

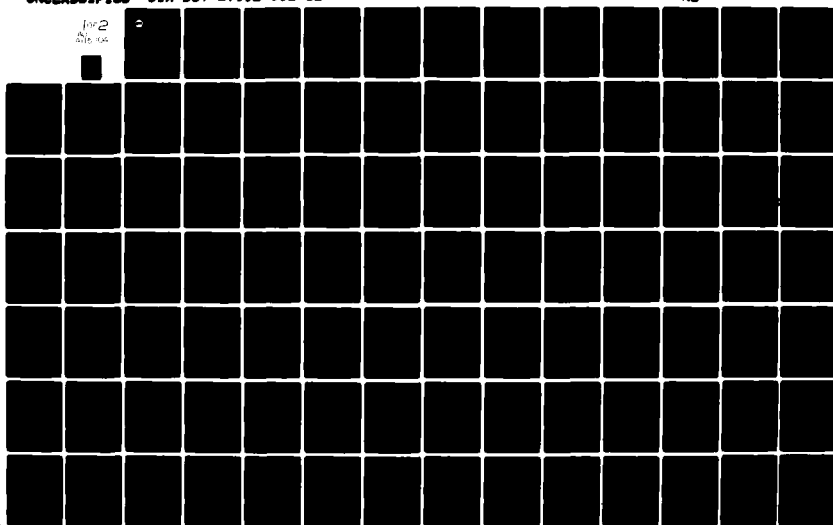
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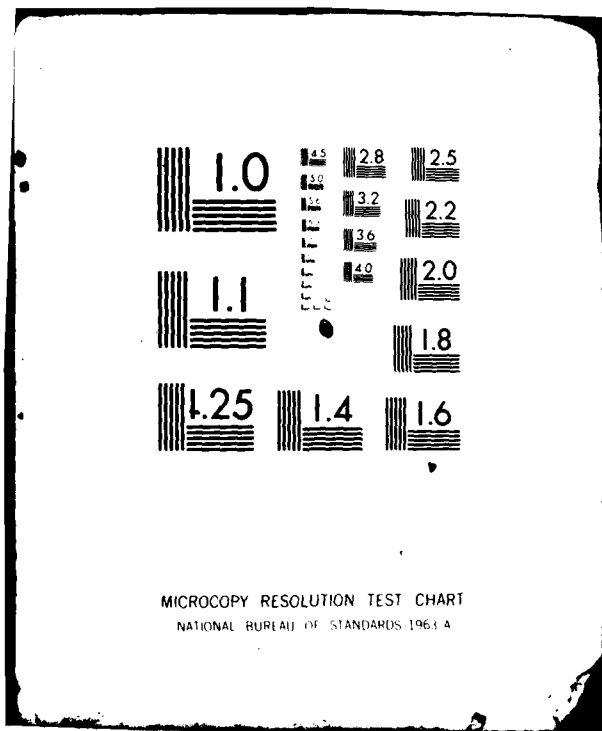
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No. 51

JANUARY - FEBRUARY 1981

Date of Report

March 5, 1982

Vice Director for Foreign Intelligence
Defense Intelligence Agency

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20. ABSTRACT This is the Soviet Laser Bibliography for January-February 1981, and is No. 51 in a continuing series on Soviet Laser developments. The coverage includes basic research on solid state, liquid, gas, and chemical lasers; components; nonlinear optics; spectroscopy of laser materials; ultrashort pulse generation; crystal growing; theoretical aspects of advanced lasers; and general laser theory. Laser applications are listed under biological effects; communications; beam propagation; computer technology; holography; laser-induced chemical reactions; measurement of laser parameters; laser measurement applications; laser-excited optical effects; laser spectroscopy; beam-target interaction; and plasma generation and diagnostics.		

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Introduction

This bibliography has been compiled under an interagency agreement as a continuing effort to document current Soviet-bloc developments in the quantum electronics field. The period covered is January-February 1981, and includes all significant laser-related articles received by us in that interval. The bulk of the entries come from the approximately 30 periodicals which are known to publish the most significant findings in Soviet laser technology. Citations from the Russian Reference Journals are also included. Laser items from the popular or semipopular press are generally omitted.

For convenience we have abbreviated frequently cited source names; a source abbreviations list and an author index are included. All sources cited with no parenthetical notation are available at the Library of Congress. A parenthetical entry (RZh, KL) indicates the secondary source in which the citation was found as a bibliographic entry or abstract, but for which the original source is not currently available at the Library. The authors' affiliations are indicated by the numbers in parentheses following the authors' names in the text and are listed in the Author Affiliations List. New affiliations are assigned a new number and are added to a cumulative list which includes all affiliations from 1969 to the present. Only those affiliations which appear in this issue are listed in this issue's Author Affiliations List.

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SOVIET LASER BIBLIOGRAPHY, JANUARY - FEBRUARY 1981

TABLE OF CONTENTS

I. BASIC RESEARCH

A. Solid State Lasers

1. Crystal: Ruby	1
2. Crystal: Rare-Earth Activated	
a. Nd ³⁺	1
b. Er ³⁺	3
c. Miscellaneous Rare Earth	3
3. Crystal: Miscellaneous	3
4. Semiconductor: Simple Junction	
a. CdS	4
5. Semiconductor: Mixed Junction	5
6. Semiconductor: Heterojunction	5
7. Semiconductor: Theory	7
8. Glass: Nd	7

B. Liquid Lasers

1. Organic Dyes	
a. Rhodamine	8
b. Miscellaneous Dyes	8
2. Inorganic Liquids	---

C. Gas Lasers

1. Simple Mixtures	
a. He-Ne	9
b. He-H ₂	10
2. Molecular Beam and Ion	
a. CO ₂	10
b. CO	13
c. Noble Gas	13
d. N ₂	14
e. H ₂ O	15
f. CF ₄	15

g. Submillimeter	15
h. Metal Vapor	16
i. Gasdynamic	16
3. Excimer	17
4. Theory	19
D. Chemical Lasers	
1. $F_2+H_2(D_2)$	21
2. Photodissociative	---
3. Transfer	21
4. H_2+Cl_2	21
E. Components	
1. Resonators	
a. Design and Performance	22
b. Mode Kinetics	23
2. Pump Sources	23
3. Deflectors	24
4. Diffraction Gratings	24
5. Windows	25
6. Mirrors	25
7. Detectors	25
8. Modulators	26
9. Miscellaneous Components	28
F. Nonlinear Optics	
1. Frequency Conversion	28
2. Parametric Processes	30
3. Stimulated Scattering	
a. Raman	31
b. Brillouin	31
c. Miscellaneous Scattering	32
4. Self-focusing	33

5. Acoustic Interaction	33
6. General Theory	34
G. Spectroscopy of Laser Materials	38
H. Ultrashort Pulse Generation	38
J. Crystal Growing	39
K. Theoretical Aspects of Advanced Lasers	40
L. General Laser Theory	41
II. LASER APPLICATIONS	
A. Biological Effects	43
B. Communications Systems	47
C. Beam Propagation	
1. In the Atmosphere	49
2. In Liquids	55
3. Theory	56
D. Computer Technology	56
E. Holography	57
F. Laser-Induced Chemical Reactions	61
G. Measurement of Laser Parameters	65
H. Laser Measurement Applications	
1. Direct Measurement by Laser	67
2. Laser-Excited Optical Effects	84
3. Laser Spectroscopy	90
J. Beam-Target Interaction	
1. Metal Targets	97
2. Dielectric Targets	99
3. Semiconductor Targets	100
4. Miscellaneous Studies	100
K. Plasma Generation and Diagnostics	102

III. MONOGRAPHS, BOOKS, CONFERENCE PROCEEDINGS	108
IV. SOURCE ABBREVIATIONS	116
V. AUTHOR AFFILIATIONS	122
VI. AUTHOR INDEX	127

I. BASIC RESEARCH

A. SOLID STATE LASERS

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H. LASER MEASUREMENT APPLICATIONS

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2. Laser-Excited Optical Effects

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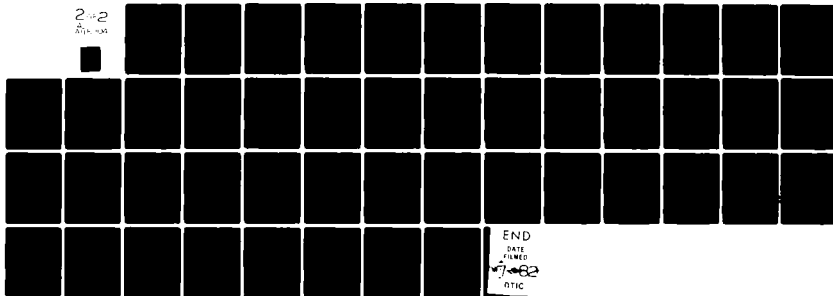
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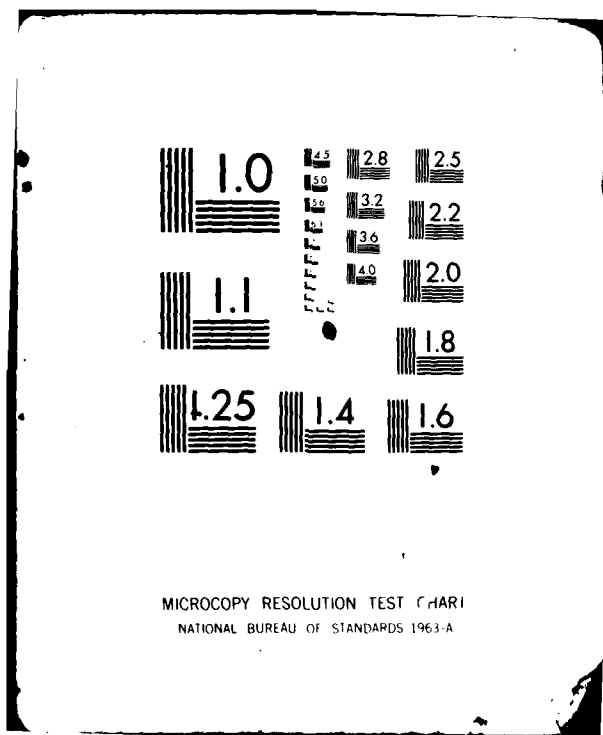
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J. BEAM-TARGET INTERACTION

