AD-770 641

BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS, NUMBER 12, APRIL-JUNE 1973

Stuart G. Hibben

Informatics, Incorporated

Prepared for:

Air Force Office of Scientific Research
Advanced Research Projects Agency

24 September 1973

UNCLASSIFIED

Security Classification

AD770 641

DOCUMENT CONTROL DATA - R & D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

ORIGINATING ACTIVITY (Corporate author)

Informatics Inc.
6000 Executive Blvd.
Rockville, Md. 20852

2a. REPORT SECURITY CLASSIFICATION

UNCLASSIFIED

2b. GROUP

REPORT TITLE

Bibliography of Soviet Laser Developments, No. 12, April - June 1973

DESCRIPTIVE NOTES (Type of report and inclusive dates)

Scientific --- Interim

AUTHOR(S) (First name, middle initial, last name)

Stuart G. Hibben

REPORT DATE	7a. TOTAL NO. OF PAGES	7b. NO. OF REFS
September 24, 1973	139	

8a. CONTRACT OR GRANT NO.	9a. ORIGINATOR'S REPORT NUMBER(S)
F44620-72-C-0053	
b. PROJECT NO. 1622-4	
c. 62701E3F10	9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report) AFOSR - TR - 73 - 2071
d.	

10. DISTRIBUTION STATEMENT

Approved for public release; distribution unlimited

11. SUPPLEMENTARY NOTES	12. SPONSORING MILITARY ACTIVITY
Tech. Other	Air Force Office of Scientific Research 1400 Wilson Boulevard (NP) Arlington, Virginia 22209

13. ABSTRACT

This is the Soviet Laser Bibliography for the second quarter of 1973 and is No. 12 in the series on Soviet laser developments. The coverage includes basic research on solid state, liquid and gas lasers; chemical lasers; u-v lasers; components; nonlinear optics, spectroscopy of laser materials; ultrashort pulse generation; crystal growing; and general laser theory. Laser applications are listed under biological effects; communications; computer technology; holography; instrumentation and measurements; materials processing; and plasma generation and diagnostics.

FORM 1473

BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS

No. 12, April - June 1973

Sponsored by

Advanced Research Projects Agency

ARPA order No. 1622-4

September 24, 1973

ARPA Order No. 1622-4
Program Code No: 62701E3F10
Name of Contractor:
Informatics Inc.
Effective Date of Contract:
January 1, 1973
Contract Expiration Date:
December 31, 1973
Amount of Contract: $343,363

Contract No. F44620-72-C-0053, P00001
Principal Investigator:
Stuart G. Hibben
Tel: (301) 770-3000
Short Title of Work:
"Soviet Lasers"

This research was supported by the Advanced Research Projects Agency of the Department of Defense and was monitored by the Air Force Office of Scientific Research under Contract No. F44620-72-C-0053. The publication of this report does not constitute approval by any government organization or Informatics Inc. of the inferences, findings, and conclusions contained herein. It is published solely for the exchange and stimulation of ideas.

informatics inc
Systems and Services Company
6000 Executive Boulevard
Rockville Maryland 20852
(301) 770-3000 Telex 89-521

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Introduction

This bibliography has been compiled by the staff of Informatics Inc. in response to a continuing contractual assignment to monitor current Soviet-bloc developments in the quantum electronics field. Of all material reviewed, the major yield has been from the approximately 30 periodicals which are known to report the most advanced and interesting findings in Soviet laser technology.

The period covered is the second quarter of 1973, and includes all significant laser-related articles received by us during that interval. The structure and selection criteria are basically those used in the preceding reports.

For convenience we have abbreviated frequently cited source names; a source abbreviation list and an author index are included. Unless indicated by a parenthesized (RZh, LZhS) notation, all cited sources are available at Informatics Inc. The numbers in parentheses following the authors' names in the text refer to the Cumulative Affiliations List which includes all author affiliations from 1969 to the present.

Acknowledgement is due to the consultant effort of Mr. Yuri Ksander of the Rand Corporation for assistance in selection and structure of the material.

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IV. SOURCE ABBREVIATIONS

AiT	-	Avtomatika i telemekhanika
APP	-	Acta physica polonica
DAN ArmSSR	-	Akademiya nauk Armyanskoy SSR. Doklady
DAN AzSSR	-	Akademiya nauk Azerbaydzhanskoy SSR. Doklady
DAN BSSR	-	Akademiya nauk Belorusskoy SSR. Doklady
DAN SSSR	-	Akademiya nauk SSSR. Doklady
DAN TadSSR	-	Akademiya nauk Tadzhikskoy SSR. Doklady
DAN UkrSSR	-	Akademiya nauk Ukrainskoy SSR. Dopovidi
DAN UzbSSR	-	Akademiya nauk Uzbekskoy SSR. Doklady
DBAN	-	Bulgarska akademiya na naukite. Doklady
EOM	-	Elektronnaya obrabotka materialov
FAiO	-	Akademiya nauk SSSR. Izvestiya. Fizika atmosfery i okeana
FGiV	-	Fizika goreniya i vzryva
FiKhOM	-	Fizika i khimiya obrabotka materialov
F-KhMM	-	Fiziko-khimicheskaya mekhanika materialov
FMiM	-	Fizika metallov i metallovedeniye
FTP	-	Fizika i tekhnika poluprovodnikov
FTT	-	Fizika tverdogo tela
FZh	-	Fiziologicheskiy zhurnal
GiA	-	Geomagnetizm i aeronomiya
GiK	-	Geodeziya i kartografiya
IAN Arm	-	Akademiya nauk Armyanskoy SSR. Izvestiya. Fizika
IAN Az	-	Akademiya nauk Azerbaydzhanskoy SSR. Izvestiya. Seriya fiziko-tekhnicheskikh i matematicheskikh nauk

