al, [1988, p.84-102, rus] 43-736
Recommendations for urban planning in snowy country. Kuriyama, H., [1986, p.30-36, jpn] 43-2191
Cities designed for winter. Mänty, J., ed, [1988, 384p., eng] 43-4235
Need for new approaches. Pressman, N., [1988, p.19-31, eng] 43-4236
Winter policies, plans and designs: the Canadian experience. Pressman, N., [1988, p.35-64, eng] 43-4237
Planning with winter climate in mind. Phillips, D.W., [1988, p.65-83, eng] 43-4238
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Norwegian land-use policy and building design to relation to climate. Skarstein, O.B., [1988, p.245-250, eng] 43-4246
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Urban planning and design in Norilsk. Bond, A.R., [1988, p.295-318, eng] 43-4250
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Towards an ideal winter city. Lu, W.M., [1988, p.367-381, eng] 43-4252
Architecture of arctic regions: a selected bibliography White, A.G., [1987, 7p., eng] 43-4387

Urea
Reference strengths of sea ice based on total porosity. Häusler, F.U., [1988, p.77-91, eng] 43-2911
On confined compressive strength of urea-doped ice. Taguchi, Y., et al, [1988, p.92-98, eng] 43-2912
Global design load selection for arctic mobile drilling platform. Kamesaki, K., et al, [1988, p.371-384, eng] 43-2937
Model ice of the NKK Ice Model Basin Narita, S., et al, [1988, p.782-792, eng] 43-2973
Fracture experiments on freshwater and urea model ice. Bentley, D.L., et al, [1988, 152p., eng] 43-3040
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USSR
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—Abakan
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—Ala Tau
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—Alai Range
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—Altay Mountains
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Chemical composition of indigenous ice in the lower Amur River region. Ivanov, A.V., et al, [1987, p.28-38, rus] 43-3655
—Anabar Plateau
Ice cover dynamics of northeastern Mid-Siberian Highlands in Late Pleistocene. Andreeva, S.M., et al, [1987, p.112-118, rus] 43-240
—Aral Sea
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—Boguslav
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—Bol'shezemel'skaya Tundra
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—Carpathian Mountains
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—Caucasus
Characteristics of external mass transfer on the Malyy Azau glacier, Elbrus Mountain. Diurgerov, M.B., et al, [1987, p.91-95, rus] 43-235
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Cartographic and aerospace monitoring of the Elbrus glaciation system. Knizhnikov, IU.F., et al, [1988, p.153-157, rus] 43-955
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Marukh Glacier—water and heat balance. Kotliakov, V.M., ed, [1988, 252p., rus] 43-1455
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"Snow pole" of the Caucasus. Pogorelov, A.V., [1988, p.25-30, rus] 43-2673
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Avalanche zones of the Caucasus. Abdushelishvili, K.L., et al, [1988, p.71-88, rus] 43-3836
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—Charskaya Basin
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—Elbrus Mountain
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—Fedchenko Glacier
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—Gromotukha River
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—Inyl'chek River
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—Issyk-Kul'
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—Kamchatka River
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—Kara Sea
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Glaciological investigations in Siberia, Vol.2. Antipov, A.N., ed, (1987, 162p., rus) 43-3652
Thermo-physical studies of the cryolithozone of Siberia. Pavlov, A.V., ed, (1983, 213p, rus) 43-3862
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—Transbaikal
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—Transcaucasia
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Physical geography of Transcaucasia. Gabrielian, G.K., ed, (1986, 309p., rus) 43-3068
—Ural Mountains
Tundra ecology and mining engineering, Ural Mts. Estaf'ev, G.A., (1988, p.77-86, rus) 43-1542
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Velocity measurement
Observed velocity fluctuations on a major antarctic ice stream. Stephenson, S.N., et al, (1988, p 695-697, eng) 43-339
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Variations in flow velocity of an Alaskan glacier. Walters, R.A., (1989, p.187-191, eng) 43-3356
Ice velocity related to ice thickness in Wilkes Land. Young, N.W., et al, (1989, p.192-197, eng) 43-3357
Eruptions from under-ice explosions. Mellor, M., et al, (1988, 26p., eng) 43-3617
Glacier surge in Svalbard with examples from Usherbreen. Hagen, J.O., (1988, p.203-213, eng) 43-4425

Ventilation
Studies of shallow ventilated foundations on permafrost. Berdichevskiĭ, Iu.V., et al, (1988, p.115-122, rus) 43-535
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Vents and vapor retarders for roofs. Tobiasson, W., (1987, p 80-90, eng) 43-545
Modeling attic humidity as a function of weather, building construction, and ventilation rates. Gorman, T.M., (1988, 160p., eng) 43-1921
Problem of protecting ventilator facilities of mines in the North against freezing. Afanas'ev, V.P., et al, (1987, p.50-54, rus) 43-2290
Roof design in cold regions. Tobiasson, W., (1989, p.462-472, eng) 43-3590
Effective designs for foundations on permafrost. Goncharov, Iu.M., (1988, 191p., rus) 43-4038

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Viability
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Vibration
Vibration analysis of a DEW Line station. Haynes, F.D., et al, (1988, p.1513-1518, eng) 43-6
Ice-induced vibrations of structures. Sodhi, D.S., (1989, p.189-221, eng) 43-2818
Ice-induced vibrations of structures-self-excitation. Määttänen, M., (1989, p.223-230, eng) 43-2819
Measurements of ice-induced vibrations of channel markers. Nordlund, O.P., et al, (1988, p 537-548, eng) 43-2952
Effect of vibration on the air-void system and freeze-thaw durability of concrete. Stark, D.C., (1986, 10p., eng) 43-3486

Viscoelasticity
Calculating loads on shaft support during the thawing of frozen ground. Iudin, M.M., (1988, p.104-106, rus) 43-2787
Constitutive relations for creep of ice. Jordaan, I.J., et al, (1988, p.47-58, eng) 43-3023
Viscoelastic response of a floating ice plate to a steadily moving load. Hosking, R.J., et al, (1988, p.409-430, eng) 43-3291