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IV. SOURCE ABBREVIATIONS

(CIRC Codens)

APH	(APAHA)	Acta physica Academiae scientiarum hungaricae
BP	(BPPHA)	Beitraege aus der plasmaphysik
BWAT	(BWATA)	Biuletyn Wojskowej akademii technicznej J. Dabrowskiego
DAN B	(DBLRA)	Akademiya nauk Belorusskoy SSR. Doklady
DAN SSSR	(DANKA)	Akademiya nauk SSSR. Doklady
DAN Ukr	(DUKAB)	Akademiya nauk Ukrayins'koyi RSR. Dopovidi. Serriya A. Fizyko-matematychni ta technichni nauky
EOM	(EOBMA)	Elektronnaya obrabotka materialov
FAiO	(IFAOA)	Akademiya nauk SSSR. Izvestiya. Fizika atomsfery i okeana
FGiV	(FGVZA)	Fizika goreniya i vzryva
FiKhOM	(FKOMA)	Fizika i khimiya obrabotka materialov
FiKhS	(FKSTD)	Fizika i khimiya stekla
FMM	(FMMTA)	Fizika metallov i metallovedeniye
FTP	(FTPPA)	Fizika i tekhnika poluprovodnikov
FTT	(FTVTA)	Fizika tverdogo tela
IAN Arm	(IAAFA)	Akademiya nauk Arm. nskoy SSR. Izvestiya. Fizika
IAN B	(VABFA)	Akademiya nauk Belorusskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk
IAN Fiz	(IANFA)	Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya
I-FZh	(INFZA)	Inzhenerno-fizicheskiy zhurnal
IT	(IZTEA)	Izmeritel'naya tekhnika
IVUZ Fiz	(IVUFA)	Izvestiya vysshikh uchebnykh zavedeniy. Fizika
IVUZ Priboro	(IVUBA)	Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye
IVUZ Radioelektr (IVUZB)		Izvestiya vysshikh uchebnykh zavedeniy. Radioelektronika
IVUZ Radiofiz (IVYRA)		Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika

KE	(KVEKA)	Kvantovaya elektronika
KhVE	(KHKVA)	Khimiya vysokikh energiy
KL	(KNLTA)	Knizhnaya letopis'
Kristal	(KRISA)	Kristallografiya
Lit fiz sb	(LFSBA)	Litovskiy fizicheskiy sbornik
MTT	(IZMTB)	Akademiya nauk SSSR. Izvestiya. Mekhanika tverdogo tela
NM	(IVNMA)	Akademiya nauk SSSR. Izvestiya. Neorganicheskiye materialy
Ois	(OPSPA)	Optika i spektroskopiya
OMP	(OPMPA)	Optiko-mekhanicheskaya promyshlennost'
Opt app	(OPAPB)	Optica applicata [Poland]
Otkr izobr	(OIPOV)	Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki
PMFA	(PMFAA)	Pokroky matematicky, fiziky a astronomie
PSS	(PSSAB)	Physica Status Solidi (A). Applied Research
PSU	(PRSUB)	Pribory i sistemy upravleniya
PTE	(PRTEA)	Pribory i tekhnika eksperimenta
RiE	(RAELA)	Radiotekhnika i elektronika
Roz elektr	(RZETA)	Rozprawy elektrotechniczne
RZhF	(RZFZA)	Referativnyy zhurnal. Fizika
RZhGeo fiz	(GZGFA)	Referativnyy zhurnal. Geofizika
RZhMekh	(RZMKA)	Referativnyy zhurnal. Mekhanika
RZhRadiot	(RZRAB)	Referativnyy zhurnal. Radiotekhnika
Sb1	Sbornik	Mezhdunarodnyy kongress po voysokoskorostnoy fotografii i fotonike. 14th. Moskva, 19-24 Oct 1980. Tezisy dokladov. Place of publication not given, 1980.
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SCF	(SCEFA)	Studii si cercetari de fizica
TiEKh	(TEKHA)	Teoreticheskaya i eksperimental'naya khimiya
TKiT	(TKTEA)	Tekhnika kino i televedeniya
Tr1	Trudy	Fizicheskiy institut AN SSSR. Trudy, no. 128, 1981.
Tr2		Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 246, 1979.
Tr3		Fizicheskiy institut AN SSSR. Trudy, no. 126, 1981.
Tr4		Institut eksperimental'noy meteorologii. Trudy, no. 10(84), 1981.
Tr5		Leningradskiy gidrometeorologicheskiy institut. Mezhvedomstvennyy sbornik, no. 71, 1980.
Tr6		NII priborostroyeniya. Trudy, no. 40, Moskva, 1981.
Tr7		Glavnaya geofizicheskaya observatoriya. Trudy, no. 432, Leningrad, 1981.
Tr8		Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 228, 1978.
Tr9		Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 271, 1980.
Tr10		Tsentral'nyy NII morskogo flota. Trudy, no. 259, Leningrad, 1980.
Tr11		Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 253, 1979.
Tr12		Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 263, 1980.
Tr13		Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 280, 1980.
Tr14		Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 252, 1979.
TVT	(TVTYA)	Teplofizika vysokikh temperatur
UFZh	(UFIZA)	Ukrainskiy fizicheskiy zhurnal
VBU	(VBMFA)	Belorusskiy universitet. Vestnik. Seriya 1. Matematika, fizika, mekhanika
VKU	(-----)	Kiyevskiy universitet. Vestnik. Fizika
VMU	(VMUFA)	Moskovskiy universitet. Vestnik. Fizika, astronomiya

ZhETF	(ZEIFA)	Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhETF P	(ZFPRA)	Pis'ma v Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhFKh	(ZFKHA)	Zhurnal fizicheskoy khimii
ZhNiPFiK	(ZNPFA)	Zhurnal nauchnoy i prikladnoy fotografii i kinematografii
ZhNKh	(ZNOKA)	Zhurnal neorganicheskoy khimii
ZhPMTF	(ZPMFA)	Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki
ZhPS	(ZPSBA)	Zhurnal prikladnoy spektroskopii
ZhTF	(ZTEFA)	Zhurnal tekhnicheskoy fiziki
ZhTF P	(PZTFD)	Pis'ma v Zhurnal tekhnicheskoy fiziki