IAN B	-	Akademiya nauk Belorusskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk
IAN Biol	-	Akademiya nauk SSSR. Izvestiya. Seriya biologicheskaya
IAN Energ	-	Akademiya nauk SSSR. Izvestiya. Energetika i transport
IAN Est	-	Akademiya nauk Estonskoy SSR. Izvestiya. Fizika matematika
IAN Fiz	-	Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya
IAN Fizika zemli	-	Akademiya nauk SSSR. Izvestiya. Fizika zemli
IAN Kh	-	Akademiya nauk SSSR. Izvestiya. Seriya khimicheskaya
IAN Lat	-	Akademiya nauk Latviyskoy SSR. Izvestiya
IAN Met	-	Akademiya nauk SSSR. Izvestiya. Metally
IAN Mold	-	Akademiya nauk Moldavskoy SSR. Izvestiya. Seriya fiziko-tekhnicheskikh i matematicheskikh nauk
IAN SO SSSR	-	Akademiya nauk SSSR. Sibirskoye otdeleniye. Izvestiya
IAN Tadzh	-	Akademiya nauk Tadzhiksoy SSR. Izvestiya. Otdeleniye fiziko-matematicheskikh i geologo-khimicheskikh nauk
IAN TK	-	Akademiya nauk SSSR. Izvestiya. Tekhnicheskaya kibernetika
IAN Turk	-	Akademiya nauk Turkmenskoy SSR. Izvestiya. Seriya fiziko-tekhnicheskikh, khimicheskikh, i geologicheskikh nauk
IAN Uzb	-	Akademiya nauk Uzbekskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk
IBAN	-	Bulgarska akademiya na naukite. Fizicheski institut. Izvestiya na fizicheskaya institut s ANEB
I-FZh	-	Inzhenerno-fizicheskiy zhurnal

IiR	-	Izobretatel' i ratsionalizator
ILEI	-	Leningradskiy elektrotekhnicheskiy institut. Izvestiya
IT	-	Izmeritel'naya tekhnika
IVUZ Avia	-	Izvestiya vysshikh uchebnykh zavedeniy. Aviatsionnaya tekhnika
IVUZ Cher	-	Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya
IVUZ Energ	-	Izvestiya vysshikh uchebnykh zavedeniy. Energetika
IVUZ Fiz	-	Izvestiya vysshikh uchebnykh zavedeniy. Fizika
IVUZ Geod	-	Izvestiya vysshikh uchebnykh zavedeniy. Geodeziya i aerofotos"yemka
IVUZ Geol	-	Izvestiya vysshikh uchebnykh zavedeniy. Geologiya i razvedka
IVUZ Gorn	-	Izvestiya vysshikh uchebnykh zavedeniy. Gornyy zhurnal
IVUZ Mash	-	Izvestiya vysshikh uchebnykh zavedeniy. Mashinostroyeniye
IVUZ Priboro	-	Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye
IVUZ Radioelektr	-	Izvestiya vysshikh uchebnykh zavedeniy. Radioelektronika
IVUZ Radiofiz	-	Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika
IVUZ Stroi	-	Izvestiya vysshikh uchebnykh zavedeniy. Stroitel'stvo i arkhitektura
KhVE	-	Khimiya vysokikh energiy
KiK	-	Kinetika i kataliz
KL	-	Knizhnaya letopis'
Kristall	-	Kristallografiya
KSpF	-	Kratkiye soobshcheniya po fizike

LC	-	Received at Library of Congress
LZhS	-	Letopis' zhurnal'nykh statey
MiTOM	-	Metallovedeniye i termicheskaya obrabotka materialov
MP	-	Mekhanika polimerov
MTT	-	Akademiya nauk SSSR. Izvestiya. Mekhanika tverdogo tela
MZhiG	-	Akademiya nauk SSSR. Izvestiya. Mekhanika zhidkosti i gaza
NK	-	Novyye knigi
NM	-	Akademiya nauk SSSR. Izvestiya. Neorganicheskiye materialy
NTO SSSR	-	Nauchno-tekhnicheskiye obshchestva SSSR
OiS	-	Optika i spektroskopiya
OMP	-	Optiko-mekhanicheskaya promyshlennost'
Otkr izobr	-	Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki
PF	-	Postepy fizyki
Phys abs	-	Physics abstracts
PM	-	Prikladnaya mekhanika
PMM	-	Prikladnaya matematika i mekhanika
PSS	-	Physica status solidi
PSU	-	Pribory i sistemy upravleniya
PTE	-	Pribory i tekhnika eksperimenta
Radiotekh	-	Radiotekhnika
RiE	-	Radiotekhnika i elektronika
RZhAvtom	-	Referativnyy zhurnal. Avtomatika, telemekhanika i vychislitel'naya tekhnika
RZhElektr	-	Referativnyy zhurnal. Elektronika i yeye primeneniye

RZhF	-	Referativnyy zhurnal. Fizika
RZhFoto	-	Referativnyy zhurnal. Fotokinotekhnika
RZhGeod	-	Referativnyy zhurnal. Geodeziya i aeros"yemka
RZhGeofiz	-	Referativnyy zhurnal. Geofizika
RZhInf	-	Referativnyy zhurnal. Informatics
RZhKh	-	Referativnyy zhurnal. Khimiya
RZhMekh	-	Referativnyy zhurnal. Mekhanika
RZhMetrolog	-	Referativnyy zhurnal. Metrologiya i izmeritel'naya tekhnika
RZhRadiot	-	Referativnyy zhurnal. Radiotekhnika
Sb1	-	Sbornik. Kvantovaya elektronika, no. 1(13), Moskva, 1973.
Sb2	-	Kvantovaya elektronika, no. 6, Kiyev, 1972.
Sb3	-	Zimnaya shkola po fizike poluprovodnikov. 4th. Materialy. 1972. Leningrad, 1972.
Sb4	-	Troynyye poluprovodniki $A^{II}B^{IV}C_2^{V}$ i $A^{II}B_2^{III}C_4^{VI}$. Kishinev, Shtiintsa, 1972.
Sb5	-	Stsintillyatory i organicheskiye lyuminofory. Khar'kov, 1972.
Sb6	-	Ukrainskaya respublikanskaya nauchno-tekhnicheskaya konferentsiya, posvyashchennaya 50-letiyu metrologicheskoy sluzhby UkrSSR, 1972. Khar'kov, 1972.
Sb7	-	Goreniye i vzryv. Moskva, Nauka, 1972.
Sb8	-	Vsesoyuznyy simpozium po khimii neorganicheskikh ftoridov. erd. Odessa, 1972. No place of publication, 1972.
Sb9	-	Vsesoyuznaya konferentsiya po nelineynoy optike. 6th. Minsk, 1972.
Sb10	-	Universitet druzhby narodov im. Patrisa Lumumby. Fakul'tet fiziko-matematicheskikh i yestestvennykh nauk. Sbornik nauchnykh rabot aspirantov, no. 11, 1972.

