

AD-A018 639

BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS, NUMBER 20.  
APRIL-JUNE 1975

Stuart G. Hibben, et al  
Informatics, Incorporated

Prepared for:

Defense Supply Service  
Defense Advanced Research Projects Agency

20 November 1975

DISTRIBUTED BY:

**NTIS**

National Technical Information Service  
U. S. DEPARTMENT OF COMMERCE

365110

Informatics Inc.



ADA018639

D D C  
RECEIVED  
DEC 19 1975  
RECEIVED  
A

Reproduced by  
NATIONAL TECHNICAL  
INFORMATION SERVICE  
U.S. Department of Commerce  
Springfield, VA 22151

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

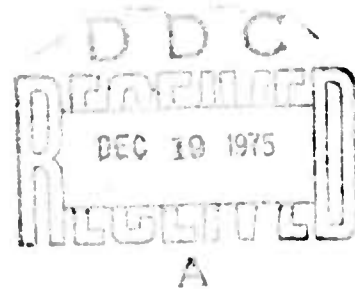
# BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS

No. 20, April - June 1975

Sponsored By  
Defense Advanced  
Research Projects Agency

DARPA Order No. 3097

November 20, 1975



DARPA Order No. 3097  
Program Code No. P6L10, P6D10, P6E20, P6G10  
Name of Contractor:  
Informatics Inc.  
Effective Date of Contract:  
September 1, 1975  
Contract Expiration Date:  
November 30, 1975  
Amount of Contract: \$100,617

Contract No. MDA-903-76C-0099  
Principal Investigator:  
Stuart G. Hibben  
Tel: (301) 770-3000  
Program Manager:  
Ruth Ness  
Tel: (301) 770-3000  
Short Title of Work:  
"Soviet Lasers"

This research was supported by the Defense Advanced Research Projects Agency and was monitored by the Defense Supply Service - Washington, under Contract No. MDA-903-76C-0099. The views and conclusions contained in this document are those of the author and should not be interpreted as necessarily representing the official policies, either express or implied, of the Defense Advanced Research Projects Agency or the United States Government.

**Informatics Inc**

Information Systems Company  
6000 Executive Boulevard  
Rockville, Maryland 20852  
(301) 770-3000

Approved for public release; distribution unlimited

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS, No. 20, APRIL - JUNE 1975		5. TYPE OF REPORT & PERIOD COVERED Scientific ... Interim
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Stuart G. Hibben, Carl Minkus		8. CONTRACT OR GRANT NUMBER(s) MDA-903-76C-0099
9. PERFORMING ORGANIZATION NAME AND ADDRESS Informatics Inc. 6000 Executive Boulevard Rockville, Maryland 20852		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS DARPA Order No. 3097 Program Code No. P6L10, P6D10, P6E20, P6G10
11. CONTROLLING OFFICE NAME AND ADDRESS Defense Advanced Research Projects Agency/TAO 1400 Wilson Boulevard Arlington, Virginia 22209		12. REPORT DATE November 20, 1975
		13. NUMBER OF PAGES 114
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) Defense Supply Service - Washington Room 1D245, Pentagon Washington, D. C. 20310		15. SECURITY CLASS. (of this report) UNCLASSIFIED
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report)  Approved for public release; distribution unlimited.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS Solid State Lasers, Liquid Lasers, Gas Lasers, Chemical Lasers, Laser Components, Nonlinear Optics, Spectroscopy of Laser Materials, Ultrashort Pulse Generation, Crystal Growing, Gamma Lasers, X ray Lasers, Laser Theory, Laser Biological Effects, Laser Communications, Holography, Laser Chemical Effects, Laser Measurement Applications, Laser Parameters, Laser Computer Technology, Laser Beam-Target Interaction, Laser Plasma		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This is the Soviet Laser Bibliography for the second quarter of 1975 and is No. 20 in the 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; computer technology; holography; laser-induced chemical reactions; instrumentation and measurements; beam-target interaction; and plasma generation and diagnostics.		

### 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 1975, 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, KL) 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.

TABLE OF CONTENTS

INTRODUCTION .....	i
<b>I. BASIC RESEARCH</b>	
<b>A. Solid State Lasers</b>	
1. Crystal: Ruby .....	1
2. Crystal: Nd <sup>3+</sup> .....	2
3. Crystal: Miscellaneous .....	3
4. Semiconductor: Simple Junction	
a. GaAs .....	3
b. InP .....	4
c. PbSe .....	4
5. Semiconductor: Mixed Junction .....	5
6. Semiconductor: Heterojunction .....	5
7. Semiconductor: Theory .....	6
8. Glass: Nd .....	6
9. Glass: Miscellaneous .....	7
<b>B. Liquid Lasers</b>	
1. Organic Dyes	
a. Rhodamine .....	8
b. Phthalimide .....	8
c. Polymethine .....	9
d. Miscellaneous Dyes .....	9
2. Inorganic Compounds .....	9
<b>C. Gas Lasers</b>	
1. Simple Mixtures	
a. He-Ne .....	9
2. Molecular Beam and Ion	
a. CO <sub>2</sub> .....	11
b. CO .....	12
c. Noble Gas .....	12
d. H <sub>2</sub> O .....	13
e. N <sub>2</sub> .....	13



	f.	Metal Vapor .....	13
	g.	Gasdynamic .....	14
	h.	Miscellaneous Molecular .....	14
	3.	Ring Lasers .....	15
	4.	Theory .....	15
D.		Chemical Lasers	
	1.	$F_2 + H_2(D_2)$ .....	16
	2.	Photodissociative .....	17
E.		Components	
	1.	Resonators	
		a. Design and Performance .....	18
		b. Mode Kinetics .....	19
	2.	Pump Sources .....	19
	3.	Deflectors .....	21
	4.	Filters .....	21
	5.	Detectors .....	21
	6.	Modulators .....	29
F.		Nonlinear Optics	
	1.	Frequency Conversion .....	30
	2.	Parametric Processes' .....	30
	3.	Stimulated Scattering	
		a. Raman .....	33
		b. Brillouin .....	35
		c. Rayleigh .....	35
	4.	Self-focusing .....	35
	5.	Acoustic Interaction .....	36
	6.	Birefringence .....	36
	7.	General Theory .....	37
G.		Spectroscopy of Laser Materials .....	38
H.		Ultrashort Pulse Generation .....	39

	J.	Crystal Growing .....	40
	K.	Theoretical Aspects of Advanced Lasers .....	40
	L.	General Laser Theory .....	40
II.	LASER APPLICATIONS		
	A.	Biological Effects .....	43
	B.	Communications	
	1.	Beam Propagation in the Atmosphere .....	43
	2.	Beam Propagation in Liquids .....	45
	3.	Theory of Propagation .....	46
	4.	Systems .....	46
	C.	Computer Technology .....	49
	D.	Holography .....	51
	E.	Laser-induced Chemical Reactions .....	59
	F.	Instrumentation and Measurements	
	1.	Measurement of Laser Parameters .....	61
	2.	Miscellaneous Measurement Applications .....	62
	G.	Beam-Target Interaction	
	1.	Metal Targets .....	68
	2.	Dielectric Targets .....	69
	3.	Semiconductor Targets .....	70
	4.	Liquid Targets .....	71
	5.	Miscellaneous Studies .....	72
	H.	Plasma Generation and Diagnostics .....	73
III.	MONOGRAPHS .....		78
IV.	SOURCE ABBREVIATIONS .....		83
V.	CUMULATIVE AFFILIATIONS LIST .....		89



## I. BASIC RESEARCH

### A. SOLID STATE LASERS

#### 1. Crystal: Ruby

1. Antsiferov, V. V., A. S. Kuch'yanov, V. S. Pivtsov, V. D. Ugozhayev, and K. G. Folin (0). Some characteristics of a quasistationary generation regime in a ruby laser with plane mirrors. OIS, v. 38, no. 3, 1975, 599-607.
2. Gorokhovskiy, A. A., V. P. Lebedev, and A. K. Przhhevuskiy (0). Absorption spectra form excited states of ruby with a high chromium content. OIS, v. 38, no. 5, 1975, 940-946.
3. Gvaladze, T. V., V. Ya. Khaimov-Mal'kov, B. N. Grechushnikov, and V. F. Koryagin (13). Effect of titanium doping on the EPR linewidth of Cr<sup>3+</sup> in ruby. FTT, no. 3, 1975, 877-882.
4. Ivlev, G. D., L. A. Lavrovskiy, Yu. F. Morgun, and M. A. Muravitskiy (0). Narrowing the spectral composition of ruby laser emission in a double resonator. ZhPS, v. 22, no. 5, 1975, 819-823.
5. I'ovalenko, Ye. S., V. A. Laptev, and A. Ye. Mandel' (0). Pulsed ruby laser using mercury capillary flashlamps under ultrahigh pressure. ZhPS, v. 22, no. 5, 1975, 814-818.
6. Krivoshchekov, G. V., V. K. Makukha, and V. M. Tarasov (10). Stabilizing ruby laser radiation by external negative feedback. KE, no. 4, 1975, 711-716.
7. Krylov, K. I., S. F. Sharlay, and V. M. Kolesnikov (30). Study of the phosphorescence of synthetic ruby and sapphire excited by Co<sup>60</sup> gamma rays. IN: Tr 1, 17-20. (RZhRadiot, 5/75, 5Ye76)

8. Lakhno, V. I. (0). Controlling the emission characteristics of a ruby laser. IN: Sb 1, 109-112. (RZhRadiot, 3/75, 3Ye112)
9. Makogon, M. M. (0). Ruby laser with a variable length mirror. OiS, v. 38, no. 3, 1975, 620-622.
10. Ponomarev, Yu. N. (0). Effect of a weak absorption line in the resonator on the characteristics of a ruby laser. ZhPS, v. 22, no. 4, 1975, 633-636.

## 2. Crystal: $\text{Nd}^{3+}$

11. Bedilov, M. R., Kh. B. Beysembayeva, U. Egamov, and U. G. Gulyamov (85). Effect of gamma radiation on an  $\text{NaLa}(\text{MoO}_4)_2:\text{Nd}^{3+}$  laser. UFZh, no. 3, 1975, 506-508.
12. Belabayev, K. G., A. A. Kaminskiy, and S. E. Sarkisov (13). Stimulated emission from ferroelectric  $\text{LiNbO}_3$  crystals containing  $\text{Nd}^{3+}$  and  $\text{Mg}^{2+}$  ions. PSS, v. A28, no. 1, 1975, K17-K20.
13. Belousov, N. D., and B. S. Skorobogatov (0). Dynamics of stimulated emission in a  $\text{YAG}:\text{Nd}^{3+}$  laser with a rotating plate in the resonator. OiS, v. 38, no. 5, 1975, 1025-1026.
14. Bilak, V. I., N. R. Dokuchayev, A. M. Onishchenko, V. A. Pashkov, A. I. Petrov, M. F. Stel'makh, and N. P. Chernousov (0). Stimulated emission in  $\text{YAG}:\text{Nd}^{3+}$  crystals pumped by injection lasers. KE, no. 5, 1975, 1050-1054.
15. Kaminskiy, A. A. (13), V. A. Koptsik (2), Yu. A. Maskayev (2), I. I. Naumova (2), L. N. Rashkovich (2), and S. E. Sarkisov (13). Stimulated emission from  $\text{Nd}^{3+}$  ions in ferroelectric "banana" ( $\text{Ba}_2\text{NaNb}_5\text{O}_{15}$ ) crystals. PSS, v. A28, no. 1, 1975, K5-K10.