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VI. AUTHOR INDEX

A			ARTAMONOV A V	22	BELYY V N	24
ABAKUMOV B M			ARTYUSHENKO V G	47	BENC I	65
ABAKUMOV G A			60 ARUTYUNYAN G G	14	BERENBERG V A	2
ABBASOV A N	61,67		ARUTYUNYAN S G	97	BERESTETSKIY V B	108
ABESADZE T SH			90 ASHMARIN I I	70	BEREZHNOY A I	84
ABRAMOVICH B S			67 ASKAR'YAN G A	34	BERGMANN J	80
ABROSIMOV I N			28 ASTAF'YEVA T B	70	BERNDT K	38
ABROSIMOV V M	30,83		AUSLENDER A L	70	BERTEL' I M	11
ABRUKOV A S			84 AVERBUKH I SH	41	BESPAL'KO V A	71
ABRUKOV V S			67 AVERINA I M	89	BESPALOV V I	31,32
AGAFONOVA K A			67 AVETISOV E S	70	BETIN A A	31,32
AGAYEV V V			65 AVETISYAN N S	29	BEZRODNYI V I	9,34
AGEKYAN V F			48 AVRORIN A V	58	BEZVERKHNYI V A	50
AGEYEV V A			86 AVROV A I	11,19	BLAZHENKOV V V	1,102
AGHANAT M B			84 AYNISHTYAN V G	76	BLINOV L M	81
AGROVSKIY B S			23 AYVAZYAN YU M	110	BLINOV S I	62
AGURKOVA T N			65 AZATYAN A S	45	BLOKH M A	105
AILERS H	43				BOBOLEV V K	63
AKCHURIN G G	100		B		BOBOVICH YA S	31,90
AKHMANOV S A	9		BABENKO S M	19	BOBRIK V I	65
AKHMETZ'YANOV M KH	108		BABICH YU N	100	BOCHUKAR' V P	51
AKIMAKINA L V	68		BABICHEV A P	15	BOCHUKAREV E P	47,99
AKIMOV A V	48		BABIN A A	32	BODNAR' I V	84
AKIMOV P S	33,92		BABIN L V	59	BODNER V A	71
AKIMOV V K	25		BABKOV L M	90	BOGACHEV B I	58
AKIMPIYEV N N	68		BADZIAK J	38	BOGACHEV I D	18
AKHMANOV A G	61		BAGAYEV S N	70	BOGANOV A G	47
AKOPYAN R S	1,2		BAGDASAROV KH S	100	BOGDANKOVICH O V	5
AKSENOV V P	8		BAGRATASHVILI V N	62	BOGOMOLOV YE N	71
AKSENOV YE T	68		BAKUT P A	70	BOKHAN P A	16
ALAVERDYAN R B	47		BAKUTSKIY V N	84	BOLESTA I M	91
ALEKHIN V I	8		BALAKIN A A	62	BOLTAR' K O	56
ALEKHNOVICH V I	47		BALASHOV I F	2	BONCH-BRUYEVICH A M	34
ALEKSANDROV A P	95		BALIN YU S	49	BONDAR' I I	34
ALEKSANDROV A YA	111		BALOTA N N	83	BONDAR' S A	5
ALEKSANDROV M L	68		BALTRAMEYUNAS R	84	BONDARENKO A N	35
ALEKSANDROV N L	68		BARANOV A V	90	BONDARENKO A V	11
ALEKSANDROV V M	10,19		BARANOV V YU	15,17,18	BONDARENKO YU F	10
ALEKSANYAN A G	16		BARANOVA N B	34	BORDUN V P	47
ALEKSEYEV A I	7,28		BARNIK M I	81	BORISENKO N G	103
ALEKSEYEV V V	34,56		BARONOV G S	15	BORISOV N A	5
ALEYLIKOV V S	93		BARSEGYANTS L O	69	BORISOV V I	26
ALFEROV G N	10		BARSUKOV K A	26	BORISOV V M	17,18
ALIYEV YU M	13		BARYKINSKIY G M	30	BORODKINA M S	56
ALLAKHVERDIYEV K R	102		BARYSHEV S A	91	BORODULENKO L I	89
ALUM KH P	68,90		BARYSHNIKOV F F	34	BORODULIN V I	5,7
AMINOV T G	78		BASHAROV A M	34,56	BOROVSKIY A V	103
ANDREYEV A A	36		BASHKIN A S	21,108	BOS M S	35
ANDREYEV A V	102		BASHLAKOVA N P	29	BOTSMANOV K V	43
ANDREYEV P A	41		BASIYEV T T	3	BOTVICH A N	94
ANDREYEVA L I	2		BASOV N G	102	BGYAKHCHYAN G P	7
ANDRUSENKO A M	8		BASUN S A	33,92	BOYKO P YE	77
ANDRYUKHINA E D	68		BATENIN V M	16	BOYKO V A	103
ANGELOVA L A	102		BATLAN L I	77	BOYKOV V S	52,72
ANGEL'SKIY O V	69		BAYKOVA N D	60	BRASLAVETS A V	91
ANIKINA YE B	59		BAZYL' O K	9	BRAZHNIK V A	103
ANIKST D A	70		BEKOV G I	62	BREKHOV G M	89
ANISIMOV N A	111		BELENOV E M	28,29,40	BREKHOV YE I	46
ANISIMOV YU M	91		BEL'GOVSKIY I M	74	BREYEV V V	11,16,19
ANTONOV V M	67		BELIN A M	26	BREYTMAN B A	58
APOSTOL D	69		BELOBORODOV V N	56	BRITOV A D	5,6
AREF'YEV B A	57		BELOUSOV V N	71	BRODCOVY A V	85
AREF'YEV I M	114		BELOZEROV A F	71	BRODSKIY I I	58
AREF'YEV V N	69		BEL'SKIY A M	22	BRODSKIY YU YA	103
ARKHARGEL'SKAYA V A	49,70		BEL'TS V A	50	BRYKOV V G	72,82
ARKHIPKIN V G	38		BELYAYEV L M	101	BUBLICHENKO I A	22
ARKHIPOV V V	29		BELYAYEV YE B	50	BUBNOV M M	47
ARSENIN V YA	69		BELYAYEV YU N	31	BUBULIS A K	72
	69		BELYY M U	84	BUCHIN A V	72
					BUDZYAK A	72

BUGAJSKI M	6	DAN'SHCHIKOV YE V	11	E	
BUGAYEV V A	15	DARBINYAN K R	97		
BUISHVILI L L	67	DARGIS A YU	26	EBERT W	14
BUKIN G V	4	DARVOYD T I	47,99	EFENDIYEV SH M	92
BULDAKOV M A	50	DASHEVSKIY Z M	6	EPSHTEYN E M	91
BUNKIN F V	62,97	DAVIDOVSKIY A M	17	EPSHTEYN V SH	29
BURAVLEV A S	72	DAVIDOV A YE	67	ERLER K	61
BURCHULADZE T G	43	DAVIDOV M A	31	ERM R E	55
BURMAKOV A P	72	DAVIDOV YU M	104	ERTER K	62
BUSHUYEV V S	103	DAVIDOVA A B	74	ETINBERG M I	73
BUTYLKIN V S	56	DAVIDOVA YE B	73	ETSIN I SH	66
BUZHINSKIY O I	16	DEDUSHENKO K B	7		
BYCHENKOV V YU	102	DEKHTYAR I YA	62	F	
BYCHKOV R M	70	DELONE N B	34		
BYCHKOV YU I	11	DELONG A	73	FABELINSKIY I L	39,110
BYKHOVSKAYA L N	65	DEMCHENKO V V	103	FADEYEV N N	54
BYKOV A M	47,73	DEMENT'YEV A S	73	PAL' A M	10,19
BYKOVSKIY YU A	7,22,73,104	DEMENT'YEV I V	26	PAL'KOVSKIY L A	85
		DEMIDENKO Z A	35	PALOMKIN I V	72
C		DEMIDOV B A	104	PAM CHONG KH'YEH	22
CERNY L	65	DEMINA T P	27	PANNIBO A K	97
CHALYY V P	86	DENCHEVA M	29	FATEYEV N P	54
CHAPLIYEV N I	97	DENISYUK YU N	58	FATEYEV V A	27
CHAPOVSKIY P L	64	DENUS S	107	FATYEVSKIY A I	55
CHAUSHANSKIY S A	107	DERBENEV YA S	40	FAYENOV A YA	103
CHAYKINA YE I	95	DERVISHOV N G	92	FAYNBERG B D	94
CHEBERYAK M S	57	DERYAGIN B V	85	FAYNER N I	74
CHEBOTAYEV V P	70	DIANOV YE M	47,48	FAYZULAYEV V N	16
CHEBURKIN N V	11	DIDENKO A N	40	FAYZULLOV F S	37
CHEKALIN S V	107	DIKAYEV YU M	48	FEDCHENYA I I	22
CHEKANOV A A	97	DIMZA V I	84	FEDCHUK I U	69
CHEL'TSOVA T V	56	DMITHRIYEV A YE	63,91	FEDIN V P	10,19
CHELYSHEV N A	78	DOBROTVORSKIY A N	50	FEDIRKO V A	56
CHEPILKO N M	95	DOLGIKH YU K	101	FEDOROV A A	88
CHEFURNOY V A	4	DOLGINOV L M	5,39	FEDOROV A I	18
CHEREPANOV V N	54	DONIN V I	13	FEDCRUSHKOV B G	7
CHEPKASOV A S	29	DONTSOVA V V	58	FEDOSEYEV D V	85
CHEPKASOV YE V	95	DONU V S	25	FEDOTCHENKO V K	80
CHEKVINSKIY M M	108	DORA D (SEE DORA GY)		FEDOTOV S I	107
CHEKVERUSHKIN B N	106	DORA GY	73	FEDYANIN G I	102
CHIGIR' N A	34	DROGOTOVTSEV V M	103	FEDYUNIN YU N	60
CHIGOGIDZE N SH	95	DOROSH I R	58	FEL'DMAN G A	111
CHIGRINOV V G	81	DOVGAN' A P	57	FEOFILOV P P	38
CHILINGARIYAN YU S	8	DOVGOSHEY N I	25	FILATOV YU V	77
CHIRKIN A S	29,108	DREYDEN G V	73	FILINOV V N	70
CHIRKOV V A	103,105	DROGAYTSEV YE A	35	FINKEL'SHTEYN M I	50
CHISTOV YE D	112	DRUZHININ A A	63	FIRTSAK YU YU	25
CHISTYAKOV A A	70	DUBOVIK M P	35	FOFANOV YA A	66
CHISTYAKOVA L K	52	DUDINOV V N	70	FOMENKO G P	40
CHMELA P	35	DUDKIN V A	13	FOMICHEV A A	39
CHUDNOVSKIY F A	67	DUDKO D A	97	FOMICHEV N N	27
CHUGUY YU V	71,78	DUL'NEV G N	28	FOMICHEV V V	92
CHUKLIN S M	96	DURDYNIAZOV N K	43	FOTIYEV V A	14
CHUPAKHINA V M	5	DUTOV A I	12	FRAYKIN G YA	43
CHURAKOV V V	11,12,41	DVURECHENSKIY S V	19	FRAYMAN G M	36
CHUZO A N	102	DYABILIN K S	102	FREYDMAN G I	31,32
CZECZOWICZ R	22	D'YACHENKO V V	100	FRIDKIN V M	80
		D'YAKOV YU YE	108	FRIDMAN S A	26
D		DYATLOV A I	32	FRITSBERG V YA	30,109
DANIL'CHENKO V P	68	DYCHKOV A S	70	FROLOV V A	6
DANILEYKO E V	10,19	DYKMAN M I	35,89	FROLOV YU L	64
DANILEYKO YU K	33,99	DYMENKO N N	101	FRONTS K	7
DANILOV S V	1	DYUBA N M	89	FURER A L	93
DANILOV V A	14	DYUMAYEV K M	29	FURER V L	93
DANILOVA V I	9	DZHABISHVILI N S	3		
DANILYANTS L B	65	DZHAKSIMOV YE	85	G	
DANILYCHEV V A	11,19	DZHARIKOV N K	91	GADIYAK G V	20
DANILYUK L P	75			GALANKIN V N	43
				GALANOV YE K	80