Viscosity
Use of low viscosity asphalts in cold regions. Janoo, V.C., (1989, p.70-80, eng) 43-2090
Visco-plasticity of soils and design of structures. Zaretskiĭ, Iu.K., (1988, 349p., rus) 43-2281
Measurement of viscosity of slush at high shear rates. Kobayashi, S., et al, (1988, p.113-119, jpn) 43-3524
Viscosity of slush. Kobayashi, S., et al, (1989, p.346-353, eng) 43-3579

Viscous flow
Dendrites, viscous fingers, and the theory of pattern formation. Langer, J.S., (1989, p.1150-1156, eng) 43-1819

Visibility
Disturbance of the homogeneity of horizontal visibility series. Kashevar, V.V., (1988, p.176-180, rus) 43-1781
Summer field season weather observations, West Gulkana Glacier and environs: 1986, 1987 Brazel, A.J., et al, (1988, p.123-142, eng) 43-2799
Comparative studies of the winter climate at selected locations in Europe and the United States. Bates, R.E., et al, (1989, p.283-293, eng) 43-3213
Synoptic meteorology, crystal habit, and snowfall rates in Northeastern snowstorms. Ryerson, C.C., et al, (1989, p.335-345, eng) 43-3214
Snow fence technology: state of the art. Tabler, R.D., (1989, p.297-305, eng) 43-3574
Model of smoke concentration reduction due to scavenging by snow. Hutt, D.L., et al, (1989, p 87-98, eng) 43-3879
Light transmission through smoke screens in falling snow. Farmer, W.M., et al, (1989, p.99-111, eng) 43-3880
Transmission levels required to defeat thermal imaging systems in winter. Farmer, W.M., et al, (1986, p.3-10, eng) 43-4622
SMART measurements at SNOW III West. Bean, B.I., et al, (1986, p.141-176, eng) 43-4633
Utilization of Unmanned Aerial Vehicles in the ALBE Thrust Greeley, H.P., et al, (1986, p.249-257, eng) 43-4639
See also: Transparence; Turbidity

Vitreous ice
Heat capacity and glass transition behavior of amorphous ice. Handa, Y.P., et al, (1988, p.3323-3325, eng) 43-174
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Polarized Raman spectra for ices. Devlin, J.P., (1989, p.1322-1329, eng) 43-2904

Volcanic ash
Volcanic ash-derived soils on Aleutian Is. and Alaska Peninsula. Ping, C.L., et al, (1988, p.455-462, eng) 43-125
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Volcanic ash soils from Kenai Peninsula, Alaska. Shoji, S., et al, (1988, p.395-413, eng) 43-2371
Iridium in volcanic dust from blue ice fields. Koeberl, C., (1989, p.317-322, eng) 43-2835
Correlation of tephra layers in antarctic ice by trace element abundances and refractive indices of glass shards. Fukuoka, T., et al, (1987, p.103-118, eng) 43-3409
Basal till and tephra layers in Kunlun Mountains. Zheng, B.X., et al, (1989, p.177-186, eng) 43-3458
Microstructural change from freeze-thaw of cohesive soils. Aoyama, K., et al, (1988, p.131-138, jpn) 43-3526

Volcanoes
Plant colonization of a volcanic island, Surtsey, Iceland. Fridriksson, S., (1987, p.425-431, eng) 43-191
Short-term vegetation recovery at an Alaskan Arctic Coastal Plain site. Ebersole, J.J., (1987, p 442-450, eng) 43-192
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Recent glacier-volcano interactions on Mt. Redoubt, Alaska. Sturm, M., et al, (1988, 18p., eng) 43-790
Glaciers of Paramushir Island, Kuril Islands. Kovalev, P.V., et al, (1988, p.126-129, rus) 43-948
Glacier variations caused by climatic changes. Oerlemans, J., (1988, p.333-341, eng) 43-1990
Distribution and ages of volcanoes in Kunlun Mountains. Liu, J.Q., et al, (1989, p.187-190, eng) 43-3459
Radar imaging of glaciovolcanic stratigraphy. Clarke, G.K.C., et al, (1989, p.7237-7249, eng) 43-3960

Volume
Specific weight of snow. Wold, K., (1987, p.79-84, eng) 43-1220
Determining volumetric changes from digital data on West Gulkana Glacier. Thompson, L.S., et al, (1988, p.11-18, eng) 43-2789
Forecasting snow capacity of existing roadside snow-protection forest strips. Kolomiets, V.A., (1989, p.125-127, rus) 43-3172
Calculating the maximum volumes of avalanches. Ebralidze, Z.N., (1988, p.132-134, rus) 43-3317
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Walls
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Behaviour of transversely loaded continuous steel-concrete composite plates. Kennedy, S.J., (1988, ?p, eng) 43-120
Composite ice-resisting walls: a state-of-the-art review. Adams, P.F., et al, (1988, p.579-592, eng) 43-647
Protecting wall panel joints of buildings from atmospheric effects. Samarin, S.A., (1988, 104p., rus) 43-761
Metallic enclosures (for buildings erected under severe climatic conditions). Tamplon, F.F., (1988, 248p., rus) 43-838
Strength of thawed and frozen dam soils under stress. Vasil'ev, I.M., et al, (1988, p.27-33, eng) 43-1087
Recommendations for design of building walls in arctic climate. (1986, 94p., rus) 43-1887
Preliminary results from simulation of retaining wall displacement by frost action. Li, Y., et al, (1989, p.389-396, eng) 43-2119
Frost action prevention in road tunnels. Takeichi, K., et al, (1989, p.721-730, eng) 43-3142
Metal buildings for Air Force facilities in Alaska: a report. (1989, 66p., eng) 43-3529
Cooling air jacket walls for underground cold storage. Chen, Q.G., et al, (1989, p.354-363, eng) 43-3580
Construction materials for low-storied housing in the North and Siberia. Khrulev, V.M., et al, (1989, 152p., rus) 43-3633
Cyclic loading on lateral load capacity of an ice-resisting wall system. Stephens, M.J., et al, (1989, p.873-883, eng) 43-3785
Roof snow loads; drifting against a higher wall. O'Rourke, M., et al, (1987, p.124-132, eng) 43-3935
Composite icewall design and analysis. Bangs, A.S., et al, (1989, p.1-22, eng) 43-4015