16. Zinov'yev, S. V., A. M. Onishchenko, and A. A. Semenov (118). Stimulated emission in neodymium ions in YAG crystals. IN: Tr 2, 62-71. (RZhRadiot, 5/75, 5Ye77)

### 3. Crystal: Miscellaneous

17. Arsen'yev, P. A. (19), K. E. Bienert (NS), and A. V. Potemkin (19). Mixed aluminates as a new class of laser materials. PSS, v. A28, no. 1, 1975, 81-86.
18. Aseyev, G. I., M. L. Kats, V. K. Nikol'skiy, B. A. Medvedev, and T. G. Silkina (0). Mechanisms for reducing the ionization potential of impurity centers in alkali-halide crystals in a laser radiation field. OiS, v. 38, no. 5, 1975, 959-965.
19. Dobrokhotova, V. K., V. S. Gorobchenko, Yu. V. Naboykin, L. A. Ogurtsova, A. P. Podgorny, and F. S. Pokrovskaya (0). Characteristics of stimulated emission in doped molecular crystals. OiS, v. 38, no. 3, 1975, 579-582.
20. Yatsenko, S. P., L. M. Skachkova, R. P. Bashuk, and A. V. Chesnokov (0). Alloy based on gallium. Author's certificate USSR, no. 418547, issued 14 August 1974. (RZhMetal, 15I, 4/75, 4I663)
21. Zverev, G. M., I. I. Kuratev, and A. M. Onishchenko (0). Transfer of excitation energy between ions of trivalent rare-earth elements in crystals. KE, no. 3, 1975, 469-481.

### 4. Semiconductor: Simple Junction

#### a. GaAs

22. Bykovskiy, Yu. A., A. V. Makovkin, V. L. Smirnov, and A. V. Shmal'ko (16). Matching GaAs laser radiation by film waveguide structures based on (AlGa)As. KE, no. 4, 1975, 826-830.

23. Gal'pern, D. Yu., V. N. Deryagin, L. Ye. Marasin, Yu. V. Popov, and I. V. Fedorova (7). Forming of semiconductor laser radiation into beams with increased space-time homogeneity. OMP, no. 3, 1975, 3-5.
24. Goncharov, I. G., K. B. Dedushenko, A. V. Kozhevnikov, V. N. Luk'yanov, A. F. Uzkiy, V. I. Shveykin, N. V. Shelkov, and S. D. Yakubovich (16). Radiation output of a semiconductor laser with e-beam excitation through a diffraction lattice. KE, no. 3, 1975, 621-622.
25. Grigor'yev, O. N., I. V. Gridneva, Ye. M. Krasavina, I. V. Kryukova, Yu. V. Mil'man, and S. I. Chugunova (141). Effect of imperfections in a GaAs crystal structure on its lasing parameters, using e-beam excitation. KE, no. 5, 1975, 1058-1062.
26. Prokhorenko, A. S., and N. N. Shavel' (0). Delay of stimulated emission in GaAs diodes. IN: Sb 2, 238-241. (RZhF, 4/75, 4D1200)
27. Ryabtsev, G. I., V. P. Gribkovskiy, and V. A. Samoylyukovich (3). Experimental study of the effect of radiation noise on the generation threshold of injection lasers. ZhTF, no. 4, 1975, 919-920.
- b. InP
28. Ismailov, I., A. Sadiyev, R. Altynbayev, and N. Shokhudzhayev (215). Characteristics of diffused laser diodes based on InP and  $\text{InP}_{x-1}\text{As}_x$ . KE, no. 4, 1975, 814-819.
- c. PbSe
29. Yunovich, A. E., V. P. Ten, M. S. Fedorov, and A. P. Khramtsov (2). Stimulated emission in thin films of lead chalcogenides under photoexcitation. FTP, no. 5, 1975, 904-906.

5. Semiconductor: Mixed Junction

30. Borshch, A. A., M. S. Brodin, V. I. Volkov, and V. V. Ovchar (5). Self-bending of a ruby laser beam in  $\text{CdS}_{1-x}\text{Se}_x$  semiconductor crystals. KE, no. 3, 1975, 602-606.
31. Brodin, M. S., and S. G. Shevel' (5). Luminescence of  $\text{Zn}_x\text{Cd}_{1-x}\text{S}$  single crystals under intense laser irradiation. UFZh, no. 3, 1975, 431-435.

6. Semiconductor: Heterojunction

32. Alfeyorov, Zh. I., S. A. Gurevich, V. R. Larionov, M. N. Mizerov, and Ye. L. Portnoy (0). Semiconductor heterolasers with a diffraction lattice at the surface of a waveguide layer. IN: Sb 3, 21. (RZhElektr, 3/75, 3B474)
33. Alfeyorov, Zh. I., and R. F. Kazarinov (4). Semiconductor laser with electric pumping. Otkr izobr, no. 14, 1975, 181737.
34. Bogatov, A. P., P. G. Yelisseyev, and B. N. Sverdlov (1). Injection laser with a ring resonator. KSpF, no. 8, 1974, 25-27.
35. Borisov, N. A., O. Ye. Korobov, B. M. Lavrushin, V. N. Maslov, and N. N. Khlebnikov (0). Use of  $\text{GaP}_x\text{As}_{1-x}$  --  $\text{GaF}_y\text{As}_{1-y}$  multilayer heterostructures in lasers with e-beam excitation. IN: Sb 2, 242-245. (RZhF, 4/75, 4D1211)
36. Dzhakhutashvil', T. V., V. V. Zorikov, I. Ye. Pekar, R. A. Chermakadze, R. I. Chikovani, and A. L. Shkol'nik (0). Pulsed LED's using heterojunction-simulators of laser radiation. IN: Sb 3, 57-58. (RZhElektr, 3/75, 3B441)

37. Gaysinskaya, L. B., M. S. Mirgalovskaya, I. A. Strel'nikova, and A. E. Yunovich (2,22). Radiative recombination in GaSb-Ga<sub>1-x</sub>In<sub>x</sub>Sb heterojunctions. FTP, no. 3, 1975, 474-477.
38. Kolyskin, V. I., V. R. Larionov, and G. N. Shelovanova (4). Generation energy of heterolasers in an AlAs-GaAs system. FTP, no. 5, 1975, 966-969.
39. Yeliseyev, P. G., and A. V. Khaydarov (0). Lightguide properties of heterostructures based on GaAs-Al<sub>x</sub>Ga<sub>1-x</sub>As and GaP-Al<sub>x</sub>Ga<sub>1-x</sub>P. IN: Sb 3, 21-22. (RZhElektr, 3/75, 3B499)
40. Yeliseyev, P. G. (0). First All-Union Conference on Physical Processes in Heterojunctions, Kishinev, 30 October - 1 November 1974. KE, no. 3, 1975, 623-627.

#### 7. Semiconductor: Theory

41. Kalenkov, S. G., and V. I. Ryzhiy (118). "Freezing" of an electron gas by monochromatic e-m radiation in quantizing magnetic fields. FTP, no. 3, 1975, 602-603.
42. Yeliseyev, P. G., V. G. Il'in, G. O. Karapetyan, V. Ya. Livshits, G. D. Negodayev, and A. V. Khaydarov (1). Use of graduated lightguides in semiconductor lasers. KE, no. 4, 1975, 848-850.

#### 8. Glass: Nd

43. Alekseyev, V. N., and A. A. Gorokhov (0). Energy and polarization characteristics of a neodymium glass laser using plane and telescopic resonators. KE, no. 4, 1975, 733-737.

44. Avdeyeva, V. I., M. A. Al'perovich, V. A. Babenko, I. I. Levkoyev, V. I. Malyshev, A. A. Sychev, and A. N. Shibanov (1). Effect of solvation on the spectroscopic properties of pentacarbocyanine dye solutions used in Nd:glass lasers. KE, no. 3, 1975, 540-545.
45. Bedilov, M. R., U. Egamov, and K. Khaydarov (0). Effect of gamma radiation on neodymium-activated glass. IN: Sb 4, 107-110. (RZhF, 3/75, 3D1224)
46. Buchenkov, V. A., B. N. Kolesnikov, V. M. Mit'kin, D. I. Perlov, and A. I. Stepanov (0). Study of a periodic Nd:glass laser in a transient thermal regime. KE, no. 4, 1975, 728-732.
47. Mak, A. A., V. M. Mit'kin, V. N. Polukhin, A. I. Stepanov, and O. S. Shchhavelev (0). A possibility for increasing the brightness of Nd:glass laser radiation. KE, no. 4, 1975, 850-852.
48. Yegorov, A. L., V. V. Korobkin, and R. V. Serov (1). Single frequency Nd:glass laser operating in a Q-switching regime. KE, no. 3, 1975, 513-518.

#### 9. Glass: Miscellaneous

49. Zheltov, G. I., S. K. Mamonov, and A. S. Rubanov (0). Optical distortions of active glass elements during the operation of a laser in a pulsed regime. ZhPS, v. 22, no. 5, 1975, 928-930.



B. LIQUID LASERS

1. Organic Dyes

a. Rhodamine

50. Deryugin, L. N., I. V. Cheremiskin, and T. K. Chekhlova (14). Thin-film ring laser with waveguide pumping. KE, no. 4, 1975, 794-798.
51. Efendiyev, T. Sh. and A. N. Rubinov (3). Dye laser with distributed feedback triggered by second harmonic radiation of a neodymium laser. KE, no. 4, 1975, 858-861.
52. Ishchenko, V. N., V. N. Lisitsyn, and A. A. Chernenko (10). Tunable dye laser with transverse pumping by an ultraviolet laser. KE, no. 4, 1975, 830-832.
53. Levin, M. B., A. S. Cherkasov, and V. I. Shirokov (0). Using luminescent converters in a rhodamine 6G tube-type laser in ethanol. Ois, v. 38, no. 3, 1975, 595-598.
54. Levin, M. B., and M. I. Snegov (0). Effect of photoreaction products on spontaneous and stimulated emission in alcohol solutions of rhodamine 6G. Ois, v. 38, no. 5, 1975, 925-927.
55. Smirnov, V. S., Yu. Ye. Zabyakin, and N. G. Bakhshiyev (0). Stimulated emission in rhodamine 6G solutions with mixed aqueous-organic solvents. Ois, v. 38, no. 3, 1975, 591-594.

b. Phthalimide

56. Alekseyev, V. A., L. F. Gladchenko, A. D. Das'ko, B. V. Kalachev, L. G. Pikulik, and A. F. Sil'nitskiy (0). Energy characteristics of stimulated emission in phthalimide solutions under flashlamp excitation. ZhPS, v. 22, no. 5, 1975, 931-933.

c. Polymethine

57. Melishchuk, M. V., Ye. A. Tikhonov, and M. T. Shpak (5).  
Characteristics of stimulated emission spectra from polymethine dye solutions at low temperatures. UFZh, no. 3, 1975, 360-366.
58. Melishchuk, M. V., Ye. A. Tikhonov, and M. T. Shpak (5).  
Absorption and fluorescence band structure of polymethine dye solutions. UFZh, no. 3, 1975, 448-455.

d. Miscellaneous Dyes

59. Abdullin, U. A., V. A. Gorshkov, I. L. Klyukach, G. A. Lyakhov, R. Yu. Orlov, and L. S. Telegin (2). Formation of spatial coherence of superluminescence in a dispersing medium. KE, no. 5, 1975, 967-974.