GALCHENKOV D V	5	GRINCHENKO B I	18	IVANOVA YE P	86,96
GALECHYAN G A	14,97	GRINEV A YU	27,48	IVANTSOV L M	24
GALKIN G N	85	GRISHANIN B A	35	IVKIN M V	104
GAL'PERN A D	58	GRISHAYEV V I	103	IVLEV YE I	101
GAPONOV-GREKHOV A V	111	GRISHCHUK R V	85	IYEVSKAYA N M	86
GARASHCHUK V P	97	GROMOV A N	103	IZMAYLOV A CH	20
GARBUSOV D Z	86	GROMOV S V	78		
GASPARYAN G G	45	GRUDININ A B	47,48	J	
GAVRILENKO V P	88	GRUDYANOV A I	43		
GAVRILOV G A	57	GRUZN OV V M	58	JUNGE K	38
GELLER YU I	35	GUBANOV V A	31,91	K	
GEL'NUKHANOV F KH	86	GUBAREV A V	11		
GENKIN S A	18	GUBAREV S I	104		
GEORGOBIANI A N	27	GUDELEV V G	12	KAKICHASHVILI SH D	58
GERASHINOV V P	91	GUDKOV YU P	23	KALECHITS V I	92
GERMAN M A	50	GULIYEV R I	68	KALENKOV S G	96
GEYZLER YE S	48	GUL'KO V M	104	KALINEC F	44
GIL' V V	74	GUMENYUK A F	91	KALININ YE V	44
GIL'DENBURG V B	104	GURARI M L	74	KALINNIKOV V T	36
GINZBURG V M	74	GURSKIY I M	75	KALINTSEV A G	2
GLAGOLEV S F	108	GURVICH A S	50,51	KALINUSHKIN V P	82
GLAZMAN L I	86	GUR'YANOV A N	47	KALNYKOVA G A	90
GLOTOV YE P	11,19	GUSEV A A	2	KAMENETS F F	19
GLOWCZEWSKI P	9	GUSEV G P	99	KAMINSKAYA N V	98
GLUSHNEV V G	50	GUSEV N S	8	KAMINSKIY A A	3
GODLEVSKIY A P	50	GUS'KOV S YU	105	KANAYEV A V	19
GOLIK L L	100	GVALADZE T V	1	KANTSYREV V L	73,104
GOLONZHKA V N	91	GYULAMIRYAN A L	35	KAPENIYEKS A E	86
GOLOVANC V F	47			KAPICKA V	76,78
GOLOVINSKIY P A	86	H		KAPLYANSKIY A A	33,92
GOLOVIZNIN V P	74			KAPRALOV V P	66
GOLUB' A P	97,101	HESSE G	66	KAPTSOV L N	2
GOLUBEV L V	91	HEVESI I	114	KARABANOV YU F	63
GOLUBEV V S	19	HOFMANNOVA D	44	KARAPETYAN G O	112
GOLUBOVSKIY O M	111	HORAK B	44	KARCHEVSKIY A I	15
GOLUBTSOV A A	35	HORAK J	92	KARDOS M	73
GOLYAMINA YE M	40	HUSA V	65	KARDOSH M (SEE KARDOS M)	
GOLYAYEV YU D	2			KARFIDOV D M	105
GOMENYUK A S	93	I		KARGARETELI L N	3
GONCHAROV I G	7			KARLASHOV A V	18
GONCHAROV M N	97	IGNATOVICH E I	75	KARLOV N V	62
GONCHUKOV S A	20	IGNATOVSKIY N A	51	KARNYUSHIN V N	12,110
GORBAN' I S	31,91	IGOSHIN V I	21,108	KAROV A V	31
GORBUNOV A A	97	IL'ICHEVA YE N	60	KASATKIN B S	75
GORBUNOV I P	108	IL'INSKAYA T A	75	KASPRUK L A	36
GORDIN M P	51	IL'INSKIY YU A	41	KASUMOVA R D	20
GORELENCK A T	86	ILLARIONOV A I	30	KAS'YANOVA L V	27
GORSHKOV B G	99	ILYUKHIN A A	103,105	KATULIN V A	103
GORSHKOV V N	13	IMAMOV R M	99	KAUFMAN S A	65
GORSHTUNOV N M	12,21	IMAS YA A	8	KAUL' B V	49
GORYAYEVA YE M	38	INDZHIYA F I	72	KAVICH I V	83
GOS'KOV P I	74	ISAKOV A I	103	KAVTCROV V V	58
GOTLIB V A	68	ISAKOV S N	17	KAYDALOV S A	8
GOVORUN D N	24	ISAYEV I F	19	KAZAK N S	24
GOWOREK A	43	ISHCHENKO M M	62	KAZAK V L	75
GOWOREK H	43	ISHKHANOV B S	40	KAZAKOV S A	15
GRACHEV A P	7	ISYANOVA YE D	4	KAZANTSEV A P	36,86
GRACHEV YU N	51	IVAKHNIK V V	36,37	KAZANTSEV S V	47
GRACHEVA M YE	50	IVANENKO M M	41	KAZHEDUB A V	11
GREKHOV I V	16	IVANOV A G	98	KEDROV A YU	15
GRENISHIN S G	101	IVANOV A P	75	KELIKH S (SEE KELICH S)	
GRIB B N	24	IVANOV I TS	72	KELLER KH	95
GRIDIN V A	22	IVANOV L I	62	KERIMOVA T G	92
GRIGOROV L N	63	IVANOV L N	27,96	KEVORKOV A N	100
GRIGORYAN DZH KH	8	IVANOV N A	4	KHADZHI P I	111
GRIGOR'YAN V S	56	IVANOV V N	98	KHALMOV-MAL'KOV V YA	1
GRIGOR'YANTS A V	100	IVANOV V P	75	KHALANEYDA D D	87
GRIGOR'YEV L I	24	IVANOVA N K	94	KHALILEV V D	7
GRIGOR'YEV V M	51	IVANOVA O I	75	KHALTURIN V I	55
GRIL' YU I	17	IVANOVA T F	55	KHANIN YA I	23