Warning systems
Statistical model for local avalanche forecasting. Navarre, J.P., et al, (1987, p.571-580, fre) 43-1262
Assemble the frost indicator. Frund, D., (1988, p 35-40, eng) 43-2489
Road weather: state of the art in Austria. Cehak, K., (1986, 3p., eng) 43-2754
Road maintenance in Switzerland. Schlup, U., (1986, 6p., eng) 43-2755
Weather monitoring equipment and highway maintenance. Chorlton, E., et al, (1986, 6p., eng) 43-2764
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Waste disposal
Thermal modeling for freezeback disposal of drilling wastes on Alaska's North Slope. Cormack, R., (1987, p.16-22, eng) 43-969

Heat loss in pulp flows on ash dumps at freezing temperatures. Panteleev, V.G., et al, (1987, p.4-11, rus) 43-1187
Environmental pollution caused by atmospheric wastes associated with geological surveys. Voevodova, Z.I., (1988, p.57-67, rus) 43-1540
Evaluation of ground-water quality monitoring in Alaska Maynard, D.L., (1988, 39p, eng) 43-1691
Disposition of waste drilling fluids in the Northwest Territories and Yukon (1988, 58p., eng) 43-1703
Impact of urban wastewater reuse in cold regions on land treatment systems. Iskandar, I.K., (1976, 32p., eng) 43-1830
Assessment of waste containment sites in the Mackenzie Valley region (1988, 30p + appends, eng) 43-1971
Waste management practices in Antarctica Sletten, R.S., et al, (1989, p.122-130, eng) 43-2095
Sewage waste discharge to the Arctic marine environment. (1987, 5 sections, eng) 43-2380
Sewage waste discharge to the arctic marine environment, February 1987. (1988, var. p, eng) 43-3060
Laser ignition of Arctic oil spills. Frish, M.B., et al, (1987, p.355-365, eng) 43-3242
Laser ignition of oil spills. Phase 1: concept development. Final report. Frish, M.B., et al, (1985, 89p. + appends, eng) 43-3243
Laser ignition of oil spills. Phase 2: outdoor demonstration experiments. Nawwar, A.M., et al, (1985, 36p. + appends, eng) 43-3244
Laser ignition of oil spills engineering design. Kung, W.L., et al, (1986, 51p., eng) 43-3245
Laser ignition of oil spills: telescope assembly and testing Frish, M., et al, (1988, 23p., eng) 43-3246
Ice-water partition coefficients for RDX and TNT. Taylor, S., (1989, 10p, eng) 43-3869
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Waste treatment
Effects of low temperature on physicochemical processes in water quality control. Viraraghavan, T., et al, (1988, p.101-110, eng) 43-871
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Environmental Quality R&D Symposium, 13th, Nov. 1988 (1988, 575p., eng) 43-1809
Low temperature thermal treatment of volatile organic compounds Nielson, R.K., et al, (1988, p.187-202, eng) 43-1810
Cold regions engineering conference, Feb 6-8, 1989 (1989, 399p., eng) 43-2083
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Primary effluent as a heat source for heat pumps. Phetteplace, G.E., et al, (1988, p.141-146, eng) 43-2160
Freeze crystallization: transportable design case history. Heist, J.A., et al, (1989, p.343-346, eng) 43-2359
Red Dog Mine. Hargrave, W.R., (1989, p.34-36, eng) 43-3699
Cyanide effluent control by freeze/thaw processing. Meech, J.A., (1985, p 80-84, eng) 43-3896
Thermal conductivity of sludges. Vesilind, P.A., et al, (1989, p.241-245, eng) 43-3984
Special design features take the chill out of wastewater treatment. Maxwell, M.J., et al, (1989, p.50-51, eng) 43-4076
Nitrogen removal works year-round. Nevers, E.S., (1989, p.68, eng) 43-4080
See also: Sewage treatment

Wastes
Scientific and technological progress and economic development in the Murmansk region. Sakharina, L.A., ed, (1987, 113p., rus) 43-104
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Water
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Effects of water and ice on the scattering of diffuse reflectors. Jezek, K.C., et al, (1986, p.259-269, eng) 43-4640
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Water balance
Ocean level and models simulating its oscillations. Kluge, R.K., et al, (1988, p.273-278, eng) 43-315
Influence of forests on the hydrology of the subalpine forest. Troendle, C.A., et al, (1987, p 68-78, eng) 43-575
Regime of river runoff in West Spitsbergen. Gokhman, V.V., (1988, p.96-103, rus) 43-942
Water temperature and ice in Danube River delta. Min'kovskaia, R.IA., (1988, p.86-94, rus) 43-2392
Computation of water budget of a snow bound river basin. Puri, S.R., et al, (1988, p.103-106, eng) 43-2885
Glacier heat and water fluxes in Kunlun Mountains. Takahashi, S., et al, (1989, p.89-98, eng) 43-3446
Modeling Laurentian Great Lakes evaporation, heat storage, and energy fluxes. Croley, T.E., II, (1989, 48p, eng) 43-3473
Azonal factors in rain runoff formation in the Kolyma water balance station. Boiarintsev, E.L., (1988, p.67-94, rus) 43-3637
Liquid precipitation in the thermal and water balance of melting naleds. Delkin, B.N., (1987, p.5-14, rus) 43-3653
Effect of clearcutting on the water balance of forest slopes. Troendle, C.A., et al, (1986, p.93-100, eng) 43-3908
Heat and water balances on glaciers. Takahashi, S., et al, (1989, p.147-152, eng) 43-4212
Snow hydrology of the Waimakariri catchment, South Island, New Zealand. Moore, R.D., et al, (1988, p.44-68, eng) 43-4258

Water cement ratio
Deterioration of concrete exposed to freezing and thawing. Cordon, W.A., (1988, p.375-418, eng) 43-3367