Sb11	-	International Conference of Light Scattering in Solids. 2nd. Paris, 1971. Proceedings. Paris, 1971.
Sb12	-	Vsesoyuznoye soveshchaniye po rostu kristallov. 4th. 1972. Part 2. Yerevan, 1972.
Sb13	-	Vsesoyuznaya shkola po gologrefii. 3rd. 1971. Materialy. Leningrad, 1972.
Sb14	-	Nekotoryye voprosy biodinamiki i bioenergii organizma v norme i patologii, biostimulyatsiya lazernom izlucheniyem. Alma-Ata, 1972.
Sb15	-	Fizika goreniya i metody yeye issledovaniya, no. 2, Cheboksary, 1971.
Sb16	-	Opticheskaya i elektroopticheskaya obrabotka informatsii. Moskva, 1972.
Sb17	-	Sovremennyye sistemy zapisi i vosproizvedeniya izobrazheniya. Moskva, Iskusstvo, 1972.
Sb18	-	CPEM Digest 1972. Conference of Precision Electromagnetic measurements, Boulder, Colorado, 1972. New York, N. Y., 1972.
Sb19	-	Avtomatizatsiya i kontrol'no-izmeritel'nyye pribory. Nauchno-tekhnicheskiy sbornik, no. 10, 1972.
Sb20	-	Avtomatizatsiya nauchnykh issledovaniya. Riga, Zinatne, 1972.
Sb21	-	Avtomatizatsiya nauchnykh issledovaniya morey i okeanov. Simpozium. 1971. Part 1. Sevastopol', 1972.
Sb22	-	Rasseyaniye sveta v zemnoy atmosfere. Alma-Ata, Nauka, 1972.
Sb23	-	Proyektirovaniye, no. 5, Moskva, 1972.
Sb24	-	Teplofizicheskiye svoystva i gazodinamika vysokotemperaturnykh sred. Moskva, Nauka, 1972.
Sb25	-	Fizyka tverdoho tila, no. 2, 1972.
Sb26	-	Fizyka tverdoho tila, no. 3, Kharkiv, 1973.
SovSciRev	-	Soviet science review
TiEKh	-	Teoreticheskaya i eksperimental'naya khimiya

TKiT	-	Tekhnika kino i televideniya
TMF	-	Teoreticheskaya i matematicheskaya fizika
Tr1	-	Moskovskiy fiziko-tekhnicheskiy institut. Trudy, 1971(1972).
Tr2	-	Nauchno-issledovatel'skiy i proyektnyy institut redkometallicheskoy promyshlennosti. Nauchnyye trudy, no. 46, 1973.
Tr3	-	Trudy Metrologicheskikh institutov SSSR. Khar'kovskiy nauchno-issledovatel'skiy institut metrologii, no. 7, 1972.
Tr4	-	Institut mekhaniki Moskovskogo universiteta. Nauchnyye trudy, no. 18, 1972.
Tr5	-	Moskovskoye vyssheye tekhnicheskoye uchilishche im. Baumana. Trudy, no. 153, 1971(1972).
Tr6	-	Moskovskoye vyssheye tekhnicheskoye uchilishche im. Baumana. Trudy, no. 154, 1972.
Tr7	-	Moskovskiy energeticheskiy institut. Trudy, no. 144, 1972.
Tr8	-	Leningradskiy institut aviatsionnogo priborostroyeniya. Trudy, no. 75, 1972.
Tr9	-	Irkutskiy politekhnicheskiy institut. Trudy, no. 71, 1972.
Tr10	-	Vsesoyuznyy nauchno-issledovatel'skiy kinofotoinstitut, no. 65, 1972.
Tr11	-	Moskovskiy institut elektronnogo tekhniki. Sbornik nauchnykh trudov po problemam mikroelektroniki, no. 12, 1972.
TVT	-	Teplofizika vysokikh temperatur
UFN	-	Uspekhi fizicheskikh nauk
UFZh	-	Ukrainskiy fizicheskiy zhurnal
UMS	-	Ustalost' metallov i splavov
UNF	-	Uspekhi nauchnoy fotografii
VAN	-	Akademiya nauk SSSR. Vestnik

VAN BSSR	-	Akademiya nauk Belorusskoy SSR. Vestnik
VAN KazSSR	-	Akademiya nauk Kazakhskoy SSR. Vestnik
VBU	-	Belorusskiy universitet. Vestnik
VDNKh SSSR	-	VDNKh SSSR. Informatsionnyy byulleten'
VLU	-	Leningradskiy universitet. Vestnik. Fizika, Khimiya
VMU	-	Moskovskiy universitet. Vestnik. Seriya fizika, astronomiya
ZhETF	-	Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhETF P	-	Pis'ma v Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhFKh	-	Zhurnal fizicheskoy khimii
ZhNiPFiK	-	Zhurnal nauchnoy i prikladnoy fotografii i kinematografii
ZhNKh	-	Zhurnal neorganicheskoy khimii
ZhPK	-	Zhurnal prikladnoy khimii
ZhPMTF	-	Zhurnal prikladnoy mekhaniki i teoreticheskoy fiziki
ZhPS	-	Zhurnal prikladnoy spektroskopii
ZhTF	-	Zhurnal tekhnicheskoy fiziki
ZhVMMF	-	Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki
ZL	-	Zavodskaya laboratoriya

V. CUMULATIVE AFFILIATIONS LIST

NS. Non-Soviet

0. Affiliation not shown

1. Physics Institute im. Lebedev, AN SSSR, Moscow (Fizicheskiy institut im. Lebedeva).

2. Moscow State University (Moskovskiy gosudarstvennyy universitet).

3. Institute of Physics, AN BSSR, Minsk (Institut fiziki, AN BSSR).

4. Leningrad Physical-technical Institute im. Ioffe (Fiziko-tekhnicheskiy institut im. Ioffe).

5. Institute of Physics, AN UkrSSR, Kiev (Institut fiziki, AN UkrSSR).

6. Institute of Semiconductors, AN UkrSSR, Kiev (Institut poluprovodnikov, AN UkrSSR).

7. State Optical Institute im. Vavilov, Leningrad (Gosudarstvennyy opticheskiy institut im. Vavilova).

8. Radiophysics Scientific Research Institute at Gorkiy State University (Gor'kovskiy nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom gos. universitete).