2. Inorganic Compounds

60. Alekseyev, N. Ye., Ya. I. Malashko, and Yu. P. Rudnitskiy (15).  
Dependence of various laser and physicochemical parameters of  $\text{POCl}_3 + \text{SnCl}_4$  based luminophors on the neodymium concentration. NM, no. 4, 1975, 713-717.
61. Kaporskiy, L. N., and O. I. Kalabushkin (7). Cells of inorganic liquid lasers. OMP, no. 3, 1975, 68-69.

C. GAS LASERS

1. Simple Mixtures

a. He-Ne

62. Apostol, D., C. Blaj, A. Ionescu, M. Ristici, and S. Tutelea (NS).  
The LG-500 He-Ne laser. Studii si cercetari de fizica, v. 26, no. 10, 1974, 1083-1086. (RZhRadiot, 3/75, 3Ye32)

63. Atutov, S. N., V. P. Koronkevich, A. I. Lokhmatov, and G. I. Smirnov (75). Frequency characteristics of a Zeeman laser with an anisotropic resonator. KE, no. 5, 1975, 1092-1094.
64. Balakin, V. A., I. P. Konovalov, and Ye. D. Protsenko (16). Measuring the spectral characteristics of the  $3.3912\mu$  ( $3s_2-3p_2$  Ne) line. KE, no. 5, 1975, 1064-1068.
65. Gnatovskiy, A. V., M. V. Danileyko, N. G. Zubrilin, A. P. Nedavniy, and M. T. Shpak (5). Resonance phenomena in a multimode laser with nonlinear absorption. UFZh, no. 4, 1975, 690-691.
66. Klimentova, T. M., V. G. Leont'yev, L. N. Orlov, and Ye. P. Ostapchenko (0). Effect of temperature on energy transfer from type II shocks in an He-Ne laser plasma. ZhPS, v. 22, no. 3, 1975, 407-410.
67. Mel'nikov, L. A., V. A. Sedel'nikov, and V. V. Tuchin (0). Effect of the lifetime of metastable neon ( $1s_5$ ) atoms on the frequency modulation of an He-Ne laser ( $6328\text{\AA}$ ). OiS, v. 38, no. 4, 1975, 791-793.
68. Tomaszewska, E. (NS). The LG-200 gas laser. Fiz. szk., v. 20, no. 5, 1974, 34-35. (RZhF, 5/75, 5D118?)
69. Vorobeychikov, E. S., V. A. Vokhmin, V. L. Larin, B. Sh. Perkal'skis, and B. N. Poyzner (47). Spectral change in a two-frequency He-Ne laser from the action of an optical signal. IN: Tr 3, 11-16. (RZhF, 4/75, 4D123!)
70. Zaprygayev, A. F. (0). Characteristics of an amplitude-modulated He-Ne laser with a five-mirror resonator. ZhTF, no. 4, 1975, 834-837.

## 2. Molecular Beam and Ion

- a. CO<sub>2</sub>
71. Andreyev, S. I., I. M. Belousova, P. N. Dashuk, D. Yu. Zaroslov, Ye. A. Zobov, N. V. Karlov, G. P. Kuz'min, S. M. Nikiforov, A. M. Prokhorov, A. N. Sidorov, L. L. Chelnokov, and M. D. Yarysheva (1). CO<sub>2</sub> laser triggered by a glancing discharge. ZhETF P, v. 21, no. 7, 1975, 424-426.
72. Aver'yanov, N. Ye. (30). Pulsed CO<sub>2</sub> TEA laser. IN: Tr 1, 33-40. (RZhRadiot, 5/75, 5Ye8)
73. Baloshin, Yu. A., and N. Ye. Aver'yanov (30). Study of a pulsed CO<sub>2</sub> laser with excitation of the active mixture by microsecond current pulses. IN: Tr 1, 25-33. (RZhRadiot, 5/75, 5Ye9)
74. Generalov, N. A., V. P. Zimakov, V. D. Kosynkin, Yu. P. Rayzer, and D. I. Roytenburg (17). Possibility of using an aircraft compressor in closed circuit lasers. DAN SSSR, v. 221, no. 2, 1975, 319-321.
75. Grishchenko, L. V., and V. S. Solov'yev (163). Calculating the rotational-vibrational transition frequencies in a CO<sub>2</sub> laser. IN: Tr 4, 101-109. (RZhMetrolog, 2/75, 2.32.1103)
76. Kuklev, Yu. I., I. I. Sokolov, and O. G. Gerlivanova (0). Studying the plasma of a CO<sub>2</sub> gas discharge laser by Thomson scattering. KE, no. 5, 1975, 1080-1084.
77. Orishich, A. M., A. G. Ponomarenko, and R. I. Soloukhin (0). Limiting energy characteristics of pulsed CO<sub>2</sub> TEA lasers. ZhPMTF, no. 1, 1975, 3-12.
78. Provorov, A. S., and V. P. Chebotayev (10). High pressure c-w CO<sub>2</sub> lasers. KE, no. 4, 1975, 748-757.

79. Shukurov, N., Ye. M. Cherkasov, and Z. T. Azamatov (0).  
Some characteristics of a chemical CO<sub>2</sub> laser in atmospheric air.  
IN: Sb 5, 175-178. (RZhF, 5/75, 5D1222)
80. Taklaya, A. A. (255). Noise in CO<sub>2</sub> lasers. IN: Tr 5, 49-52.  
(RZhF, 4/75, 4D1255)
81. Zelenov, A. A., B. A. Raykhman, and Ye. P. Semenov (7).  
Stabilization of the radiation power of a c-w CO<sub>2</sub> laser.  
OMP, no. 6, 1975, 71-72.
- b. CO
82. Dorosh, V. S., L. F. Dobro, V. N. Ivanov, E. N. Lotkova, and  
V. V. Pisarenko (1). Gas temperature in the discharge plasma  
of a CO laser. KE, no. 5, 1975, 1030-1034.
83. Komarov, V. N., N. P. Yegorov, E. A. Trubachev, S. Ye.  
Kupriyanov, V. N. Ochkin, N. N. Sobolev, and V. I. Volchenok (0).  
Mass-spectrometric analysis of the ion and neutral composition of  
a CO laser plasma. IN: Sb 6, 155-156. (RZhKh, 19AB, 5/75,  
5B1428)
- c. Noble Gas
84. Aleksandrov, Ye. B., V. N. Kulyasov, and K. Khartung (0).  
Tunable single-frequency xenon laser using two infrared transitions  
at 5.57 and 3.51 μ. OiS, v. 38, no. 4, 1975, 775-778.
85. Borisova, M. S., and V. V. Murav'yev (0). Mode-locking in an  
argon ion laser with a nonlinear absorber. OiS, v. 38, no. 4,  
1975, 771-774.
86. Razmadze, N. A., L. L. Gol'dinov, and Z. D. Chkuaseli (0).  
Study of stimulated emission in xenon ions. ZhPS, v. 22, no. 5,  
1975, 824-827.

d. H<sub>2</sub>O

87. Voytsekhovskaya, O. K. (0). Intensity of the rotational spectrum line of hydrogen vapor. IN: Sb 7, 20-21. (RZhRadiot, 3/75, 3Ye42)

e. N<sub>2</sub>

88. Tarasenko, V. F., and V. V. Savin (78). Nitrogen laser in an amplifier regime. IVUZ Fiz, no. 2, 1975, 124-125.

f. Metal Vapor

89. Alekseyev, E. I., Ye. N. Bazarov, and G. I. Telegin (0). Optical shifts in a quantum frequency standard with pulsed optical pumping and optical indication of the Ramsey structure of the 0-0 line at the Rb<sup>87</sup> atom transition. RiE, no. 4, 1975, 777-785.

90. Alekseyev, E. I., Ye. N. Bazarov, and G. I. Telegin (0). Change in the Ramsey structure of the 0-0 line at the Rb<sup>87</sup> atom transition, while increasing the quantity of SHF pulses in the intervals between optical pumping pulses. RiE, no. 4, 1975, 860-862.

91. Bakhramov, S. A., and Ya. Z. Fayzullayev (85). Intense directional radiation from two-photon excitation of cesium atoms. IAN Uz, no. 1, 1975, 100-101.

92. Bikmukhametov, K. A., V. M. Klement'yev, and V. P. Chebotayev (10). Experimental study of collision broadening and of the emission line shift in a mercury laser from the pressure of He and Ne. KE, no. 3, 1975, 489-495.

93. Isayev, A. A., M. A. Kazaryan, S. V. Markova, and G. G. Petrash (1). Study of pulsed lasing from barium vapor in the infrared. KE, no. 3, 1975, 503-507.

94. Karabut, E. K., V. F. Kravchenko, V. S. Mikhalevskiy, and V. F. Papakin (0). Determining the lifetime of metastable Pb and Mn atoms. ZhPS, v. 22, no. 5, 1975, 925-927.
95. Klimkin, V. M. (78). Study of the ytterbium vapor laser. KE, no. 3, 1975, 579-584.
96. Kopiczynski, T., J. Mizeraczyk, and Z. Zakrzewski (NS). Probe measurements of plasma parameters in ion metal vapor lasers. BAPS, no. 12, 1974, 105(1065)-111(1071).
97. Zhukov, V. V., Ye. L. Latush, V. S. Mikhalevskiy, and M. F. Sem (41). New laser transitions in the spectrum of tin, and the mechanism for producing population inversion. KE, no. 4, 1975, 842-844.
- g. Gasdynamic
98. Vargin, A. N., N. A. Ganina, V. K. Konyukhov, and A. I. Lukovnikov (0). Population inversion of rotational levels from expansion of a gas. IN: Sb 7, 112-114. (RZhKh, 19AB, 10/75, 10B712)
99. Vargin, A. N., N. A. Ganina, V. K. Konyukhov, A. I. Lukovnikov, and V. I. Selyakov (0). Obtaining population inversion at rotational levels of diatomic molecules during adiabatic expansion of a gas. KE, no. 3, 1975, 599-602.
- h. Miscellaneous Molecular
100. Davletchin, I. I., and V. M. Marchenko (1). Electric discharge in a supersonic flow of a weakly ionized molecular gas. KE, no. 4, 1975, 672-676.



### 3. Ring Lasers

101. Birman, A. Ya., and A. F. Savushkin (0). Theory of a ring laser with a nonuniform resonator. OIS, v. 38, no. 3, 1975, 615-619.
102. Danileyko, M. V., V. R. Kozubovskiy, A. P. Nedavniy, and M. T. Shpak (5). Superhigh resolution spectroscopy using a gas ring laser. UFZh, no. 4, 1975, 638-643.
103. Danileyko, M. V., V. R. Kozubovskiy, A. P. Nedavniy, and M. T. Shpak (5). Ultrahigh resolution spectroscopy by a ring laser. KE, no. 5, 1975, 1095-1098.
104. Sokolov, V. A., and E. Ye. Fradkin (12). Dual-mode generation regime in a gas ring laser with a two-isotope active medium. KE, no. 4, 1975, 807-811.

### 4. Theory

105. Burshteyn, A. I., and A. G. Kofman (295). Relaxation of the dip in velocity distribution of atoms due to elastic collisions. KE, no. 3, 1975, 482-488.
106. Gurevich, A. I., and L. M. Satarov (23). Transitions between sublevels of  $^2P$  and  $^3P$  multiplets from collisions of atoms with ions. ZhETF, v. 68, no. 4, 1975, 1265-1273.
107. Igoshin, V. I., and A. N. Orayevskiy (1). Dependence of the efficiency of a molecular laser on its emission spectrum. ZhETF P, v. 21, no. 6, 1975, 325-329.
108. Karlov, N. V., and A. M. Prokhorov (1). Efficiency of a selective two-step lasing process in an atomic beam. KE, no. 5, 1975, 1071-1074.