KHANOKH B YU	22	KONONCHUK G L	75	KRASNER YU G	20
KHANOV V A	10	KONONOV A V	1	KRASNIKOV A S	84
KHAPALYUK A P	22	KONONOV A V	102	KRASNIKOVA M D	84
KHARITONOV A I	69	KONOPLEV N A	21	KRASNIKOVA YE I	63,91
KHARLAMOV B M	92	KONOV V I	97	KRASNOV I V	62,87
KHAYKIN N SH	67	KONOVALOV I N	18	KRASOVSKIY V M	19
KHEVESHI I (SEE HEVESI 1)		KONSTANTINOV A V	44	KRASVUK I K	25
KHIDIROV A SH	92	KONSTANTINOV O V	24	KRAVCHENKO V A	20
KHLOPKOV YU V	23	KONYAYEV V P	5,7	KRAVCHENKO V I	113
KHMARA O M	80	KONYAYEV YU S	47	KRAVCHUK I M	91
KHOKHLOV A	100	KOPECKY J	65	KRAVTSOV N V	2,23
KHOKHLOV I V	44	KOPYLOV YE A	50	KRAYNOVA I YE	90
KHOKHLOV N P	98	KOPYLOV YU L	48	KREKOV G M	52
KHOKHLOVA S A	44	KOPYLOVA T N	9	KREMENCHUGSKIY L S	60
KHOMENKO A V	57	KOPYTIN YU D	50,115	KRINDACH D P	51
KHOPIN V F	47	KORBUKOV G YE	72	KRISTALLOV A R	20,66
KHRIPLOVICH I B	110	KORINFSKIY D F	89	KRIVENKOV B YE	71
KHURISTOFOROV O B	17,18	KORKUSHKO A O	95	KRIVOLAPCHUK V V	87
KHROMOV B M	44	KORMER S B	105	KRIZ J	65
KHROMOPULO YU G	29	KORNEYCHIK T M	22	KROCHIK G M	29
KHUDENKO A YA	104	KORNIYENKO L S	2,23,86	KRUGLIK G S	22
KHUYAKOV S V	63	KOROBKIN V V	8,103	KRUMIN' A E	86
KHULUGUROV V M	4	KOROBKOV V S	91	KRUPITSKIY E I	72
KICHIGIN D A	67	KOROBCHIKIN A YE	69	KRUPNIK L I	76
KIELICH S	110	KOROLEV A M	71,76	KRUTOGOLOV YU K	6
KIKHANSKIY V V	12	KOROLEV YU D	18	KRUZHALOV A V	95
KIRICHENKO N A	62,97	KOROL'KOV A N	16	KRUZHALOV S V	2
KIRKIN A N	1,102	KORONKEVICH V P	10	KRYNETSKIY B B	82
KIRPICHENKOVA YE O	3	KOROTEYEV N I	108	KRYUKOV P G	39,107
KIR'YANOV V P	71	KOROTKOV P A	24	KRYUKOVA I V	5
KISELEV V F	16	KOROVIN V YA	98	KRYZHANOVSKIY V I	32
KIYACHENKO YU F	69	KORSAKOV V V	27	KSENOFONTOV M A	95
KLAUSUT' G N	92	KORSHEVER I I	58	KUCHEROV G V	48
KLEINT CH	88	KORSUNSKAYA N YE	87	KUCHIKYAN L M	47,73
KLEMENTOV A D	18	KOSHELEV K N	107	KUDRYASHOV A M	75
KLINKIN V M	4	KOSOROTOV V F	66	KUDRYASHOVA V A	15
KLIMOV V D	65	KOSTIKOV S M	102	KUDRYAVTSEV YU A	93
KLIMOVA T N	54	KOSTIN V K	78	KUKHARENKO A T	11,16
KLIMOVSKIY I I	16	KOSTROV I D	80	KUKHTA A V	15
KLOSE E	38	KOSTRUBIEC F	98	KUKHTAREV N V	36
KNYAZEV P G	45	KOSTYUK A V	56	KUKLEV S V	71
KNYUPFER A P	65	KOTEL'NIKOV V A	6	KUKUDZHANOV A R	93
KOBAK I A	5	KOTELYANSKIY I M	48	KUKUSHKIN A B	105
KOBETS L V	92	KOTENKO L P	102	KULAGINA S N	32
KOBYL'CHAK V V	27	KOTKIN A L	86	KULEVSKIY L A	68
KOCHARYAN V R	7	KOTLYACHKOV M I	58	KULIKOV S M	105
KOCHERGINA L L	92	KOTOMTSEVA L A	38	KULIKOV S YU	15
KOCHIN S M	68	KOTYUK A F	67	KUMEYSHA A A	75
KOKHANOV V I	52	KOUDELKA L	92	KUNDROTAS YU P	26
KOLBASOV G YA	4	KOVALEV A A	32	KUOKSHTIS E	84
KOLESNIK A G	43	KOVALEV A S	98	KUPKO V S	66
KOLESNIKOV P M	48	KOVALEV I O	25	KUPRIYANOV S YE	67
KOLOSOV V V	51	KOVALEV P I	74	KURBATOV A L	5,6
KOLYSHKIN V I	6	KOVAL'SKIY L V	59	KURETS V I	23
KOMAR V G	48	KOVAR L	76	KURIK M V	76
KOMAROV A V	104	KOVARSKIY V A	41	KUSHNIR V R	23
KOMAROV B D	73	KOVRIGIN A I	37	KUSIMOV S T	20
KOMAROV N N	68	KOWARSCHIK R	66	KUSNER YU S	82
KOMAROVA A A	44	KOZHEVNIKOV A V	40	KUTIK M	65
KOMISSARUK I I	71	KOZIEROWSKI M	30	KUZEMCHENKO YU N	27
KOMISSARUK V A	71,74	KOZIN G I	70	KUZIKOVSKIY A V	51,52,54
KOMLEV A A	27	KOZLOV A P	45		55,115
KOMOVA E M	95	KOZLOV A YU	69	KUZ'MICHEV A G	1
KOMPANETS I N	27	KOZLOV D N	96	KUZ'MIN G P	25
KONCHAKOV A M	19	KOZLOV V S	76	KUZ'MIN M V	41,63
KONDILENKO I I	24	KOZMANYAN A A	76	KUZ'MINOV YU S	58
KONDRATENKO A M	40	KOZYREV YU P	73,104	KUZNETSOV A A	47,65
KONDRATENKO O N	52	KRAMIDA A YE	105	KUZNETSOV P A	74,112
KONDRATOV O I	92	KRASHENINNIKOV A A	38	KUZNETSOV V V	58
KONDRAT'YEV A I	33	KRASSENKO N P	50	KUZYAKOV B A	12

KVAPIL J

L

LAEMMEL B
LAGUZOVA N P
LANINA E P
LAPENKO V N
LARIONOV YU P
LARIONOVA N F
LARIONTOSEV YE G
LASHKAREV G V
LAVRENT'YEV A V
LAVRENYUK V A
LAVROV B P
LAZAREV S V
LAZOV V V
LEBEDEV F V
LEBEDEV V B
LEBEDEV V I
LEBEDEV V V
LEBEDEVA L V
LEBEDEVA N N
LEBEDEVA T P
LEBEDEVA V N
LEBO I G
LENKOVA G A
LEONTOVICH A M
LESHENYUK N S
LESKOV G I
LETOKHNOV V S
LEVANYUK A P
LEVIN A B
LEVIN G G
LEVIN M B
LEVIN V A
LEVIN V I
LEVINSHTEYN M YE
LEVITSKIY M YE
LEYKIN M V
LIBERTS G V
LIDORENKO N S
LIKAL'TER A A
LIKHAMSKIY V V
LIPNITSKIY I V
LIPOVA V A
LIPOVSKIY A A
LISENKOVA A M
LISHENKO B A
LISITSA M P
LISITSA V S
LISITSKIY I S
LITVAK A G
LIVSHITS YE M
LOBACHEV V A
LOBANOV B D
LOBANOV L M
LOKHNYGIN V D
LOMADZE S O
LOMASOV YU N
LOPASOV V P
LOSEV S A
LOSEVA T V
LOSKUTOV V S
LOYKO N A
LOYKO V A
LUCHININ V I
LUCHITSKIY R M
LUKASHIN V A
LUKIN I P

59 LUKIN I V
LUKIN L V
LUKINA N A
LUK'YANCHUK B S
100 LUK'YANOV D P
85 LUSHCHIK A CH
33 LUSHCHIK CH B
66 LUSHCHIK N YE
76 L'VOV B V
103 LYANSHEV L M
2 LYASHENKO N I
85 LYATOV V YE
85 LYSENKO V F
78 LYSIKOV YU I
105,106 LYSKOVICH A B
50 LYUBCHANSKIY I L
M
26 MADVALIYEV U
30 MACOMEDOV A A
6 MAKAROV N P
29 MAKAROV YE V
33 MAKRAKOV L I
99 MAKSHANTSEV B I
105 MAKSIMOV V V
58,77 MAKSIMOV YU S
1,4,102 MALDUTIS E K
12 MALINKA V I
98 MALINOVSKIY V V
63,107 MALOFIYEV N A
85 MALOFIYEVSKIY V M
35 MALOVETSKAYA V M
70 MALYSHEV G M
29 MALYSHEV I V
17 MALYSHEV S A
77 MALYUSOV V A
16 MAMAYEV A V
52 MAMEDOV A M
68,80 MAMEDOV S B
30 MAMZER A F
6 MANAK I S
13 MANENKOV A A
23 MANISHIN V G
93 MANVELYAN R V
45 MANZHARA V S
47 MARAKHONOV V I
5 MARCHENKO S N
77 MARGOLIN A D
69,93 MARKEVICH I V
34 MARKOSYAN R A
99 MASAGUTOVA R V
36 MASHINSKIY V M
108 MASLENNIKOV N M
3 MASLOV V N
4 MATIYKO N M
75 MATORIN I I
39 MATROSOV I I
50 MATROSOV V P
93 MATSIYEVICH L V
52,85,96 MATVEYETS YU A
14 MATVEYEV A Z
101 MATVEYEV V V
51,52,53 MAVRITSKIY O B
38,39 MAYOROV S A
77 MAYYER B O
98 MAYYER G V
5 MAZHUKIN V I
65 MAZING M A
53 MAZURENKO YU T

54,68 MDIVANI V N
62 MEDIK V S
105 MEDVEDEV B A
62,97 MEDVEDEV S K
77 MEKHTIYEV T R
64 MEL'CHENKO S V
64 MELEKHOV P V
64 MELESHKOV S I
2 MELIKHOV YU V
33 MEL'NIKOV G V
36 MEL'NIKOV L A
33 MEL'NIKOV N V
77 MENDE N P
106 MERKIN M R
91 MERKUL'YEV YU A
93 MERZON G I
MES'KIN I V
METERSKIY V YA
METLITSKIY B I
33 MEYSNER L B
74 MEZHEVOV V S
29 MEGOLINETS I M
21 MIKAELIAN A L
93 MIKHAYLOV A I
32 MIKHAYLOV M D
77 MIKHEYEV L D
102 MIKHLYAYEV S V
73 MIKOLAYTIS V A
93 MIL'VIDSKIY M G
87 MINACHEVA A V
77 MINEYEV N N
70 MINOGIN V G
6 MINTS A Z
66 MIRONOV V L
80 MIROSHNIKOV M M
48 MIROV S B
77 MIRZOYAN R G
34,35 MISHCHENKO A V
29 MISHCHENKO I A
87 MISHIN A V
11 MITIN I V
5 MITSEL' A A
33,99 MKHEYAN V YE
32 MOCHALOV A V
67 MOHAMAD S Z
76 MOLCHANOV A G
57 MOLOCHNIKOV B I
60 MORACHEVSKIY N V
13 MORAVSKIY V E
87 MORDUKHAYEV A R
77 MOROZ S M
88 MOROZOV N V
63 MOROZOV S V
14 MOROZOV V A
39 MOROZOV V N
97 MOSARNOVSKIY L V
23 MOSASHVILI Z I
50 MOSHKUNOV A I
4 MOSKALENKO S A
59 MOSKALIK K G
39 MOSTOVNIKOV V A
32 MOZGO A A
85 MOZHAROVSKIY A M
22 MRUZ E
57,59,103 MUKHAMADZHANOV M A
1 MURANOVA G A
9 MURAVSKIY V P
106 MURAV'YEV E N
106 MURINA T A
14 MURINA T M