9. Institute of Radiophysics and Electronics, Siberian Branch AN SSSR, Novosibirsk (Institut radiofiziki i elektroniki, Sib. otdel AN SSSR).

10. Institute of Semiconductor Physics of the Siberian Branch, AN SSSR, Novosibirsk (Institut fiziki poluprovodnikov, Sib. otdel AN SSSR).

11. Kazan' State University (Kazanskiy gos. universitet).

12. Leningrad State Universitet (Leningradskiy gos. universitet).

13. Institute of Crystallography, AN SSSR, Moscow (Institut kristallografiya, AN SSSR).

14. University of Friendship Among Nations im. Lumumba, Moscow (Universitet druzhby narodov im. Lumumby).

15. Institute of Radio Engineering and Electronics, AN SSSR, Moscow (Institut radiotekhniki i elektroniki, AN SSSR).

16. Moscow Engineering Physics Institute (Moskovskiy inzhenerno-fizicheskiy institut).

17. Institute of Mechanical Problems, AN SSSR, Moscow (Institut problem mekhaniki, AN SSSR).

18. Institute of General and Inorganic Chemistry im. Kurnakov, AN SSSR, Moscow (Institut obshchey i neorganicheskoy khimii im. Kurnakova, AN SSSR).

19. Moscow Power Engineering Institute (Moskovskiy energeticheskiy institut).

20. All Union Scientific Research Institute of Physicotechnical and Electronic Measurements, Moscow (Vsesoyuznyy nauchno-issled. institut fiziko-tekhnicheskikh i elektronnykh izmereniy).

21. Acoustics Institute, AN SSSR, Moscow (Akusticheskiy institut, AN SSSR).

22. Institute of metallurgy im. Baykov, Moscow (Institut metallurgii im. Baykova).

23. Institute of Atomic Energy im. Kurchatov, Moscow (Institut atomnoy energii im. Kurchatova).

24. Moscow Higher Technical College im. Bauman (Moskovskoye vyssheye tekhnicheskoye uchilishche im. Baumana).

25. Moscow Scientific Research Institute of Instrument Manufacture (Moskovskiy nauchno-issled. institut instrumental'nogo proizvodstva).

26. Central Scientific Research Institute of the Ministry of Defense, Moscow (Tsentral'nyy nauchno-issled. institut Ministerstva oborony).

27. All Union Scientific Research Institute of Textile and Light Machinery, Moscow (Vsesoyuznyy nauchno-issled. institut tekstil'nogo i legkogo mashinostroyeniya).

28. Leningrad Opticomechanical Society (Leningradskoye optikomekhanicheskoye obshchestvo)

29. Leningrad Polytechnic Institute (Leningradskiy politekhnicheskiy institut).

30. Leningrad Institute of Precision Mechanics and Optics (Leningradskiy institut tochnoy mekhaniki i optiki).

31. Institute of Semiconductors, AN SSSR, Leningrad (Institut poluprovodnikov, AN SSSR).

32. Physics Scientific Research Institute at Leningrad State University (Fizicheskiy nauchno-issled. institut pri Leningradskom gos. universitete).

33. Institute of Silicate Chemistry im. Grebanshchikov, AN SSSR, Leningrad (Institut khimii silikatov im. Grebanshchikova, AN SSSR).

34. Khar'kov State University (Khar'kovskiy gos. universitet).

35. Khar'kov Institute of Radioelectronics (Khar'kovskiy institut radioelektroniki).

36. Physicotechnical Institute of Low Temperatures, AN UkrSSR, Khar'kov (Fiziko-tekhnicheskiy institut nizkikh temperatur, AN UkrSSR).