109. Koshel'kov, V. A. (0). Raising the sorting efficiency in molecular generators. IN: Sb 8, 118-119. (RZhRadiot, 5/75, 5Ye27)
110. Magda, I. I., Yu. V. Tkach, Ya. B. Faynberg, and G. V. Skachek (0). Using relativistic e-beams for pumping high power pulsed lasers. IN: Sb 8, 166-167. (RZhRadiot, 5/75, 5Ye28)
111. Orishich, A. M., and A. G. Ponomarenko (193). Gain in a CO<sub>2</sub> laser with a double transverse discharge at high densities of the applied energy. KE, no. 5, 1975, 1068-1071.
112. Syts'ko, Yu. I., and S. I. Yakovlenko (16). Calculating the parameters of the active medium for an e-beam pumped plasma laser. KE, no. 4, 1975, 657-665.
113. Vladimirov, V. V., V. F. Shanskiy, and A. I. Shchedrin (0). Possibility of suppressing overheating instability in gas lasers with combined pumping. IN: Sb 9, 114. (RZhMekh, 3/75, 3B285)

#### D. CHEMICAL LASERS

##### 1. F<sub>2</sub> + H<sub>2</sub>(D<sub>2</sub>)

114. Balykin, V. I., Yu. R. Kolomiyskiy, and O. A. Tumanov (72). Tunable HF(DF) laser triggered by pulsed CO<sub>2</sub> laser radiation. KE, no. 4, 1975, 819-822.
115. Chebotarev, N. F., S. Ya. Pshezhetskiv, and S. A. Kamenetskaya (122). Study of combustion and reaction kinetics in mixtures of nitrogen fluorides with hydrogen and with hydrogen-containing compounds. KiK, no. 2, 1975, 296-301.
116. Ponomarenko, A. G., R. I. Soloukhin, and Yu. I. Khapov (193). Energy characteristics of an e-beam triggered HF chemical laser. DAN SSSR, v. 221, no. 4, 1975, 821-824.

117. Vasil'yev, G. K., Ye. F. Makarov, A. G. Ryabenko, and V. L. Tal'roze (67). Rotational and vibrational deactivation of non-uniformly excited HF molecules. ZhETF, v. 68, no. 4, 1975, 1241-1251.
118. Vasil'yev, G. K., Ye. F. Makarov, and Yu. A. Chernyshev (67). Measuring the reaction rates of the continuation and cutoff of steps in the  $F_2+H_2(D_2)$  reaction inhibited by  $O_2$ . KiK, no. 2, 1975, 320-324.
119. Vasil'yev, G. K., V. V. Vizhin, Ye. F. Makarov, Yu. A. Chernyshev, and V. L. Tal'roze (67). Pulsed photolysis of  $F_2+D_2+O_2+He$  mixtures. KhVE, no. 2, 1975, 154-159.
120. Vasil'yev, G. K., V. B. Ivanov, Ye. F. Makarov, A. G. Ryabenko, and V. L. Tal'roze (67). Study of the vibrational-rotational distribution of HF molecules formed in the reactions of fluorine atoms with  $H_2$ ,  $CH_4$ ,  $C_2H_6$ ,  $C_2H_4$ ,  $CH_3CN$  and  $C_3H_6$  molecules. IAN Khim, no. 3, 1975, 537-543.

## 2. Photodissociative

121. Kirillov, G. A., S. B. Kormer, G. G. Kochemasov, S. M. Kulikov, V. M. Murugov, V. D. Nikolayev, S. A. Sukharev, and V. D. Urlin (0). Study of the radiation divergence of a photodissociation laser with an inhomogeneous active medium. KE, no. 4, 1975, 666-671.
122. Zuyev, V. S., L. D. Mikheyev, and V. I. Yalovoy (1). Photochemical laser using the  $S_2(1\Sigma_g^+ - 3\Sigma_g^-)$  electron-vibrational transition. KE, no. 4, 1975, 799-806.

## E. COMPONENTS

### 1. Resonators

#### a. Design and Performance

123. Anan'yev, Yu. A., N. I. Grishmanova, I. M. Petrova, and N. A. Svetsitskaya (0). Spectral selection of radiation in lasers with unstable resonators. KE, no. 4, 1975, 738-742.
124. Bobrik, V. I., Yu. D. Kolomnikov, and B. S. Mogil'nitskiy (0). Output resonances in a laser with a long internal cell during saturation absorption in iodine vapor. ZhPS, v. 22, no. 3, 1975, 422-426.
125. Boytsov, V. F., and T. V. Guseva (0). Diffraction losses and frequencies of an offset ring resonator with a Gaussian diaphragm. OiS, v. 38, no. 5, 1975, 1038-1040.
126. Derevenko, N. K., and V. V. P'yanov (119). Problem of correcting a laser radiation wave front. IN: Sb 10, 139-145. (RZhRadiot, 4/75, 4Ye105)
127. Jagoszewski, E., W. Kowalik, B. Lipinska, and Z. Maciejewska (NS). Construction of a telescopic device for broadening a laser light beam. Pr. nauk. Inst. fiz. techn. PWr, no. 8, 1974, 33-38. (RZhRadiot, 3/75, 3Ye180)
128. Yermakov, B. A., A. V. Lukin, and V. V. Lyubimov (0). Operation of a laser with a phototropic switch in a resonator with offset mirrors. OiS, v. 38, no. 4, 1975, 766-770.
129. Zheltov, G. I., and G. G. Meshkov (0). Kinetics in the formation of a thermal stress field in active elements of solid state lasers. I-FZh, v. 28, no. 4, 1975, 752-753.

130. Zheiltov, G. I., and A. S. Rubanov (0). Optical distortions of active elements of a solid state laser in a transient regime. ZhPS, v. 22, no. 3, 1975, 418-421.
- b. Mode Kinetics
131. Loyko, N. A., and A. M. Samson (0). Kinetics of laser generation during external high frequency Q-switching. ZhPS, v. 22, no. 4, 1975, 623-632.
132. Mizeraczyk, J., and J. Chojnacki (NS). Influence of parabolic radial gain distribution of a medium with gain saturation on laser modes. Part 1. BAPS, no. 12, 1974, 113(1074)-118(1078).
133. Mizeraczyk, J., and J. Chojnacki (NS). Influence of parabolic radial gain distribution of a medium with gain saturation on laser modes. Part 2. BAPS, no. 12, 1974, 119(1079)-125(1085).
134. Voytovich, A. P., V. V. Dubinin, and A. Ya. Smirnov (0). Selection of oscillation modes in a gas laser by a magnetic field. ZhPS, v. 22, no. 5, 1975, 809-813.

## 2. Pump Sources

135. Anan'yev, Yu. A., V. F. Borisov, V. M. Irtuganov, V. P. Kalinin, and V. S. Popov (0). Overload device for flashlamps. Author's certificate USSR, no. 421084, issued 19 August 1974. (RZhRadiot, 3/75, 3Ye189)

136. Andreyev, S. I. (0). Calculating the boundary walls of pulsed discharges in xenon. ZhTF, no. 5, 1975, 1010-1018.
137. Baltakov, F. N., and B. A. Barikhin (0). The coaxial flashlamp as a pump source for organic dye lasers. KE, no. 4, 1975, 822-826.
138. Barzhin, V. Ya., B. Yu. Linker, A. I. Samoylovich, and N. S. Fertik (163). Optical pumping source of a passive quantum frequency standard using rubidium vapor. IN: Tr 4, 80-82. (RZhF, 3/75, 3D1556)
139. Basov, Yu. G., V. V. Ivanov, V. N. Makarov, G. I. Narkhova, and A. A. Shcherbakov (0). Effect of a laser pump on the characteristics of the pumping source. OiS, v. 38, no. 3, 1975, 608-614.
140. Baykov, V. I., V. V. Blagoveshchenskiy, E. G. Komkov, and Yu. T. Mazurenko (0). Characteristics of optical radiation from the discharge in electric explosion of thin metal foils. ZhTF, no. 5, 1975, 1128-1132.
141. Ivanchenko, A. I., R. I. Soloukhin, and Yu. A. Yakobi (193). Stabilization of the glow discharge in a flow for excitation of extended volumes of an active medium. KE, no. 4, 1975, 758-764.
142. Tagirov, R. B., E. F. Zapechel'nyuk, and B. S. Mikhaylov (7). Comparison of energy and power characteristics of flashlamp radiation in double and single flash regimes. OMP, no. 6, 1975, 24-26.
143. Vakhmyanin, K. P., V. I. Korolev, Ye. V. Yeshmemet'yeva, L. V. Ivanushkina, V. A. Serebryakov, and B. M. Sedov (7). Optical pumping system for a disk laser. OMP, no. 6, 1975, 73-74.

### 3. Deflectors

144. Opran, M. E., A. Harsanyi, V. Miclaus, and G. Mityko (NS). Electrooptic methods for discrete deflection of laser beams. Studii si cercetari fizica, v. 26, no. 7, 1974, 791-800. (RZhF, 3/75, 3D1291)

### 4. Filters

145. Shisharin, A. V., V. V. Mamyshev, S. A. Klenin, G. S. Yegorov, and V. G. Zakin (256). Two-dimensional modulated optical correlometer, providing Fresnel conversion in noncoherent light. IN: Tr 6, 160-169. (RZhF, 4/75, 4D1345)

### 5. Detectors

146. Agranov, A. Kh., and L. F. Porfir'yev (30). Possibility of direct photodetection of frequency-modulated optical radiation by a photocell in the regime of a space charge-limited current. IN: Tr 7, 22-24. (RZhF, 3/75, 3D1541)
147. Akhmedov, F. A., Ya. V. Bergmann, V. I. Korol'kov, V. G. Nikitin, and A. A. Yakovenko (0). Study of heterophotodiodes in a GaAs-AlAs system. IN: Sb 3, 85. (RZhElektr, 3/75, 3B417)
148. Akramov, Kh. T., B. D. Yuldashev, M. M. Khusanov, and T. M. Razykov (0). Electron microscope probe studies of p-Cu<sub>2</sub>S-n-CdS type film photocells and their photoelectric properties. IN: Sb 3, 102. (RZhElektr, 3/75, 3B402)
149. Akramov, Kh. T., B. D. Yuldashev, and A. Teshabayev (0). Electric and photoelectric properties of chemically obtained CdS-Cu<sub>2-x</sub>S heterojunctions. IN: Sb 11, 341-345. (RZhElektr, 3/75, 3B396)