86
65
63,91
39
90
18
78
77
93
40
20
63
71,74
78
103
102
59
78
51
36
15
25
27
65
87
19
78
78
39
25
98
63
104
111
109
3
1
13
68
48
18
54
45
72,82
78
18
68
37
98
29
66
78
72
78
5
4
67
16
111
45
44
24
1,102
59
34
48
50
3
4
3,82

MUSIL M	44	OKS YE A	88	PEREGUDOV G V	103, 105
MUSTAFINA L T	71	OLESHCHUK V A	20	PEREL'MAN N F	41
MYAKININ V A	51, 53	OLEYNIK I S	68	PERGAMENT M I	71
MYNBAYEV D K	79	OLEYNIK V N	76	PERMOGOROV S A	87
		OMEL'CHENKO A YA	103	PERMYAKOV N K	73
N		ONISHCHENKO YU I	75	PERMYAKOV V A	56
NAATE I E	53	OPACHKO I I	106	PERSONOV R I	92
NABATOV V V	101	ORAYEVSKIY A N	17, 21, 41	PERTSEV A N	82
NAGAYEV A I	27		46, 61, 108	PESINA T I	94
NAGIBINA I M	75, 79	OREKHOVA V P	4	PETNIKOVA V M	36, 37
NAKWASKI W	6	GREPER B M	57	PETRAKIEV A	78
NALIMOV I P	69	ORLENKO V F	31, 91	PETRENKO A D	33
NANAI L	114	ORLOV L N	79	PETRISHCHEV V A	55
NANI R KH	90, 92	ORLOVSKIY V M	12	PETROV A A	67
NAPARTOVICH A P	10, 12, 23	OSIKO V V	3	PETROV A K	89
NASTOYASHCHIY A F	106	OSINSKIY V I	3, 58	PETROV A L	103
NASTYUKHA A I	18	OSIPENKO V P	48	PETROV B M	25
NAUMOV A P	79	OSIPOV M V	83	PETROV K I	92
NAYDIS G V	13	OSIPOV V V	102	PETROV N S	42
NAZARENKO B P	35	OSIPOV YU V	11, 12, 20	PETROV R L	17
NAZARKIN A V	30	OSTROVSKAYA L YE	26	PETROV V A	104
NEBOL'SIN M F	55	OSTROVSKIY V N	93	PETROV V F	39
NECHUYEV S I	103	OSTROVSKIY YU I	105, 106	PETROV V I	31
NEDZVETSKIY D S	84	OVANDER L N	73, 78	PETROVA G V	111
NEFED'YEV L A	87	OVCHINNIKOV I V	93	PETROVSKIY A N	22
NEMCHINOV I V	97, 101	OVCHINNIKOV V M	91	PETROVSKIY G T	48
NEMOLOCHNOV O F	28	OVECHKIS YU N	4, 55	PETROVSKIY V A	79
NEMSHCHIMENKO YU P	12	OVSYANKIN V V	69	PETROVSKIY V N	20
NEMTSEV I Z	46		88	PETRUKHIN A I	97
NEPORENT B S	94	P		PETRUKHIN V YU	2
NESHCHIMENKO YU P	21			PETRUSHENKO K B	64
NEVDAKH V V	12	PAKHOMOV A G	81	PETRUSHENKO YU V	5
NEVSTRUYEVA YE V	5	PAKHOMOV L N	2	PETRYAKOV V N	32
NEYSHTADT E L	45	PAL' A F	10	PETUKHOV V O	11
NGUYEN KHONG SHON	88	PALVANOV V P	95	PEVTSOV V F	5
NIKANOVICH M V	93	PANASYUK L M	26	PIDLISNYY YE V	89
NIKIFOROV YU N	62	PANCHENKO V I	103	PIGULEVSKIY YE D	79
NIKITENKO A I	103	PANCHENKO V P	11	PIKHTIN A N	27
NIKITIN V YU	21	PANFILOV V N	64	PIKUZ S A	103
NIKITINA G S	35	PANKRATOV A V	61	PILIPETSKIY N F	32, 34, 35
NIKITINA O I	94	PANKRATOV S YE	61	PIMENOV V P	61
NIKLES P V	96	PANKRATOV V M	27	PINCHUK S D	54
NIKOLAYCHIK A V	47	PAN'SHIN I A	66	PISARCIK M	92
NIKOLAYEV G A	96	PANTELEYEV M S	104	PISARCZYK T	107
NIKOLAYEV I N	99	PANYUSHKIN V A	72	PISAREVA T YE	94
NIKOLAYEV V B	12	PAPIN V G	21	PISKAREV I M	40
NIKOLAYEV V D	105	PARAMONOV A A	58	PISKUNOVA L V	55
NIKOLOVA L	59	PARAMONOV G K	64, 88	PITAYEVSKIY L P	108
NIKONGROV N V	48	PARFLANOVICH I A	4	PIVOVAR V A	12
NIKOROROV V YE	67	PARKHOMENKO YU G	46	PIVTORAK V A	75
NITSOVICH B M	113	PARSHKOV O M	91	PLESHANOV P G	46, 73
NOLLE E L	7	PARYGIN V N	27	PLESHANOV YU YE	97
NOZACH V YU	103	PASHIN A YE	55	PLETNIKOV L B	77
NOVAK I I	94	PASHININ P P	25	PLIS A I	59
NOVIK G M	72	PASHKIN S V	19	PLOTKIN M YE	106
NOVIKOV N P	99	PASHKO S A	5	PLOTNIKOV A F	57
NOVOSELOVA A V	6	PASMANIK G A	31, 32	PODGAYETSKIY V M	29
NOWAK J	59	PASMUROV A YA	83	PODGORNAYA I V	77
NOZDRIN V V	66	PASYNKOV V V	87	PODOBEDOV V B	92
		PATASHENE L R	72	PODOPHIGORA V G	94
		PAVISIC M	79	PODPALYY YE A	66
		PAVLENKO A V	47	PODSOSONNYY A S	18
		PAVLOV P A	66, 77	POGODAYEV V A	53
		PAVLOV S S	103	POGORELOV V YE	113
		PAVLYGIN G N	61	POGOSYAN A R	85
		PAVLYUCHENKO L L	46	POKASOV VL V	50
		PAWLUCZYK R	59	POKORA L	107
		PECHENOV A N	6	POKORMYAKHO N G	83
		PECHERITSYN I M	87	POLCHIKOVA N D	5, 6
				POLIVANOV YU N	94