Water chemistry
Fresh water content of Hudson Bay and Foxe Basin due to ice melting. Prinsenberg, S.J., (1988, p.6-11, eng) 43-156
Acidification of shallow groundwaters during the spring melt period. Craig, D., et al, (1988, p.89-98, eng) 43-302
Nitrogen fluxes in a boreal forest ecosystem during the spring melt period. Jones, H.G., (1987, p.80-89, eng) 43-392
Bering Sea Monitoring Program. Houghton, J.P., et al, (1987, var.p., eng) 43-754
Regularities governing water crystallization in disperse rocks. Golubev, V.N., (1988, p.31-36, rus) 43-933
Seasonal pH depressions in Wisconsin lakes caused by pCO2 increases. Kratz, T.K., et al, (1987, p.1082-1088, eng) 43-1198
Snowpack and snowmelt chemistry due to atmospheric composition. Semkin, R.G., et al, (1988, p.38-46, eng) 43-1358
Calcium carbonate supersaturation of Lake Sevan water Alekin, O.A., et al, (1986, p.78-83, eng) 43-1370
Chemical undermining in foundations of dams. Tetel'min, V.V., et al, (1987, p.38-42, rus) 43-1391
Changes of landscape and geochemical structure due to geological surveys. Tentiukov, M.P., (1988, p.12-28, rus) 43-1536
Trace metal distributions at Fram 3 and Cesar ice camps Yeats, P.A., (1988, p.383-389, eng) 43-1673
Water-quality investigations in Juneau, Alaska. Motyka, R.J., (1988, 20p., eng) 43-1688
Reconnaissance of surface-water resources in the Houston area, Alaska, 1985-86. Collazzi, E.J., et al, (1988, 19p, eng) 43-1690
Evaluation of ground-water quality monitoring in Alaska. Maynard, D.L., (1988, 39p, eng) 43-1691
Microbially mediated Mn(II) oxidation in an oligotrophic Arctic lake. Johnston, C.G., et al, (1988, p.1440-1445, eng) 43-1788
Isotopic composition of glacier-river water during summer. Theakstone, W.H., (1988, p.309-317, eng) 43-1987
Heat, carbon and water fluxes in a 12-box model of the world ocean. Garcon, V.C., et al, (1988, p.161-177, eng) 43-2243
Atmospheric transport of organochlorines to the Arctic Ocean Hargrave, B.T., et al, (1988, p.480-493, eng) 43-2246
Variations in stream water constituents during snowmelt season Suzuki, K., (1984, p.137-148, eng) 43-2400
Expedition Arctic V/1a, 1b, and 2 with RV *Polarstern* 1988. Spindler, M., ed, (1989, 197p., ger) 43-3077
Trace analysis of iron in water and snow Golimowski, J., (1989, p.481-492, eng) 43-3247
Chemical discharge from rivers into the basin of Issyk-Kul' Lake. Gokhman, V.V., et al, (1988, p.142-145, rus) 43-3320
Hydrogeochemistry of surface waters in Kunlun Mountains. Sheng, W.K., (1989, p.119-122, eng) 43-3450
Water quality of lakes and rivers in Tibet Fushimi, H., et al, (1989, p.129-137, eng) 43-3452
Chemistry of pond waters in the Labyrinth. Torii, T., et al, (1989, p.255-264, eng) 43-3700
Organic carbon source areas in an alpine watershed. Hoffman, K., (1986, p.150-153, eng) 43-3914
Thermohaline circulation under Ronne Ice Shelf. Hellmer, H.H., (1989, 87p., ger) 43-4075
Stream chemistry during snowmelt runoff. Wels, C., et al, (1988, p.60-73, eng) 43-4117
pH of mountain snowfall in Montana 1981-1984. Farnes, P.E., (1985, p.72-75, eng) 43-4270
Acidic deposition and snowpack chemistry at a Sierra Nevada site. Berg, N., et al, (1985, p.76-87, eng) 43-4271
Hydrology of lakes in Central Wohlthat Massif. Haendel, D., et al, (1988, p.7-14, eng) 43-4513
Isotopes and hydrogeochemistry of Lakes Beaver and Redoubt Wand, U., et al, (1988, p.99-111, eng) 43-4517
Biogeochemical survey of streams in Alaskan mountains and foot-hills. Lock, M.A., et al, (1989, p.499-521, eng) 43-4603
Streamwater chemistry during snow-melt in a Scottish upland catchment. Abrahams, P.W., et al, (1989, p.231-248, eng) 43-4618

Water content
Mathematical model for freeze-thaw durability of concrete. Bažant, Z.P., et al, (1988, p.776-783, eng) 43-967
Simultaneous measurement of water reserves in snow and the soil moisture content from the neutron component of cosmic radiation. Altbaev, F.B., et al, (1987, p.76-79, rus) 43-1048
Effect of moisture content on temperature at the bottom of dams. Proskuriakov, A.B., et al, (1987, p.73-75, rus) 43-1195
Enhanced radar scattering from water inclusions in ice Bamber, J.L., (1988, p 293-296, eng) 43-1984
Deformation of pore-space structure in freezing fines. Lebedenko, IU.P., (1987, p 41-51, eng) 43-2333
Rock glacier stream discharge in Canadian Rockies. Gardner, J.S., et al, (1987, p.161-174, eng) 43-3053
Photosynthetic response of *Sphagnum* mosses, Philip Smith Mountains, AK. Murray, K.J., et al, (1989, p.244-250, eng) 43-4073
Comment on "Monitoring the unfrozen water content of soil and snow using time domain reflectometry" by Jean Stein and Douglas L. Kane. Patterson, D.E., et al, (1985, p.1055-1058, eng) 43-4494
Efficiencies of the ASCME and PMS aspirator hydrometeor instruments. Norment, H.G., (1986, p.57-75, eng) 43-4627
See also: Snow water content, Unfrozen water content

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New construction material for offshore application. Thompson, E.J., et al, (1988, p.35-46, eng) 43-153
Water erosion of frozen fines. IAkovlev, A.V., (1988, p.131-135, rus) 43-537
Erosion around ice-resistant structures caused by waves. Khalfin, I.Sh., et al, (1988, p.275-285, eng) 43-627
Formation of gullies in the southeastern part of West Siberia. Putilin, A.F., (1988, 81p., rus) 43-714
Repairs and protection of piles in hydraulic structures. Nikitin, P.P., (1988, p.55-56, rus) 43-896
Geomorphic impact of snowmelt on slope erosion and sediment production. Strömquist, L., et al, (1985, p 32-41, swe) 43-1014
Flood geomorphology. Baker, V.R., ed, (1988, 503p., eng) 43-1546
Permafrost and coastal processes. Walker, H.J., (1988, p.35-42, eng) 43-1722
Consequences of deforestation on mountain streams in Switzerland. (1988, 109p. + 3 maps, ger) 43-2146

Water films
Thermo-capillary and thermo-crystallizing flow of water films in capillaries. Kiseleva, O.A., et al, (1988, p.58-59, rus) 43-553