150. Alfyorov, Zh. I., D. Z. Garbuzov, V. R. Larionov, V. D. Rumyantsev, and G. N. Shelovanova (0). One hundred percent quantum yield of radiative recombination in the active region of three-layer heterostructures based on an AlAs-GaAs system. IN: Sb 3, 5. (RZh Elektr, 3/75, 3B434)
151. Alfyorov, Zh. I., F. A. Akhmedov, V. I. Korol'kov, and A. A. Yakovenko (0). Electroluminescent photothyristors based on GaAs-AlAs heterojunctions. IN: Sb 3, 83-84. (RZhElektr, 3/75, 3B424)
152. Alfyorov, Zh. I., N. S. Zimogorova, S. G. Konnikov, I. Matkova, D. N. Tret'yakov, and T. B. Godlennik (0). Properties of epitaxial heterojunctions in an AlSb-GaSb system. IN: Sb 3, 117-118. (RZh Elektr, 3/75, 3B171)
153. Alfyorov, Zh. I., F. A. Akhmedov, V. I. Korol'kov, V. V. Nazintsev, and A. A. Yakovenko (0). Photodetector with S-shaped volt-ampere characteristic based on heterojunctions in a GaAs-AlAs system. IN: Sb 2, 246-251. (RZhF, 4/75, 4D1541)
154. Anisimova, I. D., T. V. Rudovol, and V. I. Stafeyev (0). Study of the photoelectric properties of p-i-n structures with a p-Ga<sub>1-x</sub>Al<sub>x</sub>As-i-GaAs-n-GaAs heterojunction. IN: Sb 3, 90. (RZhElektr, 3/75, 3B383)
155. Armencha, N. N., I. P. Molodyan, V. G. Trofim, and V. A. Chumak (0). Properties of positionally sensitive photodetectors based on heterojunctions in an AlAs-GaAs system. IN: Sb 3, 87. (RZhElektr, 3/75, 3B384)
156. Atakova, M. M., and P. Ye. Ramazanov (0). Electric and photoelectric characteristics of n-ZnS-n-GaAs heterostructures. IN: Sb 3, 138-139. (RZhElektr, 3/75, 3B387)

157. Azimkhodzhayev, Kh. E. (0). Study of the generation of photocurrent pulses in high electric fields in CdS single crystals. IN: Sb 11, 102-112. (RZhElektr, 3/75, 3B356)
158. Belonuchkin, V. Ye. (118). Use of optical amplifiers in detecting scattered radiation. IN: Tr 8, 143-146. (RZhRadiot, 5/75, 5Ye169)
159. Borukhman, A. N., V. A. Lanin, and I. S. Oleynik (163). Potential accuracy of measuring the time interval between two bell-shaped optical signals. IN: Tr 4, 143-146. (RZhF, 3/75, 3D1575)
160. Bulyarskiy, S. V., A. A. Gutkin, S. I. Radautsan, and V. Ye. Tezlevan (0). Study of the photacapacitance effect on Au-CdIn<sub>2</sub>S<sub>4</sub> structures. IN: Sb 3, 144. (RZhElektr, 3/75, 3B345)
161. Burbulyavichyus, L. I., and S. Ch. Karpinskas (0). Effect of CdTe on the characteristics of a CdS-CdTe-Te heterostructure. IN: Sb 3, 44. (RZhElektr, 3/75, 3B374)
162. Demchenko, A. M., V. D. Lisovenko, B. P. Masenko, and Yu. G. Pukhov (0). Electric properties of n-GaP-p-Al<sub>x</sub>Ga<sub>1-x</sub>As and n-GaAs-p-Al<sub>x</sub>Ga<sub>1-x</sub>As heterojunctions. IN: Sb 3, 122-123. (RZhElektr, 3/75, 3B88)
163. Dement'yev, I. V., and L. M. Panasyuk (0). Electric and photoelectric properties of n-Cds-p-As<sub>2</sub>Se<sub>3</sub> heterostructures. IN: Sb 3, 93-94. (RZhElektr, 3/75, 3B380)
164. Dosson, N. I., and L. N. Kazarin (0). Determining the pulse sensitivity of a photodetector from its frequency characteristics. RiE, no. 4, 1975, 806-812.

165. Drozdov, V. A., M. A. Drozdov, B. V. Korobitsyn, M. M. Mel'nikov, V. M. Skrinskiy, V. I. Slyusarenko, and V. M. Tashcheyev (0). Characteristics of the optical gating effect in heterojunctions with deep centers. IN: Sb 3, 105-106. (RZhElektr, 3/75, 3B369)
166. Gashin, P. A., V. A. Kovarskiy, N. F. Perel'man, O. A. Sedletskiy, A. V. Simashkevich, and N. A. Ferdman (0). Heterojunctions in a strong electromagnetic field. IN: Sb 3, 22-23. (RZhElektr, 3/75, 3B245)
167. Gavrilenko, N. V., A. F. Onipko, A. D. Falenchuk, and I. V. Zhornovyy (0). Photoelectric properties of CdTe-ZnSe and ZnTe-CdSe heterojunctions. IN: Sb 3, 38. (RZhElektr, 3/75, 3B372)
168. Glauberman, A. Ye., V. A. Drozdov, M. M. Vetitneva, V. A. Ditchuk, M. A. Drozdov, M. M. Mel'nikov, V. M. Ivanov, and Ya. L. Potapenko (0). Aftereffects in photosensitive heterojunctions with quasimetallic centers. IN: Sb 3, 103-104. (RZhElektr, 3/75, 3B339)
169. Ivanov, V. A., K. K. Murav'yeva, I. P. Kalinkin, and D. A. Sakseyev (0). Preparation and properties of heterojunctions based on ZnSe, Ge, and GaAs. IN: Sb 3, 71-72. (RZhElektr, 3/75, 3B560).
170. Kagan, M. B., T. L. Lyubashevskaya, and T. A. Nuller (0). Photoconverters in an  $Al_xGa_{1-x}As$ -GaAs system and their comparison with homogeneous photoconverters based on diffused p-n junctions in GaAs. IN: Sb 3, 98. (RZhElektr, 3/75, 3B398)
171. Karpenko, I. V., Yu. N. Ksendzatskaya, T. V. Lisenkova, K. N. Puchkova, and R. N. Tykvenko (0). Thin film photoconverters based on  $Cu_{2-x}S$ -CdS,  $Cu_{2-x}S$ -CdTe, and  $Cu_{2-x}Te$ -CdTe heterojunctions. IN: Sb 3, 100-101. (RZhElektr, 3/75, 3B401)

172. Khinrikus, Kh. V. (255). Noise factor in photodetectors in a direct detection regime. IN: Tr 5, 41-47. (RZhElektr, 3/75, 3B352)
173. Kir'yashkina, Z. I., V. F. Nazvanov, and V. Ya. Filipchenko (0). Characteristics of a space charge-limited current in layers of CdS possessing a photomemory effect. IN: Sb 11, 221-229. (RZhElektr, 3/75, 3B355).
174. Kir'yashkina, Z. I., A. G. Rokakh, and N. M. Tsukerman (0). Negative photoconductivity in heterojunctions based on photoconducting CdSe. IN: Sb 3, 39. (RZhElektr, 3/75, 3B354)
175. Kolomiyets, B. T., V. M. Lyubin, G. A. Fedorova, Ye. I. Fedorova, and L. E. Tsyrlin (0). Electric and photoelectric properties of some amorphous heterostructures. IN: Sb 3, 94-95. (RZhElektr, 3/75, 3B389)
176. Komashchenko, V. N., A. S. Maystrenko, M. A. Ruban, Ye. A. Sal'kov, G. A. Fedorus, V. D. Fursenko, and V. V. Shumeyko (0). Highly sensitive heterojunction photodetecting device for the ultraviolet. IN: Sb 3, 98. (RZhElektr, 3/75, 3B371)
177. Kosorotov, V. F., L. S. Kremenchugskiy, and O. V. Roytsyna (0). Study of the dynamic range of a pyroelectric radiation detector in a pulsed regime. ZhPS, v. 22, no. 4, 1975. 733-739.
178. Krulitskiy, F., N. N. Syrбу, and N. Savka (0). Photoelectric properties of Schottky barriers in Ni-Zn<sub>3</sub>P<sub>2</sub>. IN: Sb 3, 148-149. (RZhElektr, 3/75, 3B414)
179. Krulitskiy, F., V. K. Kiosev, S. I. Radautsan, and N. N. Syrбу (0). Properties of Schottky photodiodes based on cadmium phosphide. IN: Sb 3, 149-150. (RZhElektr, 3/75, 3B415)

180. Kryachko, V. V., V. V. Kotov, and S. I. Frolov (0). Photoelectric phenomena in heterojunctions. IN: Sb 3, 115-117. (RZhElektr, 3/75, 3B416)
181. Lupin, V. M., and P. Ye. Ramazanov (0). Photoelectric properties of CdS-GaAs heterojunctions. IN: Sb 3, 50. (RZhElektr, 3/75, 3B381)
182. Machkus, P. V., and A. A. Smilga (0). Photoconductivity in a regime of emission currents in multilayer photodielectric systems. IN: Sb 11, 232-258. (RZhElektr, 3/75, 3B342)
183. Marchenko, L. S., N. S. Petrenko, and Ye. A. Muzalevskiy (0). Excitation energy transfer and photoelectric properties of CdS-CdSe heterojunctions. IN: Sb 3, 42-43. (RZhElektr, 3/75, 3B344)
184. Marchenko, A. I., and G. A. Fedorus (0). p-Cu<sub>2-x</sub>S-n-CdS photoconverters based on CdS ceramic plates. IN: Sb 3, 97. (RZhElektr, 3/75, 3B400)
185. Mirsagatov, Sh. A., M. Duysenbayev, and D. T. Rasulov (0). Electrophysical and photoelectric properties of n-SiC-n-CdS heterojunctions. IN: Sb 3, 49. (RZhElektr, 3/75, 3B368)
186. Molodyan, I. P., Yu. V. Popov, S. I. Radautsan, A. V. Syrbu, and V. G. Trofim (0). Preparation and study of matrix photo-detectors and light sources based on heterojunctions in an AlAs-GaAs system. IN: Sb 3, 86. (RZhElektr, 3/75, 3B495)
187. Nasledov, D. N., N. S. Grushko, A. A. Gutkin, I. P. Molodyan, and Ye. V. Russu (0). Photocapacitance effect on Au-InP structures. IN: Sb 3, 147-148. (RZhElektr, 3/75, 3B346)
188. Nikonova, T. V., Ye. A. Vygovskaya, and P. S. Kireyev (0). Photoelectric phenomena in CdTe-HgTe heterojunctions. IN: Sb 3, 45. (RZhElektr, 3/75, 3B376)

189. Pavelets, A. M., S. Yu. Pavelets, and G. A. Fedorus (0). Heterophotoconverters based on sintered layers of CdS and CdSe. IN: Sb 3, 95-96. (RZhElektr, 3/75, 3B370)
190. Presnov, V. A., V. M. Zheludkov, I. A. Ivanchenko, V. P. Kolesnichenko, and V. A. Cheresanskiy (0). Study of the photoelectric properties of PbSe-CdSe heterojunctions. IN: Sb 3, 114-115. (RZhElektr, 3/75, 3B375)
191. Rovinskiy, A. P., V. F. Synorov, B. I. Sysoyev, and N. V. Gudkov (0). Photoelectric properties of heterostructures with CdGa<sub>2</sub>Se<sub>4</sub> thin films. IN: Sb 3, 112-113. (RZhElektr, 3/75, 3B385)
192. Saidov, M. S., Kh. A. Shamuratov, and M. M. Mirtalipov (0). Volt-ampere characteristics of Si- $\beta$ SiC structures. IN: Sb 11, 486-488. (RZhElektr, 3/75, 3B366)
193. Savitskiy, V. G., A. K. Filatova, L. I. Alekseyenko, N. N. Berchenko, Yu. V. Danilyuk, D. -L. L. Futorskiy, B. S. Sokolovskiy, and S. N. Sirotiyuk (0). Zone structure and photovoltaic effect in smooth CdTe-HgTe heterojunctions. IN: Sb 3, 46-47. (RZhElektr, 3/75, 3B377)
194. Savitskiy, V. G., A. K. Filatova, L. I. Alekseyenko, Yu. V. Danilyuk, M. V. Miliyanchuk, V. K. Pisarevskiy, and L. S. Monastyrskiy (0). Photoelectric properties of smooth heterojunctions based on mercury chalcogenides. IN: Sb 3, 47-48. (RZhElektr, 3/75, 3B378)
195. Shalimova, K. V., S. V. Varganov, and A. M. Gulyayev (0). Photoelectric properties of Ge-InSb and CdTe-InSb heterojunctions. IN: Sb 3, 130. (RZhElektr, 3/75, 3B386)