37. Yerevan State University (Yerevanskiy gos. universitet).

38. Kazan' Physicotechnical Institute (Kazanskiy fiziko-tekhnicheskiy institut).

39. Institute of Cybernetics, AN GruzSSR (Institut kibernetiki, AN GruzSSR).

40. Tbilisi State University (Tbilisskiy gos. universitet).

41. Rostov-on-Don State University (Rostovskiy-na-Donu gos. universitet).

42. Ural Polytechnic Institute im. Kirov, Sverdlovsk (Ural'skiy politekhnicheskiy institut im. Kirova).

43. Ural State University, Sverdlovsk (Ural'skiy gos. universitet).

44. Institute of Applied Physics, AN MSSR, Kishinev (Institut prikladnoy fiziki, AN MSSR).

45. Saratov State University (Saratovskiy gos. universitet).

46. Novosibirsk State University (Novosibirskiy gos. universitet).

47. Siberian Physicotechnical Institute im. Kuznetsov, Tomsk (Sibirskiy fiziko-tekhnicheskiy institut im. Kuznetsova).

48. Tomsk Institute of Radio Engineering and Electronics (Tomskiy institut radiotekhniki i elektroniki).

49. Vilnus State University (Vil'nyusskiy gos. universitet).

50. Institute of Semiconductor Physics, AN LitSSR, Vilnus (Institut fiziki poluprovodnikov, AN LitSSR).

51. Kiev State University (Kiyevskiy gos. universitet).

52. Joint Institute of Nuclear Research, Dubna (Ob"yedinennyy institut yadernykh ispytaniy).

53. Chernovitsy State University (Chernovitskiy gos. universitet).

54. Taganrog Radio Engineering Institute (Taganrozhskiy radiotekhnicheskiy institut).

55. Physicotechnical Institute, AN TurkSSR, Ashkhabad (Fiziko-tekhnicheskiy institut, AN TurkSSR).

56. Nezhin State University (Nezhinskiy gos. universitet).

57. All Union Machine Construction Institute, Kramatorsk (Vsesoyuznyy mashinostroitel'nyy institut).

58. Kemerova State Pedagogical Institute (Kemerovskiy gos. pedagogicheskiy institut).

59. Institute of Physics Research, AN ArmSSR (Institut fizicheskikh issled., AN ArmSSR).

60. Institute of Physics, AN AzSSR (Institut fiziki, AN AzSSR).

61. Institute of Physics and Astronomy, AN EstSSR (Institut fiziki i astronomii, AN EstSSR).

62. Institute of Geophysics, AN GruzSSR (Institut geofiziki, AN GruzSSR).

63. Institute of Physics, AN LatSSR (Institut fiziki, AN LatSSR).

64. Institute of Atmospheric Physics, AN SSSR (Institut fiziki atmosfery, AN SSSR).

65. Institute of Problems of Physics, AN SSSR (Institut fizicheskikh problem, AN SSSR).

66. Institute of Solid State Physics, AN SSSR (Institut fiziki tverdogo tela, AN SSSR).

67. Institute of Physics of Chemistry, AN SSSR (Institut khimicheskoy fiziki, AN SSSR).

68. Institute of Space Research, AN SSSR (Institut kosmicheskikh issledovaniy, AN SSSR).

69. Institute of Oceanography, AN SSSR (Institut okeanologii, AN SSSR).

70. Institute of Organic and Physical Chemistry, AN SSSR (Institut organicheskoy i fizicheskoy khimii, AN SSSR).

71. Institute of Applied Mathematics, AN SSSR (Institut prikladnoy matematiki, AN SSSR).

72. Institute of Spectroscopy, AN SSSR (Institut spektroskopii, AN SSSR).

73. Institute of Theoretical Physics im. Landau, AN SSSR (Institut teoreticheskoy fiziki im. Landau, AN SSSR).

74. Institute of High Temperatures, AN SSSR (Institut vysokikh temperatur, AN SSSR).

75. Institute of Automation and Electronic Measurements, Siberian Branch AN SSSR (Institut avtomatiki i elektrometrii, Sib. otdel. AN SSSR).

76. Institute of Hydrodynamics, Siberian Branch AN SSSR (Institut gidrodinamiki, Sib. otdel. AN SSSR).

77. Institute of Inorganic Chemistry, Siberian Branch AN SSSR (Institut neorganicheskoy khimii, Sib. otdel. AN SSSR).

78. Institute of Atmospheric Optics, Siberian Branch AN SSSR (Institut optiki atmosfery, Sib. otdel. AN SSSR).

79. Institute of Nuclear Physics, Siberian Branch AN SSSR (Institut yadernoy fiziki, Sib. otdel. AN SSSR).

80. Computer Center, Siberian Branch AN SSSR (Vychislitel'nyy tsentr, Sib. otdel AN SSSR).

81. Physicomechanical Institute, AN UkrSSR (Fiziko-mekhanicheskiy institut, AN UkrSSR).

82. Physicotechnical Institute, AN UkrSSR (Fiziko-tekhnicheskiy institut, AN UkrSSR).

83. Institute of Problems in Material Studies, AN UkrSSR (Institut problem materialovedeniya, AN UkrSSR).

84. Institute of Radiophysics and Electronics, AN UkrSSR (Institut radiofiziki i elektroniki, AN UkrSSR).

85. Institute of Nuclear Physics, AN UzSSR (Institut yadernoy fiziki, AN UzSSR).

86. Azerbaydzhan State University (Azerbaydzhanskiy gos. universitet).

87. Belorussian State University (Belorusskiy gos. universitet).

88. Dagestan State University (Dagestanskiy gos. universitet).

89. Donetsk State University (Donetskiy gos. universitet).

90. Electrotechanical Institute of Communications (Elektrotekhnicheskiy institut svyazi).

91. Power Institute im. Krzhizhanovskiy (Energeticheskiy institut im. Krzhizhanovskogo).

92. Physicochemical Institute im. Karpov (Fiziko-khimicheskiy institut im. Karpova).

93. Gor'kov Physicotechnical Research Institute at Gor'kov State University (Gor'kovskiy issled. fiziko-tekhnicheskiy institut pri Gor'kovskom gos. universitete).

94. Gor'kov State University (Gor'kovskiy gos. universitet).

95. State Scientific Research and Planning Institute of the Rare Metals Industry (GIREDMET, Gos. nauchno-issled. proyektnyy institut redkometallicheskoy promyshlennosti).

96. State Scientific Research Institute of Photochemical Planning (GOSNIIKhIMFOTOPROYEKT)

97. Georgian Polytechnical Institute (Gruzinskiy politekhnicheskiy institut).

98. Institute of Nuclear Physics at Moscow State University (Institut yadernoy fiziki pri Moskovskom gos. universitete).

99. Institute of Mechanics and Physics, Saratov (Institut mekhaniki i fiziki).

100. Institute of Oncology im. Petrov (Institut onkologii im. Petrova).

101. Ivanovo State Medical Institute (Ivanovskiy gos. meditsinskiy institut).

102. Ivanovo Chemicotechnological Institute (Ivanovskiy khimiko-tekhnologicheskiy institut).

103. Ivanovo Pedagogical Institute (Ivanovskiy pedagogicheskiy institut).

104. Kaunas Polytechnic Institute (Kaunasskiy politekhnicheskiy institut).

105. Kazan' Civil Engineering Institute (Kazanskiy inzhenerno-stroitel'skiy institut).

106. Kiev Poly[illegible]ic Institute (Kiyevskiy politekhnicheskiy institut).

107. Khar'kov State Scientific Research Institute of Metrology (Khar'kovskiy gos. nauchno-issled. institut metrologii).

108. Khar'kov Polytechnic Institute (Khar'kovskiy politekhnicheskiy institut).

109. Latvian State University (Latviyskiy gos. universitet).

110. Leningrad Electrotechnical Institute (Leningradskiy elektrotekhnicheskiy institut).

111. Leningrad Mining Institute (Leningradskiy gornyy institut).

112. Leningrad Institute of Soviet Trade (Leningradskiy institut Sovetskoy torgovli).

113. Leningrad Mechanical Institute (Leningradskiy mekhanicheskiy institut).

114. L'vov State University (L'vovskiy gos. universitet).

115. L'vov Polytechnic Institute (L'vovskiy politekhnicheskiy institut).

116. Moscow Aviation Institute (Moskovskiy aviatsionnyy institut).

117. Moscow Mining Institute (Moskovskiy gornyy institut).

118. Moscow Physicotechnical Institute (Moskovskiy fiziko-tekhnicheskiy institut).

119. Moscow Institute of Electronic Engineering (Moskovskiy institut elektronnyy tekhniki).

120. Moscow Institute of Engineers of Geodesy, Aerial Photography and Cartography (Moskovskiy institut inzhenerov geodezii, aerofotos"-yemki i kartografii).

121. Moscow Institute of Chemical Machinery (Moskovskiy institut khimicheskogo mashinostroyeniya).

122. Scientific Research Institute of Physicochemistry im. Karpov (Nauchno-issled. fiziko-khimicheskiy institut im. Karpova).