POLONSKIY A K		46	REBROV A K	82	SARZHEVSKIY A M	49
POLUEKTOV I A	7,28,30,100	96	REMEL' I G	58	SATTAROV D K	76
POLUEKTOV N P		96	REMIGAYLO YU L	4	SAVANIN S YU	32
POLUEKTOV P P		92	RESHETNIKOV V N	77	SAVEL'YEV A D	68
POLUKHIN A T		15	REVUTSKIY YE I	77	SAVVA V A	64,88
POLUPAN A I		56	REZNIKOV I V	82	SAZONOV V N	63
POLYAKOV YE V		47	RIKENGLAZ M M	11	SCHMIEDBERGER P	106
POLYANSKIY V K		59	ROBEZHKO A L	82	SCHREIBER W	61,82
PONOMAREV YU N		85	RODIONOV N B	17	SCHUBERT M	80
PONOMAREVA S B		85	ROGACHEV A A	93	SCHULENBURG H	100
POPOV A K		29	ROGACHEVA S S	76	SEDNENOV M V	83
POPOV A M		98	ROMANENKO L V	94	SEDOV L V	33
POPOV B N		80	ROMANENKO V I	28	SEINOV N P	63
POPOV D YE		62	ROMANOV YU F	24	SELEZNEV V N	49,57
PCPOV V N		26	ROTARU A KH	111	SELEZNEV V P	89
PCPOV YE G		77	ROZANOV N N	4,36	SELEZNEVA L A	16
POPOV YU M	6,7,100,114	77	ROZANOV V B	105,107	SELITSKAYA T I	46
PORTNOY YE L		7	ROZHDESTVENSKIY A YE	53	SEMCHISHEN V A	39
PORTNYAGIN A I		99	ROZHNOV G V	24	SEMENTETS T I	36
PORTNYAGIN V V		105	ROZOV B S	110	SEMENOV A S	62
POSTOVALOV V YE		39	RUBANOV V S	21,79,80	SEMENOV A YE	90,95
POTAPOV V K		63	RUBEZHNIY YU G	92	SEMENOV YE	12
POTENKIN A V		3	RUBIN L B	43	SEMILETOV S A	99
POTIKHONOV G N		80	RUBINOV A N	44	SEMOCHKIN P N	27
POTSAR A A		20	RUBTSOVA N N	89	SEMYACHKIN B YE	82
POZHIDAYEV V N		55	RUD' L V	91	SENATOROV A K	47
PRESNUKHIN D L		66	RUD' N A	93	SENCHUK V I	79
PRESNIAKOV G S		71	RUD' YU V	88	SERDYUCHENKO YU N	39
PRISHUTOV A A		28	RUD' KO G YU	89	SEREGBRYAKOV V A	32
PRIVALOV V YE		66	RUDELEV S A	16	SERGEYCHEV K F	103
PROKHORENKO V I		8	RUDENKO V S	47	SERGEYENKO T N	72
PROKHOROV A M	1,3,6,33,39	47,62,82,96,99	RUDENOK I P	48	SERGEYEV A B	5
PROKOF'YEVA S P		5	RUDISHIN V K	104	SERGEYEV B V	53
PROBYUSHKIN V I		60	RUDOV YU K	6	SERGEYEV G T	74
PROTASOV YU I		94	RUKAVISHNIKOV N N	105	SERGEYEV V G	16
PROTSENKO YE D		70	RUKHADZE A A	40	SEVAST'YANOV B K	4
PRUSIKHIN O V		66	RUKHIN V B	13	SHABANOV V F	94
PRUSS P KH		59	RUKMAN G I	65	SHABLIY I YU	87
PRZHIBEL'SKIY S G		34	RUMYANTSEV YU M	74	SHABLYA A V	38
PRZHONGSKAYA O V		9,34	RUPASOV A A	102	SHAKIROV A KH	69
PTITSYN G A		63	HUPASOV V I	64	SHALAGIN A M	64
PUCHKOV V N		94	RURUKIN A N	20	SHAMANAYEVA L G	50
PUCHKOVSKAYA G A	90,113	94	RUSANOV S YA	47	SHANGINA L K	44
PUGNIL V I		13	RUZOV V P	79	SHAPAREV N YA	62,87
PUKH V P		94	RYAZANOV A V	11	SHAPIRO D A	13,31
PUZANOV I V		6	RYBAKOV V A	97	SHAPIRO YE SH	70
PYL'NOV YU V		60	RYKALIN N N	101	SHARKOV V F	16
PYNDYK A M		92	RYKHLOV A F	24	SHARONOV G V	14
			RYMOV A A	48	SHAROV V A	69
K			RYVKIN B S	7	SHATILOV A V	99
RABOTKIN V G		18	RYVKIN S M	26	SHAYTANOV S P	61
RACHIN V A		33	RYZHKO V A F	80	SHCHEDRIN A I	13
RADAUTSAN S I	25,109	77	RYZHKO V S V	80	SHCHEGLOV V A	17,21,108
RADIN A YU		77	RYZKO J	57	SHCHEKOTUROV L V	27
RADON I		88			SHCHELEV M YA	8,39,80
RADUGINA L A		78	S		SHCHEPETKIN YU A	60
RADZEWICZ C Z		9	SADOVNIKOV V P	51	SHCHEPETOV N G	19
RAGOZIN YE N		106	SAGINOV L D	96	SHCHERBAKOV YE A	49
RAGUL'SKIY K M		72	SAKALAUSKAS S V	73	SHCHERBAKOV YU A	72
RAGUL'SKIY V V		35	SAKHAROV V K	74	SHCHERBAN' YU I	68
RAKHMANOV B N		112	SALAYEV E YU	68	SHCHERBO A N	21
RAKIN V I		79	SALDIN YE L	40	SHCHERBO A V	12
RAKITIN V D		75	SALYADINOV V S	8	SHEIN V V	84
RAKOV A V		58	SAMARTSEV V V	87	SHELAYEV A N	23
RAMAZANOV P YE		96	SAMOKHVALOV I V	49,53	SHELOPUT D V	81
KARENKO I M		87	SAMSON A M</			

SHEVCHENKO V P	4	SMIRNOV G I	13,31,91	SUYNOV V KH	60
SHEVCHENKO V V	67	SMIRNOV V L	22	SVICH V A	83
SHEVCHENKO YE G	5	SMIRNOV V S	36	SVIDZINSKIY K K	26
SHEVEL'KO A P	106	SMIRNOV V V	68,96	SVIRIDOV K N	70
SHEYNKMAN M K	87	SMIRNOV VL N	88	SYCHUGOV V A	47,49
SHIKANOV A S	102,107	SMOLENKOV V F	20	SYSOYEV V K	10
SHIKANOV A YE	104	SNEZHKIN YE N	10,41	SZOPIERAJ T	43
SHIKHLINSKAYA R E	33	SOBOLEV A G	27		
SHILOV A A	31,32	SOKOLOV V P	36	T	
SHILOV K A	103	SOKOLOV YE B	6		
SHILOV V B	94	SOLODOV A M	96	TABIRYAN N V	37
SHIPILOV K F	31	SOLOMATIN V S	37	TAGIROV V R	20
SHIPULO G P	49	SOLOMONOV A V	87	TALANOV V I	55
SHISHKEVICH N N	66	SOLOUKHIN R I	12,110	TAL'YANSKIY E B	87
SHISHKOV A G	60	SOLOV'YEV M V	72	TAMOYKIN V V	28
SHISHLOV V I	94	SOLOV'YEV N G	81	TANAS R	36
SHKEDOV I M	62	SOLOV'YEV V A	46	TARAKANOV V I	76
SHKOBA T I	25	SOLOV'YEV V S	12	TARANENKO V B	3
SHKUNOV V V	34,35	SOMS L N	2	TARASENKO V F	18
SHLITERIS E P	15	SON E YE	14	TARASIK M I	89
SHMAKOV V F	91	SOOVIK KH A	64	TARASOV A A	2
SHMAL'GAUZEN V I	49	SOROKA A M	19	TARASOV G G	35,89
SHMAONOV T A	31	SOSKIN M S	3	TARASOV L V	23,113
SHMAREV YE K	75	SPIKHAL'SKIY A A	49	TARASOV R P	56
SHMELEV G M	88	SPIRO A G	94	TARKHOV B A	85
SHMELEV V M	13	SRESELI YE M	6	TARNAY A A	25
SHOR M I	77	STAKHURSKIY L L	36	TAYIROV M M	64
SHORIKOV YU S	92	STARIK A M	17	TELEGIN G G	86
SHPAK M T	8,9,10,19,34,113	STARIK P M	5,6	TEL'NOV V A	11,20
SHPIGEL' I S	102	STARIKOVA G S	10	TELYAYEVA N N	31
SHTANOV V I	6	STARODUBTSEV A I	15	TEMCHENKO V S	27,48
SHTERNBERG A R	30	STAROSTENKO B V	74	TEPLYAKOVA N L	46
SHTERNOV A A	112	STAROSTIN A N	10	TERENT'YEV V YE	28
SHTEYN YU G	40	STARTSEV V R	39	TERPUGOV V S	2,48
SHTEYNGART L M	81	STARUNOV V S	39	TERUKOV YE I	67
SHTEYNGOL'TS Z I	67	STASEL'KO D I	1	TESTOV V G	17
SHUBIN M V	5,6	STAVNIKOV M V	76	TIKHOMIROV B A	85
SHUL'GA A YA	66	STAVREVA M	29	TIKHONOV YE A	8,9,34
SHUL'GIN B V	95	STAVROVSKIY D B	19	TIKHONOVA N P	1
SHUL'TS M M	47	STEPANOV A A	21	TIME N S	54
SHURAYTS A L	63	STEPANOV B M	8,65,70,74,89	TIMOFEYEV V B	104
SHUVALOV V V	36,37	STEPANOV V A	9,13	TIMOFEYEV V P	29
SHVEYGERT V A	20	STEPANOV YE V	83	TIMOFEYEV YU P	26
SHVLEYKIN V I	5,7	STEPANOV YU A	84	TIMOFEYEV YU T	18
SIDORIN A V	99	STERLIGOV V A	4	TITKOV A N	95
SIDOROV V A	2,23	STETSIV YA I	83	TITKOV V I	81
SIERADZAN A	9	STOLBOV V S	16	TITOV YU M	4
SIKORSKI A	57	STOLYAROV A K	27	TKACHENKO N V	58
SILENOK A S	97	STONIK O G	32	TKACHEV V D	89
SIMASHKEVICH A V	26	STREL'CHENKO S S	5,6	TLYAVLIN A Z	20
SIMONENKO A F	101	STRELKOV G M	51,52,53	TODOROV T	59
SIMONOV A P	67	STRIGUN V L	1	TODUA P A	27
SINAYSKIY N A	64	STRINADKO L V	60	TOKAREV V N	97
SINITSA L N	96	STRINADKO M T	60	TOLMACHEV A V	62
SIROTKINA YE YE	76	STRIZHEVSKIY V L	95	TOLSTOBROV B YA	54
SKACHKOV A N	61	STROGANOV V I	30	TOLSTOPYATOV O I	22
SKAKUNOVA T V	89	STRUMBAN E YE	25	TOMASHEV V N	21
SKLIZKOV G V	81,102,103,107	STRUNIN V P	64	TOMBAK M A	76,81
SKOBELEV I YU	103	SUBBOTIN F M	78	TOMSONS YA YA	81
SKOBELEKIN O K	46	SUDARKIN A N	35	TOPKOV A N	83
SKOPIN I A	5	SUGACHEV O L	54,68	TORGOVICHEV V A	54
SKRIPKO V V	69	SUKHAREV S A	105	TORPACHEV P A	49
SKVORTSOV YU A	97	SUKHIN S A	34	TOTSKIY YU I	104
SLIN'KO L A	94	SUKHORUKIKH V S	69	TRAVNIKOV V V	87
SLOBODCHIKOV V YU	6	SURAN V V	34	TROFIMOVA G V	78
SLUTSKER YA Z	103	SURDUTOVICH G I	86	TRUFANOV A N	81
SMAGA I V	25	SURIS R A	56	TRUKAN M K	86
SMAKOTIN M M	11	SUSHCHINSKIY M M	113	TRUNOV V K	89
SMERKOV G D	14	SUSOV A M	23	TRUSHIN S A	11,12
SMIRNOV A I	107	SUYNOV S KH	60	TRUSOV K K	9