196. Sheftal', N. N., V. Ye. Kisenko, V. I. Klykov, L. I. Balshen, Yu. V. Bochkov, A. N. Georgobiani, A. V. Lavrov, and V. A. Chikhacheva (0). Photoelectric properties of p-ZnTe-n-GaAs heterojunctions. IN: Sb 3, 52. (RZhElektr, 3/75, 3B382)
197. Tsurkan, A. Ye., and T. D. Shemyakova (0). Spectral photo-sensitivity of SnO<sub>2</sub>-CdSe-CdTe-Au heterojunctions. IN: Sb 3, 41-42. (RZhElektr, 3/75, 3B373)
198. Tyurin, Yu. G., M. S. Ulugova, Yu. M. Yuabov, and G. R. Yagudayev (0). Study of the properties of n-CdSe-p-Sb<sub>2</sub>Se<sub>3</sub> thin film heterojunctions. IN: Sb 3, 113-114. (RZhElektr, 3/75, 3B379)
199. Volkov, L. A., F. P. Kesamanly, V. F. Kovalenko, I. Ye. Maronchuk, and B. P. Masenko (0). Photoluminescence of Al<sub>x</sub>Ga<sub>1-x</sub>As-GaAs and In<sub>1-x</sub>Ga<sub>x</sub>P-GaAs heterostructures. IN: Sb 3, 124-125. (RZhElektr, 3/75, 3B433)
200. Zased, V. S., K. I. Skorik, Z. V. Pavlova, Yu. A. Kuznetsov, and Ya. A. Fedotov (0). Study of the electric and photoelectric properties of heterojunctions in an InSb film. IN: Sb 3, 24. (RZhElektr, 3/75, 3B388)
201. Zhitar', V. F., V. S. Donu, and Ye. D. Arama (0). Surface barrier structures based on ZnIn<sub>2</sub>S<sub>4</sub> and their photoconductivity spectra. IN: Sb 3, 144-145. (RZhElektr, 3/75, 3B340)
202. Zheludkov, V. M., V. A. Zavadskiy, V. A. Mokritskiy, P. T. Savin, and L. L. Terletsкая (0). GaP-Si heterojunctions in infrared radiation detectors. IN: Sb 3, 132. (RZhElektr, 3/75, 3B367)



## 6. Modulators

203. Adrianova, I. I., I. V. Golubenko, Z. V. Nesterova, and Yu. V. Popov (7). SHF modulation of laser radiation by  $\text{LiNbO}_3$  and KDP crystals. OMP, no. 1, 1975, 65-67.
204. Adrianova, I. I., A. A. Berezhnoy, V. G. Krastin, and Yu. V. Popov (0). Possibility of designing electrooptic modulators using PMN crystal thin films. OIS, v. 38, no. 3, 1975, 576-578.
205. Bokhonov, A. F., V. S. Burakov, V. V. Zhukovskiy, and A. A. Stavrov (3). Correlation of a laser generation regime with a laser plasma. KE, no. 4, 1975, 836-839.
206. Ittu, M., and R. Dabu (NS). Light modulation by KDP crystals. Studii si cercetari fizica, v. 26, no. 9, 1974, 965-972. (RZhF, 4/75, 4D1307)
207. Karaul'nik, A. Ye., K. V. Sorokin, K. L. Leont'yev, and V. N. Seliverstov (0). Light modulator. Author's certificate USSR, no. 376741, issued 23 May 1973, (RZhMetrolog, 2/75, 2.32.1094)
208. Mikhnov, S. A., and V. Ye. Matyushkov (0). Effect of the duration of the excited state of a passive switch on the power of single pulse generation. ZhPS, v. 22, no. 5, 1975, 949-950.
209. Mirovitskiy, D. I., I. F. Budagyan, V. F. Dubrovin, I. M. Kharitonov, and A. N. Titov (161). Cavity optical element with variable geometry. Author's certificate USSR, no. 418924, issued 25 July 1974. (RZhRadiot, 3/75, 3Ye238)
210. Popel', A. M., and I. V. Stasyuk (114). Theory of the electrooptic effect in deuterated  $\text{KH}_2\text{PO}_4$  (DKDP) crystals. UFZh, no. 4, 1975, 600-609.
211. Rubinina, N. M., V. B. Shagdarov, V. G. Yanovskiy, and R. N. Kuz'min (2). Study of impurity centers in iron-doped lithium metaniobate by gamma-resonance spectroscopy. KE, no. 5, 1975, 1024-1029.

212. Smirnov, V. S., and A. M. Tumaykin (0). Polarization of radiation in a gas laser with a nonlinear absorption cell. OiS, v. 38, no. 4, 1975, 806-807.
213. Tuchin, V. V. (0). Frequency modulation of gas laser radiation. RiE, no. 4, 1975, 786-791.
214. Vlokh, O. G., and L. A. Laz'ko (114). Gyrotropy and electrooptic effect in  $\alpha$ -HIO<sub>3</sub> crystals. UFZh, no. 3, 1975, 510-513.

F. NONLINEAR OPTICS

1. Frequency Conversion

215. Akchurin, G. G., V. A. Sedel'nikov, and V. V. Tuchin (45). Modulation of radiation in a gas laser by an alternating magnetic field. KE, no. 4, 1975, 788-793.
216. Arutyunyan, E. A., and V. S. Mkrtchyan (59). High efficiency conversion of infrared radiation to the visible by a LiNbO<sub>3</sub> crystal. KE, no. 4, 1975, 812-814.
217. Badikov, V. V., O. N. Pivovarov, Yu. V. Skokov, O. V. Skrebneva, and N. K. Trotsenko (0). Some optical properties of silver thiogallate single crystals. KE, no. 3, 1975, 618-621.
218. Belikova, G. S., M. P. Golovey, V. D. Shiyorin, and G. P. Shipulo (0). Generation of the second optical harmonic in meta-dinitrobenzene crystals. OiS, v. 38, no. 4, 1975, 779-783.
219. Bykovskiy, Yu. A., I. Ye. Nakhutin, E. A. Manykin, Yu. G. Rubezhnyy, and P. P. Poluektov (0). Determining the cross-section of second harmonic generation in a small spherical particle. ZhPS, v. 22, no. 3, 1975, 428-430.

220. Dmitriyev, V. G., V. A. Konovalov, and Ye. A. Shalayev (0). Theory of thermal self-stress during second harmonic generation in nonlinear crystals. KE, no. 3, 1975, 496-502.
221. Gnatyuk, L. N., S. N. Marchenko, and G. I. Rukman (0). Methods for studying nonlinear optical conversion in a proustite crystal. IT, no. 3, 1975, 43-44.
222. Karainzin, Yu. N., and A. P. Sukhorukov (71,2). Limit efficiency in frequency doubling of picosecond pulses. KE, no. 5, 1975, 912-918.
223. Lugina, A. S., A. G. Khatkevich, and V. N. Belyy (0). Characteristics of stimulated emission in the infrared. ZhPS, v. 22, no. 4, 1975, 637-641.
224. Maymistov, A. I., L. R. Malov, and E. A. Manykin (16). Generation of harmonics under conditions of two-quantum resonance. KE, no. 4, 1975, 677-683.
225. Nikogosyan, D. N., A. P. Sukhorukov, and M. I. Golovey (72). Saturation of second harmonic generation of a CO<sub>2</sub> TEA laser in proustite. KE, no. 3, 1975, 609-612.
226. Petrashko, G. A., and Yu. Ye. Sapozhnikov (118). Interaction of coupling transitions in neon and conversion of infrared radiation to the visible. IN: Tr 8, 98-104. (RZhRadiot, 5/75, 5Ye30)
227. Volosov, V. D., S. G. Karpenko, N. Ye. Korniyenko, V. N. Krylov, A. A. Man'ko, and V. L. Strizhevskiy (51). Intraresonator second harmonic generation. KE, no. 5, 1975, 919-929.

228. Voronin, E. S., V. S. Solomatin, N. I. Cherepov, V. V. Shuvalov, V. V. Badikov, and O. N. Pivovarov (2). Conversion of IR radiation by AgGaS<sub>2</sub> crystal. KE, no. 5, 1975, 1090-1092.
229. Voronov, V. V., Yu. S. Kuz'minov, V. V. Osiko, and A. M. Prokhorov (1). Dielectric and electrooptic properties of barium-sodium-potassium niobate crystals. Second harmonic generation. KE, no. 3, 1975, 525-528.
230. Wolejko, L., and S. Kielich (NS). Optical molecular reorientation in second harmonic light scattering. APP, v. A47, no. 3, 1975, 367-383.

## 2. Parametric Processes

231. Im Tkhek-de, O. P. Podavalova, A. K. Popov, and G. Kh. Tartakovskiy (210). Resonant four-photon parametric processes in Ne in the field of a single frequency He-Ne laser, and their application in nonlinear spectroscopy. ZhETF P, v. 21, no. 7, 1975, 427-431.
232. Stolyarov, A. D. (0). Degrees of higher order coherence of parametric converter radiation. Ois, v. 38, no. 4, 1975, 761-765.
233. Vechkanova, R. A. (0). Problem of a high speed phase quantizer based on a parametric generator. IN: Sb 15, 90-99. (RZhRadiot, 5/75, 5Yell6)

### 3. Stimulated Scattering

#### a. Raman

234. Abdullin, U. A., and Yu. Ye. D'yako. (2). Energy conversion under stimulated Raman and Brillouin scattering of a Gaussian light pulse. KE, no. 3, 1975, 529-539.
235. Akhmanov, S. A., N. I. Koroteyev, and A. I. Kholodnykh (0). Excitation of coherent  $E_g$  phonons in calcite by means of the active spectroscopy method. Journal of Raman Spectroscopy, v. 2, no. 3, 1974, 239-248. (RZhF, 3/75, 3D1170)
236. Aleksandrov, I. V., Ya. S. Bobovich, V. G. Maslov, and A. N. Sidorov (0). Stimulated Raman scattering spectra of anion radicals, dianions and carboanions of anthracene and its deuterated derivatives. DAN SSSR, v. 221, no. 3, 1975, 567-569.
237. Arbatskaya, A. N., and M. M. Sushchinskiy (1). Ring structure of class II radiation in stimulated Raman scattering in benzene. KSpF, no. 9, 1974, 29-32.
238. Bobovich, Ya. S., A. V. Bortkevich, and M. Ya. Tsenter (0). Combined study of resonant spontaneous and resonant stimulated Raman scattering in polymethine dyes. Ois, v. 38, no. 3, 1975, 541-549.
239. Brekhovskikh, G. L. (1). Effect of temperature on gain in stimulated Raman scattering in carbon bisulfide. KSpF, no. 11, 1974, 23-28.
240. Kneipp, K., W. Werncke, H. E. Ponath, J. Klein, A. Lau, and Chu Dinh Thuy (NS). Raman backscattering by polaritons in  $LiIO_3$  single crystals. Physica status solidi, v. B64, no. 2, 1974, 589-598. (RZhKh, 19AB, 5/75, 5B715)