123. Novosibirsk Institute of Automation and Electrometallurgy (Novosibirskiy institut avtomatiki i elektrometallurgii).

124. Odessa Scientific Research Institute of Eye Disease and Tissue Therapy (Odesskiy nauchno-issled. institut glaznykh bolezney i tkanevoy terapii).

125. Odessa Technological Institute of Refrigeration Industry (Odesskiy tekhnologicheskiy institut kholodil'noy promyshlennosti).

126. Omsk Polytechnic Institute (Omskiy politekhnicheskiy institut).

127. Rostov Civil Engineering Institute (Rostovskiy inzhenerno-stroitel'nyy institut).

128. Ryazan' Radiotechnical Institute (Ryazanskiy radiotekhnicheskiy institut).

129. Siberian State Scientific Research Institute of Metrology (Sibirskiy gos. nauchno-issled. institut metrologii).

130. Tadzhik State University (Tadzhikskiy gos. universitet).

131. Tartu State University (Tartusskiy gos. universitet).

132. Tomsk State University (Tomskiy gos. univeristet).

133. Central Aerohydrodynamic Institute im. Zhukovskiy (Tsentral'nyy aerogidrodinamicheskiy institut).

134. Central Aerological Observatory (Tsentral'naya aerologicheskaya observatoriya).

135. Central Scientific Research Institute of Communications (Tsentral'nyy nauchno-issled. institut svyazi).

136. Uzhgorod State University (Uzhgorodskiy gos. universitet).

137. Voronezh State University (Voronezhskiy gos. universitet).

138. Voronezh Polytechnic Institute (Voronezhskiy politekhnicheskiy institut).

139. All Union Electrotechnical Institute (Vsesoyuznyy elektrotekhnicheskiy institut).

140. All Union Scientific Research Institute of Physicotechnical and Radiotechnical Measurements (VNIFTRI).

141. All Union Scientific Research Institute of Opticophysical Measurements (Vsesoyuznyy nauchno-issled. institut optiko-fizicheskikh izmereniy).

142. All Union Scientific Research Institute for Synthesis of Mineral Ore (VNII sinteza mineral'nogo syrya).

143. All Union Scientific Research Institute of Synthetic Rubber (VNII sinteticheskogo kauchuka).

144. All Union Scientific Research Institute of Television and Radio Broadcasting (VNII televideniya i radioveshchaniya).

145. All Union Correspondence Electrotechnical Institute of Communications (Vsesoyuznyy zaochnyy elektrotekhnicheskiy institut svyazi).

146. Yerevan Physics Institute (Yerevanskiy fizicheskiy institut).

147. Moscow Highway Institute (Moskovskiy avtodorozhnyy institut, MADI).

148. Institute of Terrestrial Magnetism, the Ionosphere and Radiowave Propagation, AN SSSR (Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln, IZMIRAN, AN SSSR).

149. Leningrad Shipbuilding Institute (Leningradskiy korablestroitel'nyy institut).

150. Dnepropetrovsk State University (Dnepropetrovskiy gos universitet).

151. Kishinev State University (Kishinevskiy gos universitet).

152. Moscow Institute of Steel and Alloys (Moskovskiy institut stali i splavov, MISI).

153. Kiev Civil Engineering Institute (Kiyevskiy inzhenerno-stroitel'skiy institut, KISI).

154. Marine Hydrophysical Institute, AN UkrSSR (Morskoy gidrofizicheskiy institut, AN UkrSSR).

155. North Osetinsk State University (Severo-Osetinskiy gos universitet).

156. Mountain Agricultural Institute (Gorskiy sel'skokhozyaystvennyy institut).

157. All Union Scientific Research, Planning and Design Institute of Electric Equipment, Khar'kov (VNI i proyektno-konstruktorskiy institut elektroaparatov).

158. Military Medical Academy, Leningrad (Voyenno-meditsinskaya akademiya).

159. Institute of Thermophysics, Siberian Branch, AN SSSR, Novosibirsk (Institut teplofiziki, SOAN).

160. Scientific Research Institute of Hydrometeorological Instrument Manufacture (NII gidrometeoroligeskogo priborostroyeniya).

161. Moscow Institute of Radio Engineering, Electronics and Automation (Moskovskiy institut radiotekhnika, elektroniki i avtomatiki).

162. Moscow State Pedagogical Institute (Moskovskiy gos pedagogicheskiy institut).

163. All Union Scientific Research Institute of Metrology im. Mendeleyev (VNII metrologii im Mendeleyeva).

164. Special Design Bureau for Analytical Instrument Manufacture, AN SSSR (Spetsial'noye konstruktorskoye byuro analiticheskogo priborostroyeniya AN SSSR).

165. Kazan' Command Engineering College (Kazanskoye vyssheye komandno-inzhenernoye uchilishche).

166. Riga Polytechnic Institute (Rizhskiy politekhnicheskiy institut).

167. Institute of Petrochemical Synthesis im. Topchiyev, AN SSSR, Moscow (Institut neftekhimicheskogo sinteza im Topchiyeva AN SSSR).

168. Institute of Electric Welding im. Paton, AN UkrSSR, Kiev (Institut elektrosvarki im Patona AN Ukr SSR).

169. Department of Telecommunications of the All Union State Planning, Surveying and Scientific Research Institute of Power Systems and Electric Power Networks (Otdel dal'nykh peredach Vsesoyuznogo gosudarstvennogo proyektno-izyskatel'skogo i nauchno-issledovatel'skogo instituta energeticheskikh sistem i elektricheskikh setey, Energoset'proyekt).

170. Moscow Machine Tool Institute (Moskovskiy stankoinstrumental'nyy institut).

171. Leningrad Institute for the Advanced Training of Physicians (Leningradskiy institut usovershenstvovaniya vrachey).

172. Main Astronomical Observatory AN UkrSSR (Glavnaya astronomicheskaya observatoriya AN UkrSSR).

173. Ul'yanovsk Polytechnic Institute (Ul'yanovskiy politekhnicheskiy institut)

174. Scientific Research Institute of Organic Intermediates and Dyestuffs, Moscow (NII organicheskikh poluproduktov i krasiteley).