Water flow
Meltwater movement in natural heterogeneous snow covers. Marsh, P., et al, (1985, p.1710-1716, eng) 43-181
Influence of ice layers on the travel time of meltwater flow through a snowpack. Furbish, D.J., (1988, p.265-272, eng) 43-288
Flow resistance due to floating partial ice covers. Arisz H., et al, (1987, p.178-191, eng) 0
Observations of oversnow flow in subalpine meadows of Colorado. Kattelmann, R., (1987, p.185-188, eng) 43-581
Multiple similarity solutions of buoyancy induced flows for ice melting in cold pure water. Wang, C., et al, (1988, p.1007-1017, eng) 43-972
Water flow over and through concrete dams during construction. Sokolov, I.B., et al, (1987, p.4-9, rus) 43-1194
Some measurements of water movement and storage in snow. Kattelmann, R., (1987, p.245-254, eng) 43-1234
Meltwater percolation through an alpine snowpack. Martinec, J., (1987, p.255-264, eng) 43-1235
Effect of thermal polynyas on runoff and wind flow in a reservoir Pavlov, V.K., et al, (1986, p.49-55, rus) 43-1884
Effects of water speed and temperature on icing in thermal siphons. Vislobitskii, P.A., et al, (1988, p 629-634, eng) 43-2001
Flow developers for melting ice—experimental results. Ashton, G.D., (1989, p.151-160, eng) 43-2098
Heat, carbon and water fluxes in a 12-box model of the world ocean. Garcon, V.C., et al, (1988, p.161-177, eng) 43-2243
Melting of an ice surface in porous medium Kazmierczak, M., et al, (1988, p.352-358, eng) 43-2316
Effects of an ice cover on flow in a movable bed channel. Wuebben, J.L., (1988, p.137-146, eng) 43-3027

Water flow *(cont.)*
Meteorological conditions in the formation of water and snow flows. Perov, V.F., et al, [1988, p.41-47, rus] 43-3254
Velocity and temperature distributions in fresh-water basins. Speranskaia, A.A., et al, [1987, p.23-33, eng] 43-3888
Flow fingers and ice columns in a cold snowcover Marsh, P., [1988, p.105-112, eng] 43-4002
Heat transfer from water flowing through a chilled-bed open channel. Richmond, P.W., et al, [1989, p.51-58, eng] 43-4199
Snowmelt lysimeters: design and use. Kattelmann, R.C., [1984, p 68-79, eng] 43-4317

Water freezing
See also: Ice formation

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Water intakes
International Specialty Conference on Cold Regions Engineering, 1984. [1984, p.1021-1201, eng] 43-667
Design of river intakes in cold climates. Hodgson, J.E., et al, [1984, p.1113-1127, eng] 43-674
Frazil ice formation on water intake Andersson, A., et al, [1987, 11p, eng] 43-1116
Ice problems in intakes to power plants Roen, S., et al, [1988, p.81-91, eng] 43-2982
Beaufort environmental monitoring project, 1987-1988 final report. [1989, 136p., eng] 43-3062
Controlling wear on hydraulic installations. Bezinge, A., [1988, p 303-328, fre] 43-4443

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Water level
Ice forces on a pier due to water level changes. Kerr, A.D., et al, [1986, p.105-113, eng] 43-264
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Snowmelt runoff estimation to control dam water level Kawata, Y., et al, [1988, p 439-440, eng] 43-1524
Highest water levels in Dniester River and its tributaries. Vishnevskiĭ, P.F., [1988, p.36-48, rus] 43-1772
Statistical structure of frost in the Aral Sea area. Palagina, L.L., [1988, p.35-38, rus] 43-1782
Effects of ice on water levels in the upper Niagara River Crissman, R.D., et al, [1989, p.141-150, eng] 43-2097
Preliminary study of scour under an ice jam. Wuebben, J.L., [1988, p.177-192, eng] 43-2171
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Breakup prediction on a non-regulated river. Andres, D.D., [1988, p.305-325, eng] 43-2178
Forecasting of the water level during ice breakup. Kil'mianinov, V.V., et al, [1988, p.44-48, rus] 43-2347
Forecasting river ice breakup in relation to water level. Liser, I.IA., [1988, p.48-53, rus] 43-2348
Forecasting of maximal water level on Lena River due to ice jams. Kil'mianinov, V.V., [1988, p.55-67, rus] 43-2350
Minimal river discharge of the Chulyma basin. Proskurina, G.V., [1988, p.67-74, rus] 43-2351
Level, ice and thermal regime of Voronezh Reservoir. Bolotov, G.I., [1987, p.94-113, rus] 43-2436
Fluctuations in water levels and the hydrographic system of a glacier. Sokolov, D.P., [1988, p.111-117, rus] 43-2687
Laboratory study of vertical ice forces on piles. Christensen, F.T., [1988, p.512-525, eng] 43-2950
Arctic pipeline river crossings—design trends and lessons learned. Veldman, W.M., [1983, p.70-83, eng] 43-3414
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Water pipelines
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Water supply lines in the Arctic and Subarctic. Haviland, R.A., [1983, p.694-703, eng] 43-3425
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Water pollution
Environmental assessment of the Alaskan continental shelf. [1979, 107p., eng] 43-440
Ecology and practice. Ivantsov, O.M., [1988, p.28-32, rus] 43-566
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Quality of used-snow discharged in Montreal Harbor. Zinger, I., et al, [1988, p.47-57, eng] 43-1074
Water quality during winter river navigation seasons. Sletten, R.S., [1988, 56p., eng] 43-1201
Aluminum in meltwater, Chalk River and Turkey Lakes watersheds. Chew, H., et al, [1988, p 66-71, eng] 43-1359
Water-quality investigations in Juneau, Alaska. Motyka, R.J., [1988, 20p., eng] 43-1688
Evaluation of ground-water quality monitoring in Alaska. Maynard, D.L., [1988, 39p., eng] 43-1691
Analysis of sediment data from the Beaufort Sea Shorebase Monitoring Program, 1982-1984. Wainwright, P.F., et al, [1988, 78p. + appends, eng] 43-1702
Alaska ground-water quality. Madison, R.J., et al, [1987, 8p., eng] 43-1734
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Development of a membrane for *in-situ* optical detection of TNT. Zhang, Y., et al, [1988, 6p, eng] 43-1842
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Transformation of petroleum films in the ocean-ice-atmosphere system. Izmailov, V.V., [1988, 144p, rus] 43-2282
Air pollution of surface waters shown by oligotrophic swamps. Potapova, T.M., [1988, p.23-29, rus] 43-2463
Pollution of the waters of the northern seas and problems of its investigation. Potanin, V.A., et al, [1989, p.55-61, eng] 43-3229
Trace analysis of iron in water and snow Golimowski, J., [1989, p.481-492, eng] 43-3247
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Airborne organochlorines in the Canadian High Arctic. Patton, G.W., et al, [1989, p.243-255, eng] 43-3868
Single fiber measurements for remote optical detection of TNT. Zhang, Y., et al, [1989, 7p, eng] 43-3870
Organic carbon source areas in an alpine watershed. Hoffman, K., [1986, p.150-153, eng] 43-3914
Problems of the Arctic and the Antarctic: collection of articles. Krutskikh, B.A., ed, [1989, 152p, eng] 43-4367
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Ecotoxicology and climate Bourdeau, P., ed, [1989, 392p, eng] 43-4453
Chemicals in cold environments. Miller, D.R., [1989, p.91-96, eng] 43-4454
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Pore water pressure at an ice lens: its measurement and interpretation. Konrad, J.M., [1989, p 63-74, eng] 43-1579
Preconsolidation pressures in intertill glaciolacustrine clay near Blaine Lake, Saskatchewan. Sauer, E.K., et al, [1988, p.831-839, eng] 43-1804
Birth and growth of the Porsild Pingo, Tuktoyaktuk Peninsula. Mackay, J.R., [1988, p.267-274, eng] 43-2081