TSAPENKO A M	8	VASIL'YEV S G	4	VORONOV G S	107
TSELYKOVSKIY A F	13	VASIL'YEVA V I	1	VORONTSOV M A	49
TSINTSADZE G V	95	VASIN B L	107	VORONTSOV V F	114
TSISEK Z	72	VAVILOV V S	64	VOROPAY YE S	49
TSIVADZE A YU	95	VAYTKUS YU	84	VOSKA R	101
TSUKERMAN V G	27	VAZHOV V F	82	VOSKOBOYNIKOV YU YE	54
TSUKKERMANN N S	78	VEDENEYEV S I	29,40	VOSTRIKOV A A	82
TSURKAN G I	88	VEDENOV A A	114	VOTENTSEV V N	58
TSVENTUKH V N	5	VEDERNIKOV V M	71	VOVK YU V	60
TSVETKOV YE G	4	VELICHKO O A	97	VOYTSEKHOVSKAYA O K	54
TSVETOV YE R	72	VELICHKO O M	17	VRUBLEVSKIY L L	48
TSYBIN A S	104	VELICHKO S P	24	VUL B M	112
TSYGANENKO V V	48	VELIKANOV A G	12	VIDOLUB G M	66
TUCHIN V V	9,20	VELIKODNIY YU A	89		
TUCHKEVICH V M	28	VENDIK O G	42	W	
TULAYKOVA T V	47	VENIG S B	28		
TUNIK YU V	17	VERESHCHAKA M F	69	WALDMANN J	100
TURCHANINOV V K	64	VERKHOVSKIY V S	18	WENKE L	61,82
TVERDOKHLEB P YE	57	VERTIPOROKH A N	102		
TYAGAY V A	4	VERTOPRAKHOV V V	71	Y	
TYCHINSKIY V P	95	VESEL'NITSKIY I M	89		
TYL J	38	VESELOVSKIY V V	18	YAKHKIND A K	76
		VETOKHIN S S	82	YAKIBCHUK O P	83
U		VEYDENBAKH L V	60	YAKIMOVICH A P	61
UDALOVA T A	65	VEYKO V P	101	YAKOVLENKO S I	19,37
UDAL'TSOV V S	14	VIDOLOVA-ANGELOVA YE P	62,96	YAKOVLEV B S	62
UGLOV A A	101,106			YAKOVLEV D V	37
UKHOV V V	56	VIGASIN A A	17	YAKOVLEV N YE	94
ULENIKOV O N	113	VILISOV G T	96	YAKOVLEV V I	72
ULITSKIY N I	92	VINETSKIY V L	36	YAKOVLEV V P	86
ULYAKOV P I	98	VINOGRADOV A V	103	YAKOVLEVA T V	32
UMANSKIY I M	95	VINOGRADOV V M	71	YAKUBOVICH YE I	37
UMARKHODZHAYEV R M	86	VINOGRADOVA A A	8	YAMALETDINOV A G	1,2
UMREYKO D S	92,93	VINOKUR M A	67	YANCHENKO A M	89
UNZHAKOV A D	78	VINOKUROV V A	113	YANUSHKEVICH V A	62
URBANOVICH A YE	62	VINOKUROVA L N	60	YAREMKA A M	93
URINSON A S	83	VISHERATIN K N	49	YAROSHETSKIY I D	26,96
URMAKHER L S	70	VITRIKHOVSKIY N I	4,104	YAROSLAVSKIY A I	71
USANOV D A	28	VITUSHKIN L F	65	YARTSEV D A	74
USHAKOV V YA	82	VLADIMIROV V V	13	YASHCHUK V P	84
USKOV A V	28,29	VLASOV A P	68	YASHIN V YE	32
USTICHENKO S N	93	VLASOV G K	96	YAS'KOV A D	27
USTIMOV V I	105,106	VO HONG ANH	89,90	YATSENKO L P	10,19
USTINOV N D	70	VO KHONG AN'		YEFREMOV V A	89
UTOCHKIN A V	2	(SEE VO HONG ANH)		YEREMOVA G V	82
UYUKIN YE M	85	VODOP'YANOV L K	91	YEREV S V	55
V		VOINOV YE M	15	YEGOROV B N	84
VAGARIN A YU	28	VOKHMIN P A	16	YELETSKIY A V	65
VAGIN L N	60	VOKIN A I	64	YELINSON M I	100
VAGNER R I	45	VOLKOV S YU	96	YELISEYEV P G	5,7,100
VALAKH M YA	89,95,113	VOLKOV V N	10	YELISEYEVA E G	46
VALEK V	44	VOLKOV V V	58	YELYUKHIN V A	7
VAL'SHIN A M	1,2	VOLKOV YU K	58	YENIKOLOPYAN N S	74
VALUYEV A D	107	VOLKOVITSKIY O A	50,54	YEPIFANOV A S	99
VARPOLOMEYEV A A	41	VOLOSEVICH P P	107	YEPIKHIN V M	99
VARNAVSKIY O P	4	VOLOSOV V D	2	YEPISHIN V A	63
VARSHAVSKAYA I G	85	VOL'SKAYA S P	13	YEREMEYEV YE P	55
VASHCHILLO A G	82	VOLYAK T B	25	YERMACHENKO V M	20
VASIL'CHENKO YE A	64	VOLYAR A V	47,73	YERMAKOV N I	84
VASILENKO L S	89	VOROB'YEV A K	50	YERMAKOVA N G	95
VASILENKO M V	95	VOROB'YEV N S	8,31	YEROKHIN A A	107
VASILISHIN V L	57	VOROB'YEV S A	82	YEROKHIN A I	37
VASILYAUSKAS R S	72	VOROB'YEV V D	3	YES'KOV A P	69
VASIL'YEV A A	82	VORONA V A	75	YEVSEYEV V I	27
VASIL'YEV G K	21	VORONIN E S	37	YEVTIKHIEV N N	83
VASIL'YEV L A	11	VORONIN YE N	27,48	YEVTVSHENKO A M	96
VASIL'YEV N N	84	VORON'KO YU K	3	YEVTYUKHOV K N	2
		VORONKOV G L	114	YUDIN I K	69
		VORONKOV V V	82	YUKHANOV YU V	25
		VORONKOVA G I	82	YULISH V I	78

YUNDEV D N	83
YUR'YEV M S	12
YUSUPOV D B	29

Z

ZABOROV A N	61
ZACHKO I YU	83
ZAGORSKIY YA T	65
ZAKHARCHENKO L N	94
ZAKHARCHENYA B P	67
ZAKHARENKO YU A	107
ZALESKAYA G A	62
ZAMOSHSKIY V D	74
ZAPESOCHNYY I P	34
ZARETSKIY D F	41
ZAROSLOV D YU	25
ZASKAL'KO O P	39
ZASTROGIN YU F	71, 83
ZAVESTOVSKAYA I N	7, 100
ZAV'YALOVA A A	99
ZAYDEL' I N	71
ZEL'DOVICH B YA	32, 34, 37
ZELENSKIY S YE	84
ZEMLYANOV A A	54, 55
ZENCHENKO S A	14
ZENKIN V A	23
ZEYLIKOVICH I S	71
ZEYNALLY A KH	29
ZHABOTINSKIY M YE	56
ZHAROV A A	103
ZHDANOV A A	58
ZHDANOV B V	37
ZHEKOV V I	3
ZHELEZNYAKOV V A	59
ZHELUDEV N I	37
ZHERIKHIN A N	107
ZHERLITSYN A G	40
ZHIKHAREVA N A	93
ZHITAR' V F	25
ZHULANOV YU V	55
ZHUVANOVA Z G	54
ZIMIN A B	42
ZINOV'YEV N N	96
ZINOV'YEV YU S	83
ZLOMANOV V P	6
ZMIYEVSKOY G N	83
ZRODNIKOV V S	18
ZSCHERPE G	100
ZUBOV B V	82
ZUBOV V V	10
ZUYEV V S	19
ZUYEV V YE	55, 96, 109, 115
ZVEREV V N	96
ZVERKOV M V	7
ZYUBRIK A I	61, 83, 90