175. Arctic and Antarctic Scientific Research Institute, Leningrad (Arkticheskiy i antarkticheskiy NII).

176. Moscow Geological Prospecting Institut im Ordzhonikidze (Moskovskiy geologorazvedochnyy institut im Ordzhonikidze).

177. Riga Institute for Civil Aviation Engineers (Rizhskiy institut inzhenerov grazhdanskoy aviatsii).

178. Moscow Institute of Chemical Technology im. Mendeleyev (Moskovskiy khimiko-tekhnicheskiy institut im Mendeleyeva).

179. Moscow Institute of Fine Chemical Technology im. Lomonosov (Moskovskiy institut tonkoy khimicheskoy tekhnologii im Lomonosova).

180. Institute of Heat and Mass Exchange, AN BSSR (Institut teplo- i massoobmena AN BSSR).

181. Institute of Nuclear Research, AN UkrSSR, Kiev (Institut yadernykh issledovaniy AN UkrSSR).

182. Kiev Communications College of Military Engineering (Kiyevskoye vyssheye voyennoye inzhenernoye uchilishche svyazi).

183. Physico-technical Institute, AN BSSR (Fiziko-tekhnicheskiy institut AN BSSR).

184. Institute of Geochemistry and Analytical Chemistry im. Vernadskiy, AN SSSR, Moscow (Institut geokhimii i analiticheskoy khimii im Vernadskogo AN SSSR).

185. Gor'kiy Polytechnic Institute (Gor'kovskiy politekhnicheskiy institut).

186. Kishinev Pedagogical Institute (Kishinevskiy pedagogicheskiy institut).

187. Institute of Epidemiology and Microbiology im. Gameleya, AMN SSSR, Moscow (Institut epidemiologii i mikrobiologii im Gamelei AMN SSSR).

188. All Union Scientific Research Institute of Single Crystals, Khar'kov (VNII monokristallov).

189. Novocherkassk Polytechnic Institute (Novocherkasskiy politekhnicheskiy institut).

190. Central Scientific Research Institute of the Maritime Fleet (Tsentral'nyy NII morskogo flota).

191. Karaganda Polytechnic Institute (Karagandinskiy politekhnicheskiy institut).

192. Belorussian Technological Institute (Belorusskiy tekhnologicheskiy institut).

193. Institute of Theoretical and Applied Mechanics, Siberian Branch AN SSSR, Novosibirsk (Institut teoreticheskoy i prikladnoy mekhaniki SOAN).

194. VIOGEM

195. Northwest Correspondence Polytechnic Institute (Severo-Zapadnyy zaochnyy politekhnicheskiy institut).

196. Institute of Organic Chemistry im. Zelinskiy, AN SSSR (Institut organicheskoy khimii im Zelinskogo AN SSSR).

197. Tomsk Polytechnic Institute (Tomskiy politekhnicheskiy institut).

198. Institute of Mineral Fuels, Moscow (Institut goryuchikh iskopayemykh).

199. Moscow Institute of Electronic Machinery (Moskovskiy institut elektronnogo mashinostroyeniya).

200. Khar'kov Aviation Institute (Khar'kovskiy aviatsionyy institut).

201. Institute for Problems of Information Transmission, AN SSSR, Moscow (Institut problem peredachi informatsii AN SSSR).

202. Institute of Electronics, AN UzSSR, Tashkent (Institut elektroniki AN UzSSR).

203. Institute of General and Inorganic Chemistry, AN ArmSSR, Yerevan (Institut obshchey i neorganicheskoy khimii AN ArmSSR).

204. Institute of General Genetics, AN SSSR, Moscow (Institut obshchey genetiki AN SSSR).

205. Moscow X-ray Radiological Scientific Research Institute (Moskovskiy nauchno-issledovatel'skiy rentgeno-radiologicheskiy institut).

206. Institute of Geology and Geophysics, Siberian Branch, AN SSSR, Novosibirsk (Institut geologii i geofiziki SOAN).

207. Main Geophysical Observatory (Glavnaya geofizicheskaya observatoriya).

208. Tula Polytechnic Institute (Tul'skiy politekhnicheskiy institut).

209. Moscow Institute of Precision Mechanics and Computer Technology (Moskovskiy institut tochnoy mekhaniki i vychislitel'noy tekhniki).

210. Institute of Physics, Siberian Branch, AN SSSR (Institut fiziki SOAN).

211. Kalinin Polytechnic Institute (Kalininskiy politekhnicheskiy institut).

212. Kuban' State University (Kubanskiy gos universitet).

213. Leningrad Technological Institute (Leningradskiy tekhnologicheskiy institut).

214. Kazan' Pedagogical Institute (Kazanskiy pedagogicheskiy institut).

215. Physico-technical Institute, AN TadzhSSR (Fiziko-tekhnicheskiy institut AN TadzhSSR).

216. Kazan' Aviation Institute (Kazanskiy aviatsionnyy institut).

217. Poltava Civil Engineering Institute (Poltavskiy inzhenerno-stroitel'nyy institut).

218. Second Moscow State Medical Institute im. Pirogov (Vtoroy Moskovskiy meditsinskiy institut im Pirogova).

219. Belorussian Polytechnic Institute, Minsk (Belorusskiy politekhnicheskiy institut).

220. Institute of Experimental Meteorology (Institut eksperimental'noy meteorologii).

221. All Union Scientific Research Institute of Hydraulic Engineering (VNII gidrotekhniki).

222. Institute of Surgery im. Vishnevskiy, AMN SSSR (institut khirurgii im Vishnevskogo AMN SSSR).

223. Central Institute for the Advanced Training of Physicians (Tsentral'nyy institut usovershenstvovaniya vrachey).

224. Yerevan Polytechnic Institute (Yerevanskiy politekhnicheskiy institut).

225. Institute for Problems of Oncology, AN UkrSSR (Institut problem onkologii AN UkrSSR).

226. Leningrad Branch of the Mathematical Institute, AN SSSR (Leningradskoye otdeleniye Matematicheskogo instituta AN SSSR).

227. Tashkent State University (Tashkentskiy gos universitet).

228. Institute of Theoretical Physics AN UkrSSR (Institut teoreticheskoy fiziki AN UkrSSR).

229. Moscow Aviation Technological Institute (Moskovskiy aviatsionnyy tekhnologicheskiy institut).

230. Novosibirsk Institute for Engineers of Geodesy, Aerial Surveying and Cartography (Novosibirskiy institut inzhenerov geodezii, aerofotos"yemki i kartografii).