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Snow resources and regional runoff. Mishon, V.M., [1988, 192p., rus] 43-1886
Fluvio-glacial resources of the Issyk-Kul' region. Dikikh, A.N., ed, [1988, 129p., rus] 43-2382
Seasonal snow resources and their recent secular variations in China. Li, P., [1988, p.1808-1812, eng] 43-2777
Review of the study on frozen ground for water conservancy engineering. Xu, S.X., [1988, p.342-343, chi] 43-2879
Using maps to calculate glacial runoff. Zverkova, N.M., et al, [1988, p.129-134, rus] 43-3270
Stream types and floods in the Kunlun Mountains. Ai, S.T., [1989, p.123-127, eng] 43-3451
Average snow reserves and snow loads in the Caucasus. Aliev, I.A., et al, [1988, p.46-58, rus] 43-3834
Evaluation of the isotopic snow measurement gage. Wheeler, P.A., et al, [1984, p.48-56, eng] 43-4315

Water storage
Some measurements of water movement and storage in snow. Kattelmann, R., [1987, p.245-254, eng] 43-1234
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Total utilization system of snow/ice stored during the winter season. Kobiyama, M., [1989, p.107-112, eng] 43-4206
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Snow hydrology and subalpine forests Swanson, R.H., [1987, p.79-85, eng] 43-576
Coon Creek water yield augmentation pilot project. Bevenger, G.S., et al, [1987, p.145-149, eng] 43-579
Factors affecting snowmelt and streamflow. Garstka, W.U., [1987, p.253, eng] 43-585
Glaciological studies at Juan Carlos I base, 1987-1988. [1988, 3p., eng] 43-1055
Snow pillows in the mountainous areas of Alberta. Coles, G.A., et al, [1987, p.193-206, eng] 43-1296
Extrapolating snow measurements on the Marmot Creek experimental basin. Bernier, P.Y., [1987, p.215-229, eng] 43-1298
Economics of piped services in Northwest Territories hamlets. Feilden, R.E.K., et al, [1988, p.734-748, eng] 43-1335
Environmental protection of the BAM zone. Vorob'ev, V.V., ed, [1987, 167p., rus] 43-1435
River-flow studies in the BAM zone in winter. Sokolov, B.L., et al, [1987, p.96-110, rus] 43-1436
Water level calculation for northeast European rivers. Kokovkin, A.V., [1988, p.99-112, rus] 43-1544
Water-quality investigations in Juneau, Alaska. Motyka, R.J., [1988, 20p., eng] 43-1688
Reconnaissance of surface-water resources in the Houston area, Alaska, 1985-86. Collazzi, E.J., et al, [1988, 19p., eng] 43-1690
Evaluation of ground-water quality monitoring in Alaska. Maynard, D.L., [1988, 39p, eng] 43-1691
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Ice formation in channels with year-round service. Batalova, N.N., [1988, p.89-93, rus] 43-1785
Ice buildup in tailing basins. Barr, D.W., [1989, p.202-214, eng] 43-2103
Snow measurement in the mountain-glacial basin of Aktru (Altay Mts.). Sheremetov, R.T., et al, [1988, p.81-87, rus] 43-2353
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Proceedings. [1989, 199p, eng] 43-3655
Water conservation at the Swedish antarctic Wasa Base—implementation and results 1988/89. Marklund, S., [1989, p.1143-1149, eng] 43-3810
Snow fencing to increase streamflow: preliminary results. Sturges, D.L., [1986, p.18-29, eng] 43-3900
Watershed management pilot project in Alberta. Bernier, P.Y., et al, [1986, p 87-92, eng] 43-3907
Estimated consumptive loss from man-made snow. Mills, K.D., et al, [1986, p.162-164, eng] 43-3917
Runoff in the Upper Colorado River Basin, water years 1983-85. Wahl, K.L., et al, [1987, p.31-40, eng] 43-3925
Snow hydrology—forest harvesting interface. Toews, D.A.A., et al, [1988, p.13-22, eng] 43-3992