241. Kovner, M. A., S. K. Potapov, and V. L. Derbov (0). Some effects in stimulated Raman scattering excited by a strong optical field. OIS, v. 38, no. 3, 1975, 534-540.
242. Krayskiy, A. V. (1). Transfer equations of stimulated Raman scattering in dispersed media. KSpF, no. 11, 1975, 29-32.
243. Morozova, Ye. A., A. I. Sokolovskaya, and M. M. Sushchinskiy (1). Characteristics of the spectral distribution of stimulated Raman scattering in substances with small Kerr constants. KE, no. 3, 1975, 612-615.
244. Pasmanik, G. A. (0). Stimulated Raman scattering of nonmonochromatic radiation in a medium with spontaneous scattering lines of random form. OIS, v. 38, no. 4, 1975, 811-813.
245. Ponath, H. E., and K. D. Kneipp (NS). Spontaneous Raman scattering by extraordinary polaritons in  $\text{LiIO}_3$  crystal. OIS, v. 38, no. 4, 1975, 696-700.
246. Rezayev, N. I., and M. B. Tabibi (0). Effect of complexing in solutions on the generation threshold and intensity of stimulated Raman scattering lines. OIS, v. 38, no. 5, 1975, 861-865.
247. Strizhevskiy, V. L., and Yu. N. Yashkir (51). Raman scattering of light by coherent polaritons. KE, no. 5, 1975, 995-1006.
248. Yemel'yanov, V. I., and Yu. L. Klimontovich (2). Onset of intensity modulation of stimulated scattering at high pump levels. ZhETF, v. 68, no. 3, 1975, 929-939.

b. Brillouin

249. Gerasimov, V. B., S. A. Gerasimova, Ye. M. Zemskov, and V. K. Orlov (0). Stimulated Brillouin scattering in optical resonators excited by nonmonochromatic pumping. KE, no. 3, 1975, 572-578.
250. Krivoshchekov, G. V., and M. F. Stupak (10). Fine structure of stimulated Brillouin scattering components in quartz and in substances with absorbers. KE, no. 4, 1975, 782-787.
251. Tamoykin, V. V., and S. M. Faynshteyn (8). Stimulated Brillouin scattering from propagation of Alfvén waves in a plasma with random inhomogeneities. ZhETF, v. 68, no. 3, 948-955.

c. Rayleigh

252. Krivoshchekov, G. V., and M. F. Stupak (0). High spectral resolution of stimulated Rayleigh scattering components by emission spectroscopy. IN: Sb 7, 142. (RZhKh, 19AB, 6/75, 6B288)

4. Self-focusing

253. Vigasin, A. A., and A. P. Sukhorukov (2). Effect of thermoelastic stresses on the self-focusing of quasi-c-w radiation. KE, no. 3, 1975, 519-524.
254. Vlasov, S. N. (8). Effect of a reflected wave on the self-focusing of light beams in a medium with cubical nonlinearity. IVUZ Radiofiz, no. 4, 1975, 615-618.
255. Zakharov, V. Ye., and V. S. Synakh (80). On the nature of singularity in self-focusing. ZhETF, v. 68, no. 3, 1975, 940-947.



## 5. Acoustic Interaction

256. Brazhe, R. A., M. A. Grigor'yev, and V. I. Nayanov (45). Effectiveness of light diffraction on pure modes of elastic waves. FTT, no. 3, 1975, 886-895.
257. Karinskiy, S. S., R. G. Dokhikyan, and A. M. Martynov (0). Method for optical processing of a pulsed wideband phase-keyed signal. Author's certificate USSR, no. 415762, issued 28 June 1974. (RZhRadiot, 3/75, 3Ye219)
258. Makarychev, P. P., and G. N. Chizhukhin (0). Dispersion and resolving power of acoustooptic systems for deflecting a laser beam. IN: Sb 16, 78-82. (RZhRadiot, 5/75, 5Ye157)
259. Vedenov, A. A., S. V. Drobyazko, V. N. Knizhnikov, and V. B. Turundayevskiy (23). Effect of acoustic waves, originating in a gap discharge, on the operation of a pulsed CO<sub>2</sub> laser in a pulsed regime. TVT, no. 2, 1975, 425-427.
260. Zubrinov, I. I., and D. V. Sheloput (10). Thermoacoustic effect of laser beam focusing in chalcogenide glass and proustite. FTT, no. 3, 1975, 944-945.

## 6. Birefringence

261. Mamedov, A. M. (0). Nonlinear optical properties of SbSI. IN: Sb 17, 58-59. (RZhKh, 19AB, 9/75, 9B695)
262. Vlokh, O. G., I. A. Velichko, and L. A. Laz'ko (114). Characteristics of the electrooptic effect in LiIO<sub>3</sub> crystals. Kristal, no. 2, 1975, 430-432.

## 7. General Theory

263. Alekseyev, V. A., and B. Ya. Zel'dovich (1). Introducing an area theorem in the problem of self-induced transparency. KE, no. 5, 1975, 1078-1080.
264. Alexiewicz, W. (NS). Theory of spectral line broadening for second harmonic light scattering in liquids composed of asymmetric-top molecules. APP, v. A47, no. 5, 1975, 657-672.
265. Averbukh, B. B., and R. I. Sokolovskiy (0). Stark effect in luminescence under excitation by a short optical pulse. OiS, v. 38, no. 5, 1975, 882-887.
266. Bancewicz, T., Z. Ozgo, and S. Kielich (NS). Rotational hyper-Raman light scattering by axial molecules without a center of inversion. APP, v. A47, no. 5, 1975, 645-656.
267. Bolotskikh, L. T., and A. K. Popov (0). Spectral line shape of an inhomogeneously broadened transition, in the presence of a strong field of an adjacent homogeneously broadened transition. OiS, v. 38, no. 3, 1975, 583-590.
268. Delone, N. B. (1). Multiphoton ionization of atoms. UFN, v. 115, no. 3, 1975, 361-401.
269. Kruzhilin, Yu. I. (0). Induced aberration. KE, no. 5, 1975, 1084-1087.
270. Melikyan, A. O. (59). Quasi-energy of a two-level system in an intense monochromatic field. ZhETF, v. 68, no. 4, 1975, 1228-1233.
271. Ovander, L. N., and A. D. Petrenko (0). Theory of nonlinear optical activity in molecular crystals. ZhPS, v. 22, no. 5, 1975, 887-892.

272. Piekara, A. (NS). Developments in nonlinear and coherent optics. Optica applic., v. 4, no. 2, 1974, 29-38. (RZhRadiot, 3/75, 3Ye183)

273. Sinyavskiy, E. P. (0). Indirect optical transitions in a high power laser emission field. IAN Mold, no. 1, 1975, 73-74.

G. SPECTROSCOPY OF LASER MATERIALS

274. Alekseyev, N. Ye., V. P. Gapontsev, A. K. Gromov, S. A. Zelentsova, A. A. Izyneyev, V. B. Kravchenko, N. A. Paramonova, and Yu. P. Rudnitskiy (15). Effect of hydrocyclic groups on the luminescence properties of phosphate glass activated by rare-earth ions. NM, no. 2, 1975, 323-327.

275. Baklanov, Ye. V., and V. P. Chebotayev (10). Line shape of two-photon absorption at the 1S-2S transition of the hydrogen atom. KE, no. 3, 1975, 606-609.

276. Bayev, V. M. (1), W. Werncke (NS), and E. A. Sviridenkov (1). Detection of Raman amplification lines by intracavity laser spectroscopy. KE, no. 4, 1975, 856-857.

277. Bogdanov, V. L., V. P. Klochkov, and B. S. Neporent (0). Optical quenching of fluorescence in vapors of aromatic compounds. OiS, v. 38, no. 5, 1975, 888-896.

278. Gordi, V. (0). Millimeter and submillimeter spectrum of molecular oxygen. IN: Sb 7, 75. (RZhRadiot, 3/75, 3Ye45)

279. Kaplyanskiy, A. A., S. A. Basun, V. A. Rachin, and R. A. Titov (4). Anisotropy of resonant absorption of high frequency phonons at  $0.87 \times 10^{12}$  Hz in an excited state of  $\text{Cr}^{3+}$  ions in ruby. ZhETF P, v. 21, no. 7, 1975, 438-441.

280. Keskinova, E. N., and P. P. Kircheva (NS). Spectral structure of stimulated fluorescence of organic dyes. DBAN, no. 2, 1975, 165-168.
281. Margaryan, A. A., M. G. Manvelyan, S. S. Karapetyan, A. L. Grigoryan, and A. A. Kozmanyanyan (203). Spectroscopy of Mn(II) in fluorophosphate glass. DAN SSSR, v. 221, no. 3, 1975, 665-668.
282. Moskalenko, N. I., and O. V. Zotov (0). Experimental studies of the parameters of spectral absorption lines in N<sub>2</sub>O bands. IN: Sb 7, 50-52. (RZhRadiot, 3/75, 3Ye44)
283. Rooze, N. S., and N. A. Anisimov (0). Luminescence in YAG. OiS, v. 38, no. 3, 1975, 627-629.
284. Tibilov, S. S., and V. L. Yermolayev (0). Mechanism of oxygen quenching of fluorescent and phosphorescent states of aromatic hydrocarbons and their perfluoroanalogs in solutions. OiS, v. 38, no. 5, 1975, 904-912.

#### H. ULTRASHORT PULSE GENERATION

285. Brunner, W., H. Duerr, E. Klose, and H. Paul (NS). Effect of a saturable two-photon absorber on ultrashort pulse generation. KE, no. 4, 1975, 832-835.
286. Korda, I. M., and A. N. Rubinov (0). Ultrashort pulse dye laser with continuous tuning of the emission spectrum. ZhPS, v. 22, no. 4, 1975, 761-762.
287. Morozov, B. N. (0). Synchronism by optical rectification during stimulated emission in crystals. ZhPS, v. 22, no. 3, 1975, 427-430.

288. Mory, S., D. Leupold, and P. Koenig (NS). Mechanism of ultrashort pulse generation in organic dye lasers with a bleachable absorber. KE, no. 4, 1975, 853-856.

J. CRYSTAL GROWING

289. Kvapil, J., B. Perner, and Jos. Kvapil (NS). Liquid-solid interface profile of melt-grown oxide crystals. Part 2. Crystal quality. Czechoslovak Journal of Physics, v. B24, no. 12, 1974, 1345-1350.

290. Vasil'yev, A. P. (0). Methods for growing multilayer epitaxial structures of solutions and melts in a GaAs-AlAs system. IN: Sb 2, 119-121. (RZhKh, 19AB, 9/75, pB547)

K. THEORETICAL ASPECTS OF ADVANCED LASERS

291. Andreyev, A. V., and Yu. A. Il'inskiy (2). Gain in a gamma laser based on the Bragg criterion. ZhETF, v. 68, no. 3, 1975, 811-816.

292. Baklanov, Ye. V., and V. P. Chebotayev (10). A possibility for obtaining stimulated emission in the gamma range. ZhETF P, v. 21, no. 5, 1975, 286-289.

293. Horvath, Z. Gy., and N. Kroo (NS). X-ray and gamma lasers. Fizikai szemle, v. 24, no. 6, 1974, 167-176. (RZhF, 4/75, 4D1176)

L. GENERAL LASER THEORY

294. Alekseyev, E. I., and Ye. N. Bazarov (15). Generalization of the Ramsey formula for the transition probability in the separate oscillating fields method. KE, no. 5, 1975, 1098-1101.