231. Scientific Research Institute of Motion Pictures and Photography (Nauchno-issledovatel'skiy kinofotoinstitut, NIKFI).

232. State Scientific Research Institute of Glass (Gosudarstvennyy NII stekla).

233. Ivanovo-Frankov Pedagogical Institute (Ivanovo-Frankovskiy pedagogicheskiy institut).

234. Scientific Research Institute of Civil Aviation (NII grazhdanskoy aviatsii).

235. Tashkent State Pedagogical Institute (Tashkentskiy gos. pedagogicheskiy institut).

236. All Union Scientific Research Institute of Mining Geomechanics and Surveying (VNII gornoy geomekhaniki i marksheyderskogo dela).

237. Department of the Physics of Nondestructive Control, AN BSSR (Otdel fiziki nerazrushayushchego kontrolya AN BSSR).

238. Institute of Physics of High Pressures, AN SSSR (Institut fiziki vysokikh davleniy AN SSSR).

239. All Union State Planning, Surveying and Scientific Research Institute of Power Systems and Electric Power Networks (Vsesoyuznyy gosudarstvennyy proyektn- izyskatel'skiy i nauchno-issledovatel'skiy institut energeticheskikh sistem i elektricheskikh setey, ENERGOSET'-PROYEKT).

240. Odessa State University (Odesskiy gos. universitet).

241. Sverdlovsk State Pedagogical Institute (Sverdlovskiy gos. pedagogicheskiy institut).

242. Kazakh State University, Alma Ata (Kazakhskiy gos. universitet).

243. Radio Engineering Institute, AN SSSR (Radiotekhnicheskiy institut AN SSSR).

244. Moscow Scientific Research Institute of Television (Moskovskiy nauchno-issledovatel'skiy televizionnyy institut).

245. Novosibirsk State Pedagogical Institute (Novosibirskiy gos. pedagogicheskiy institut).

246. Main Astronomical Laboratory, AN SSSR (Glavnaya astronomicheskaya laboratoriya AN SSSR).

247. Scientific Research Institute of Electrophysical Equipment im. Yefremov, Leningrad (NII elektrofizicheskoy apparatury im. Yefremova).

248. Institute of Mechanics at Moscow State University (Institut mekhaniki pri Moskovskom gos universitete).

249. Omsk Agricultural Institute (Omskiy sel'skokhozyaystvennyy institut).

250. Sverdlovsk Mining Institute (Sverdlovskiy gornyy institut).

251. Tomsk Institute of Automatic Control Systems and Radioelectronics (Tomskiy institut avtomatizirovannykh sistem upravleniya i radioelektroniki).

252. Leningrad Institute of Nuclear Physics, AN SSSR (Leningradskiy institut yadernoy fiziki AN SSSR).

253. Kirghiz State University (Kirgizskiy gos. universitet).

254. Moscow Civil Engineering Institute (Moskovskiy inzhenerno-stroitel'skiy institut).

255. Tallinn Polytechnical Institute (Tallinskiy politekhnicheskiy institut).

256. Far Eastern State University, Vladivostok (Dal'nevostochnyy gos. universitet).

257. Comprehensive Institute of Natural Sciences, AN UzSSR, Nukus (Kompleksnyy institut yestyestvennykh nauk AN UzSSR).

258. Institut of Theoretical Astronomy, AN SSSR (Institut teoreticheskoy astronomii AN SSSR).

259. Institut of Physics and Mathematics, AN LitSSR (Institut fiziki i matemateki AN LitSSR).

260. Kazan' Institute of Chemical Technology im. Kirov (Kazanskiy khimiko-tekhnologicheskiy institut im. Kirova).

261. Rybinsk Evening Technological Institute (Rybinskiy vecherniy tekhnologicheskiy institut).

262. Physicotechnical Institute, AN UzSSR (Fiziko-tekhnicheskiy institut AN UzSSR).

263. Astrophysical Institute, AN KazSSR (Astrofizicheskiy institut AN KazSSR).

264. Institute of Radiophysics and Electronics, AN ArmSSR (Institut radiofiziki i elektroniki AN ArmSSR).

265. Irkutsk Polytechnical Institute (Irkutskiy politekhnicheskiy institut).

266. Leningrad Forestry-Technical Academy (Leningradskaya lesnotekhnicheskaya akademiya).

267. Laboratory of Electronics, AN BSSR, Minsk (Laboratoriya elektroniki AN BSSR).

268. Scientific Research Institute of Applied Mathematics and Mechanics at Tomsk State University (NII prikladnoy matematiki i mekhaniki pri Tomskom gos universitete).

269. Dnepropetrovsk Metallurgical Institute, Zaporozh'ye Branch (Dnepropetrovskiy metallurgicheskiy institut, Zaporozhskiy filial).

270. Special Astrophysical Observatory, AN SSSR, Leningrad Branch (Spetsial'naya astrofizicheskaya observatoriya AN SSSR, Leningradskiy filial).

271. Ul'yanovsk State Pedagogical Institute im Ul'yanov (Ul'yanovskiy gosudarstvennyy pedagogicheskiy institut im Ul'yanova).

272. Military Engineering Radio Engineering Academy of Air Defense im Govorov (Voyenno-inzhenernaya radiotekhnicheskaya akademiya protivovozdushnoy oborony im Govorova).

273. Military Command Academy of Air Defense (Voyennaya komandnaya akademiya protivovozdushnoy oborony).

274. Donets Physico-technical Institute AN UkrSSR (Donetskiy fiziko-tekhnicheskiy institut AN UkrSSR).

275. Moscow Electrotechnical Institute of Communications (Moskovskiy elektrotekhnicheskiy institut svyazi).

276. Institute of Physics of the Earth im. Shmidt, AN SSSR (Institut fiziki Zemli im. Shmidta AN SSSR).

277. Leningrad Institute of Aviation Instruments (Leningradskiy institut aviatsionnogo priborostroyeniya).

278. Samarkand State University (Samarkandskiy gos. universitet).

279. Moscow Institute of the Petrochemical and Gas Industry im. Gubkin (Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti im. Gubkina).

280. Moscow Scientific Research Institute of Eye Diseases im. Gel'mgol'ts (Moskovskiy NII glaznykh bolezney im. Gel'mgol'tsa).

VI. AUTHOR INDEX

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