Snow survey water supply forecasting program Palmer, P.L., (1988, p.43-51, eng) 43-3995
Snowpack modelling using daily climatological data. Garr, D.A., (1988, p.176-180, eng) 43-4127
Study on keeping of underground fire cistern from freezing. Inaba, H., et al, (1989, p.303-308, eng) 43-4227
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Sewage waste discharge to the Arctic marine environment. (1987, 5 sections, eng) 43-2380
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Blast noise propagation research. Raspet, R., (1987, p.251-252, eng) 43-3297
Proceedings. Vol.2: Unclassified section. (1988, 738p, eng) 43-3428
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Acoustic scattering from the arctic ice canopy. McDaniel, S.T., (1989, p.2378-2382, eng) 43-4374
Bistatic, high-frequency, under-ice, acoustic scattering model Pt.I: theory; Pt.II: applications. Bishop, G.C., (1989, p.1903-1924, eng) 43-4377
Falling snow versus liquid hydrometeor attenuation. Ebersole, J.F., et al, (1986, p.39-54, eng) 43-4626
Millimeter wave scattering by snow crystals. O'Brien, S.G., et al, (1986, p.77-91, eng) 43-4628
Scattering by irregular inhomogeneous particles. O'Brien, S.G., et al, (1986, p.93-100, eng) 43-4629
Millimeter wave snow data collection program description: Snowman I. Green, A.H., et al, (1986, p.273-290, eng) 43-4641
Mm wave tower snow data collection program. Trostel, J.M., et al, (1986, p.291-300, eng) 43-4642
Observations of the backscatter from snow at millimeter wavelengths. Berger, R.H., et al, (1986, p.311-316, eng) 43-4644
Comments on the characteristics of *in situ* snow at millimeter wavelengths. Walsh, J., et al, (1986, p.317-320, eng) 43-4645
Bidirectional reflectance of snow surfaces in the thermal infrared. Gimmestad, G.G., et al, (1986, p.329-342, eng) 43-4647
Forward reflection coefficient of snow at 35 GHz. Snieder, J., et al, (1986, p.353-369, eng) 43-4649

Waves
See also: Detonation waves; Elastic waves; Microwaves; Ocean waves; Radio waves, Shock waves; Sound waves; Water waves

Weather
To the Arctic: an introduction to the far northern world. Young, S.B., [1989, 354p., eng] 43-3080
Snow and avalanches in the Swiss Alps, Winter 1986/87. [1988, 139p., ger] 43-3236
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See also: Meteorology

Weather control
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Weather forecasting
Prediction of winter battlefield weather effects. Ryerson, C.C., et al, [1988, p.357-362, eng] 43-603
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Capabilities and problems in modeling the arctic cryosphere and clouds Crum, T.D., [1987, p.289-292, eng] 43-863
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Feasibility model for use of weather protection in cold region construction. Shahbodaghlou, F, [1988, 308p., eng] 43-1919
Need for weather and climate modification. List, R., [1987, p 61-86, eng] 43-2249
Introduction of Nowcasting system development in China. Liang, B.J., et al, [1987, p.331-334, eng] 43-2253
Forecasting of ocean waves and wind. Hodgins, S.L.M., et al, [1988, 356p., eng] 43-2258
Forecasting snowstorm avalanches in the USSR. Grishchenko, V.F., et al, [1987, p.46-57, rus] 43-2498
Proceedings. [1986, var. p., eng] 43-2753
Road weather: state of the art in Austria. Cehak, K., [1986, 3p., eng] 43-2754
Road maintenance in Switzerland. Schlup, U., [1986, 6p, eng] 43-2755
Master plan for highway meteorology. Le Quentrec, M., [1986, 12p., eng] 43-2757
Some recent road weather developments in the UK. Hunt, R., [1986, 8p., eng] 43-2759
Snow and freeze forecasting for highways in winter. Miyata, K., et al, [1986, 16p., eng] 43-2760
Ice detection system in Wales. Symons, L., et al, [1986, 11p., eng] 43-2763
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Weather modification
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Numerical modeling of artificial nucleation, precipitation and dissipation of stratiform clouds. Bakhanov, V.P., et al, [1988, p.90-100, rus] 43-1081
Artificial nucleation of mixed and stratiform clouds. Bulkov, M.V., et al, [1988, p.24-29, rus] 43-1083
Space-time distribution of atmospheric ice nucleating agents above Ukraine. Silaev, A.V., et al, [1988, p.142-153, rus] 43-1084
Need for weather and climate modification. List, R., [1987, p.61-86, eng] 43-2249
Cloud physics and weather modification. Plaude, N.O., ed, [1988, 136p., rus] 43-2709
Characterization of a modified hexagonal silver iodide ice nucleus aerosol. Scott, P.T., et al, [1989, p.722-726, eng] 43-4547
See also: Artificial precipitation; Climate control; Cloud dissipation; Cloud seeding; Fog dispersal; Hail prevention

Weather observations
Automated information system for determining avalanche danger. Belima, A.S., et al, [1987, p.167-170, rus] 43-252
Federal meteorological handbook, No.1. Surface observations. [1988, 12 chapters, eng] 43-981
Research results from antarctic automatic weather stations Stearns, C.R., et al, [1988, p.45-61, eng] 43-1404
Snow survey of Great Britain, 1987-88. [1988, 22p., eng] 43-1730
Melting layer of frozen precipitation. Klaassen, W., [1988, p.3741-3753, eng] 43-2360
Recent advances in automatic snow and ice observations. Part 1. Endo, T., et al, [1988, p.231-236, jpn] 43-2704
Glacier and climate studies, West Gulkana Glacier and environs, Alaska, Vol.1. Marcus, M.G., ed, [1988, 142p., eng] 43-2788
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Expedition Arctic V/1a, 1b, and 2 with RV *Polarstern* 1988. Spindler, M., ed, [1989, 197p., ger] 43-3077
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Climatic atlas of Alaskan coastal regions and shelf waters. Brower, W.A., Jr., et al, [1988, 3 vols., eng] 43-4476

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Expedition Arctic V/1a, 1b, and 2 with RV *Polarstern* 1988. Spindler, M., ed, [1989, 197p., ger] 43-3077
Alaska climate summaries, 2nd edition. Leslie, L.D., comp, [1989, 478p., eng] 43-3846
Development of an automatic weather station for cold regions. Strangeways, I.C., [1984, p.12-23, eng] 43-4311

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Problems of design and service of machinery and structures for polar regions. Larionov, V., et al, [1989, p.820-830, eng] 43-3780
Extra high strength structural steels for ice breakers. Nordén, R., [1989, p.839-851, eng] 43-3782

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Thermal properties of mines in the North. Shurgin, B.V., ed, [1987, 81p., rus] 43-2259
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Formation of wet avalanches and their forecasting. Kondrashov, I.V., [1987, p.64-69, rus] 43-2500
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Statistical forecasting of wet avalanches in the Caucasus Mountains. Simoniia, T.K., [1988, p.112-115, rus] 43-3838
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Wettability
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Wind direction
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Pattern of pollutant transfer into the Arctic troposphere. Karimova, G.U., et al, [1988, p.168-181, rus] 43-1177
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Reliability of Ontario Hydro's 500 kV narrow base transmission structures. Goel, A.P., [1987, p.73-88, eng] 43-1587
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Cold weather concreting in the St Paul-Minneapolis area. Downs, M.B., et al, (1989, p.41-49, eng) 43-2087
Use curing blankets to offset cold weather effects on concrete. Royek, S., (1988, p.1036-1037, eng) 43-2136
New data and technology for construction in the North. (1986, 133p., rus) 43-2214
Evaluation of cold-weather concrete patching materials Kudlapur, S., et al, (1989, p.36-44, eng) 43-2335
Energy-efficient regimes for thermal treatment of concrete in extended constructions under winter conditions. Zasedatelev, I.B., et al, (1988, p.75-79, rus) 43-2434
Grouting joints in large panel buildings. Gol'dguber, B.M., (1988, p.30-31, rus) 43-3534
Integrated method for concreting structures. Kostiaev, P.S., et al, (1989, p.25-26, rus) 43-3536
Gypsum plaster-free portland cement with potash for winter concreting. Shpynova, L.G., et al, (1988, p.21-23, rus) 43-3850
Proceedings. (1988, 417p., eng) 43-4044
Effect of slag on concrete cured at low temperatures. Numata, S., et al, (1988, p.137-167, eng) 43-4051
Cold weather concreting using non-freezing agent. Takada, M., et al, (1988, p.168-191, eng) 43-4052
Practical curing design for heat-insulated winter concreting. Nagashima, H., (1988, p.192-221, eng) 43-4053
Construction of the substructure of the new Tokachi Bridge. Ishikawa, H., et al, (1988, p.222-236, eng) 43-4054
Winter concrete work using air dome as a protective structure. Shibata, I., et al, (1988, p.237-253, eng) 43-4055

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Winter maintenance

Methods of determining service life of equipment in the Far North. Malinovskii, N.S., et al, (1987, p.29-32, rus) 43-105
Repair of winter damage. Grunau, E.B., (1988, p.21-26, ger) 43-124
Improvement of Federal Highway 27 in a difficult mountain region in the Harz Mountains. Joop, U., et al, (1988, p.137-143, ger) 43-173
Winter road maintenance in Sweden. Thunberg, B., (1985, p.75-87, swe) 43-363
National highway system in the Swedish mountains. Nilsson, A., (1985, p.88-95, swe) 43-364
Winter maintenance of large airports. Aaro, T., (1985, p.256-261, swe) 43-378
Quebec City—a snow city Gagnon, G., (1988, p.50-51, eng) 43-502
Bibliography of snow and ice hazards on highways. Schweiger, A.J., comp, (1987, 110p., eng) 43-753
Living snow fence project. (1975, 22p., eng) 43-882
Experience on wintertime road accidents. Peltola, H., et al, (1987, p.11-14, fin) 43-1007
Tire friction on roads in winter Heuser, G., et al, (1985, 116p., ger) 43-1054
Planning for winter snows. (1988, p.1,3, eng) 43-1057
ANAS snow clearing service Zechini, Q., et al, (1988, p.32-41, ita) 43-1062
Contribution of chemistry to road trafficability. Dalcq, P., et al, (1988, p.61-63, ita) 43-1064
Spring opening of the Gran San Bernardo Pass. Scotto, G.E., (1988, p.76-79, ita) 43-1066
Dobbiaco '78: new developments in operations and technology. Baiano, G., (1988, p.88-93, ita) 43-1067
Contracting also suitable for municipal winter road service. Rahja, J., (1988, p.13-15, 26, fin) 43-1796
Taming winter weather. (1988, p.24-28, eng) 43-1849
Winter operations call for advance preparation Stellfox, E., et al, (1988, p.36-37, eng) 43-1852

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Winter maintenance *(cont.)*
City gives potholes icy reception. Bembry, E., [1988, p.54, eng] 43-1855
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Limited salt spreading on highways—effects on traffic movement and safety. Hanke, H., et al, [1988, p.392-402, ger] 43-2187
Warming up to winter. Twombly, M.R., [1988, p.62-65, eng] 43-2313
Ground deicing and anti-icing. Golbey, S.B., [1988, p.82-84, eng] 43-2314
Evaluation of cold-weather concrete patching materials. Kudlapur, S., et al, [1989, p.36-44, eng] 43-2335
Proceedings. [1986, var. p., eng] 43-2753
Correlations between road salt use and winter intensity. Speth, O., [1986, 16p., eng] 43-2756
Snow and freeze forecasting for highways in winter. Miyata, K., et al, [1986, 16p., eng] 43-2760
Climatic factors for road maintenance and traffic safety. Lindqvist, S., [1986, 8p., eng] 43-2762
Ice retardant pavements and the importance of stationary winter maintenance. Johannes, H.P., [1989, p.27-29, eng] 43-3485
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Developing an effective snow plan. Nanninga, J.A., [1989, p.58-60, eng] 43-4078
Snowbelt county's approach to winter maintenance. Buss, M.D., [1989, p.66-67, eng] 43-4079
Calcium magnesium acetate in winter maintenance. Fritzsche, C., [1989, p.78-79, eng] 43-4082
Colorado fights frost heave with insulation. Upright, W., [1989, p 81-82, eng] 43-4083
Solutions to improve ice and snow control management on road, bridge, and runway surfaces. Kelley, J.R. [1988, p.152-161, eng] 43-4125
See [also]: Snow removal

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See [also]: Cold weather performance

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Wood
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Mongolia, land of the herders under change. Erat, B., [1988, p 223-241, eng] 43-4245

Work time standards
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Observations of large-angle grain boundaries in ice crystals. Hondoh, T., [1988, p.129-146, eng] 43-1419
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X ray diffraction
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Dislocations in natural ice crystals. Fukuda, A., et al, [1988, p.13-25, eng] 43-1414
Dislocations in artificially grown single crystals of ice. Oguro, M., [1988, p.27-47, eng] 43-1415

Yukon River
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