295. Antsiferov, V. V., A. V. Gayner, K. P. Komarov, and K. G. Folin (345). Spatial inhomogeneity of inversion and undamped pulsations in solid state lasers. KE, no. 3, 1975, 691-598.
296. Baranov, V. Yu., V. M. Borisov, A. P. Napartovich, Ye. Sh. Napartovich, Yu. A. Satov, and V. V. Sudakov (0). Radiation gain at 9.6 and 10.6  $\mu$ . KE, no. 4, 1975, 840-842.
297. Bykh, A. I., I. F. Ogorodneychuk, N. N. Rozhitskiy, and Yu. K. Khudenskiy (0). Possibility of generating stimulated emission in electrochemiluminescent systems. IN: Sb 18, 134-138.  
(RZhKh, 19AB, 10/75, 10B1307)
298. Chaykovskiy, I. A. (44). Absorption of light in thin films in the presence of resonant laser radiation. FTT, no. 4, 1975, 1148-1150.
299. Derbov, V. L., M. A. Kovner, and S. K. Potapov (45). Method for calculating multilevel systems interacting with the resonant field of a high power optical wave. KE, no. 4, 1975, 684-687.
300. Drabovich, K. N., and L. S. Kancheva (NS). Peculiarities in the behavior of a three-level quantum system in the presence of a strong resonant light field. DBAN, no. 2, 1975, 169-172.
301. Kabayev, N. I. (321). Effect of a lock-in standing wave in a laser on its output radiation density. IAN B, no. 2, 1975, 72-76.
302. Kolokolov, A. A. (0). Reflection of light beams from a medium with population inversion. OIS, v. 38, no. 4, 1975, 809.
303. Loyko, N. A., and A. M. Samson (3). High frequency self-modulation of radiation in a linear laser with constant losses. KE, no. 4, 1975, 773-781.

304. Makhviladze, T. M., A. I. Rez, and M. Ye. Sarychev (0). Thermodynamics of two-level molecules in a resonator and stimulated emission without inversion. ZhPS, v. 22, no. 4, 1975, 642-647.
305. Makhviladze, T. M., A. I. Rez, and M. Ye. Sarychev (0). Phase transition in a system of multilevel molecules interacting with a resonant field. ZhPS, v. 22, no. 5, 1975, 828-836.
306. Pyshkin, O. S., A. M. Ratner, I. A. Rom-Krichevskaya, and V. S. Chernov (36). Self-oscillations of a laser with inhomogeneous transverse field distribution. KE, no. 3, 1975, 567-571.
307. Skorobogatov, G. A. (12). Kinetic model of optically pumped lasers based on electron transitions of noble gas molecules. ZhTF, no. 4, 1975, 827-833.
308. Sokolov, I. V., and Ye. D. Trifonov (12). Spectral shape of emission from a two-level system in the field of a strong monochromatic wave. VLU, no. 4, 1975, 20-26.
309. Vdovin, Yu. A., V. M. Yermachenko, and V. K. Matskevich (16). Interaction of weak and strong waves in an amplifying medium. KE, no. 5, 1975, 902-911.
310. Vorob'yev, F. A., and R. I. Sokolovskiy (0). Quantum phenomena in coherent sources. OiS, v. 38, no. 5, 1975, 1001-1005.
311. Zon, B. A., B. G. Katsnel'son, and V. Ya. Kupershmids (137). Saturation effect at resonant transitions between multiplet levels. KE, no. 5, 1975, 1055-1058.



## II. LASER APPLICATIONS

### A. BIOLOGICAL EFFECTS

312. Grigor'yev, A. O., I. Ye. Krasnotsvetova, A. P. Mel'nikova, A. Ye. Novik, A. F. Pavlova, L. D. Khazov, and B. M. Khromov (0). Some physical problems in laser surgery. KE, no. 4, 1975, 743-747.
313. Savin, B. M., R. I. Kovach, and Ye. Ye. Kolchin (0). Role of nonlinear optical effects in photoreception of laser radiation. DAN SSSR, v. 221, no. 1, 1975, 255-256.
314. Shpakov, Yu. (0). The laser as a growth stimulator for seeds. Pravda, 11 June 1975, p. 6.
315. Vilenskiy, Yu. (0). The laser against tumors. Interview with N. Gamaleya (225) in Kazakhstanskaya pravda, 24 May 1975, p. 4.
316. Wrembel, H. Z. (NS). Occupational safety with a laser. Fiz. shk., v. 20, no. 5, 1974, 36-38. (RZhF, 5/75, 5D1304)

### B. COMMUNICATIONS

#### 1. Beam Propagation in the Atmosphere

317. Adiks, T. G., V. N. Aref'yev, and V. I. Dianov-Klokov (1). Effect of molecular absorption on propagation of CO<sub>2</sub> laser radiation in the earth's atmosphere. KE, no. 5, 1975, 885-897.
318. Aganbekyan, K. A., V. P. Bisyarin, A. Yu. Zrazhevskiy, A. O. Izyumov, A. V. Soko'lov, and Ye. V. Sukhonin (0). Study of the propagation of submillimeter, infrared and optical waves in the earth's atmosphere. IN: Sb 19, 93-139. (RZhF, 5/75, 5Zh252)

319. Banakh, V. A., A. F. Zhukov, V. L. Mironov, and R. Sh. Tsvyk (78). Saturation level of intensity fluctuations of an optical beam in a turbulent atmosphere. IVUZ Fiz, no. 2, 1975, 31-34.
320. Chapurskiy, L. I. (0). Device for measuring the optical characteristics of aerosols. Otkr izobr, no. 10, 1975, 463937.
321. Chytil, B. (NS). Cross frequency correlation of wave amplitude fluctuation in the optical band. Elektrotechnicky casopis, v. 25, no. 9-10, 1974, 709-721. (RZhRadiot, 4/75, 4Ye215)
322. Gurvich, A. S., R. A. Kazaryan, S. O. Lomadze, K. P. Pogosyan, and V. V. Pokasov (64). Frequency spectra of intensity fluctuations in laser emission at 0.63 and 10.6  $\mu$  in the atmosphere. IVUZ Radiofiz, no. 4, 1975, 610-613.
323. Konjevic, N. (NS). Using a laser for observing toxic pollution of the atmosphere. Nauc.-tenn. pregl. VTI, v. 24, no. 2, 1974, 61-77. (RZhGeofiz, 5/75, 5B489)
324. Milyutin, Ye. R. (0). Frequency spectrum of phase fluctuations of a wave in a spatially bounded light beam. IN: Tr 10, 61-67. (RZhRadiot, 5/75, 5Ye272)
325. Mironov, V. L., G. Ya. Patrushev, V. V. Pokasov, and L. I. Shchavlev (78). Measuring the intensity fluctuations in angle-spaced light beams. IVUZ Radiofiz, no. 3, 1975, 450-452.
326. Skrelin, A. L., A. P. Ivanov, L. V. Nikolayev, and I. S. Khutko (3). Results of laser probing of the atmosphere along vertical and inclined paths. FAiO, no. 4, 1975, 370-378.
327. Toropova, T. P., A. B. Kos'yanenko, K. M. Salamakhin, A. P. Ten, and O. D. Tokarev (0). Atmospheric aerosols and optical attenuation in the surface boundary layer. IN: Sb 20, 32-90. (RZhGeofiz, 5/75, 5B203)

328. Vorob'yev, V. V., and V. V. Shemetov (64). Stimulated convection in the atmosphere during absorption of optical radiation. FAiO, no. 3, 1975, 311-315.
329. Zakharov, V. M., O. K. Kostko, and V. S. Portasov (134). Measuring aerosol characteristics and atmospheric density by lidar. Meteorologiya i gidrologiya, no. 6, 1975, 18-23.
330. Zuyev, V. Ye. (0). Symposium on Laser Probing of the Atmosphere, Tomsk, 16-18 September 1974. VAN, no. 3, 1975, 112-113.
331. Zuyev, V. Ye., L. S. Ivlev, G. M. Krekov, and R. F. Rakhimov (78). Effect of the microphysical characteristics of an aerosol on the prediction of its optical properties. Part 2. Imaginary part of the complex index of refraction. IVUZ Fiz, no. 4, 1975, 149-151.

## 2. Beam Propagation in Liquids

332. Antonenko, T. I. (0). Optical phenomena in surface layers of liquids. IN: Sb 21, 120-134. (RZhF, 4/75, 4D1097)
333. Bepalov, V. I., A. M. Kiselev, A. M. Kubarev, and G. A. Pasmanik (8). Parameters of laser pulses propagating through an aqueous medium. FAiO, no. 3, 1975, 324-326
334. Bozhkov, A. I. (1). Correlation theory of surface fluctuations of a transparent liquid in an intense optical radiation field. KE, no. 3, 1975, 546-558.
335. Kropotkin, M. A., and T. Yu. Sheveleva (110). Study of the reflectivity of seawater and various aqueous solutions at 10.6  $\mu$ . FAiO, no. 2, 1975, 211-214.

### 3. Theory of Propagation

336. Al'tshuler, G. B., and S. F. Sharlay (30). Deflection and self-deflection of light beams in the field of an intense optical wave. IN: Tr 1, 14-17. (RZhRadiot, 5/75, 5Ye224)
337. Benda, O. (NS). Possibility of using laser technology for diagnostics of media with randomly variable parameters. Elektrotechnicky casopis, v. 25, no. 9-10, 1974, 673-689. (RZhRadiot, 4/75, 4Ye190)
338. Lebed'ko, Ye. G., and F. I. Khaytun (7). Efficiency of converting energy similarity, allowing for signal noise. OMP, no. 5, 1975, 12-14.
339. Troitskiy, Yu. V. (0). Optimizing the parameters of a Gaussian optical beam radiating through a circular aperture. RiE, no. 3, 1975, 621-623.
340. Vaynshteyn, V. D. (0). Transfer of information by a quantum electromagnetic field in an absorbing medium. Problemy peredachi informatsii, no. 1, 1975, 3-14.
341. Zel'manovich, I. L., and I. Ya. Lef (0). Study of the first optical resonance maximum. OiS, v. 38, no. 4, 1975, 799-801.

### 4. Systems

342. Abramov, K. D., N. N. Yeldyshev, and D. A. Oparin (0). Spectral density of noise caused by the turbulent effect of the atmosphere at the input of an optical tracking system. IN: Sb 1, 112-118. (RZhRadiot, 3/75, 3Ye249)

343. Arapov, A. P., V. M. Arpishkin, A. I. Inyushin, V. R. Muratov, V. K. Stupnikov, A. I. Stepanov, and V. M. Stepanov (7). Observation of isolated objects during their irradiation by a laser beam. OMP, no. 5, 1975, 71-72.
344. Patrakov, A. S. (0). Minimizing the energy requirements of a laser transmitter with external amplitude modulation. RiE, no. 3, 1975, 566-574.
345. Blank, L. M., and G. A. Fel'dman (0). Experiment in measuring distances up to 100 km with a "Kvarts" optical DME and a model 8 geodimeter. GiK, no. 3, 1975, 14-19.
346. Bukhonin, Yu. S., N. A. L'vova, and S. A. Smirnov (30). Study of field distribution in the region of diffraction focus of quasioptic systems in the far visible range. IN: Tr 1, 76-81. (RZhRadiot, 5/75, 5Ye196)
347. Bykovskiy, Yu. A., A. V. Makovkin, and V. L. Smirnov (16). Matching of integrated optical circuits with fiber lightguides. KE, no. 4, 1975, 844-847.
348. Dovgiy, Ya. O., Ya. M. Bilyy, M. I. Brilinskiy, R. G. Gnyp, V. P. Dmytruk, and Yu. Ye. Simkin (0). Frequency-contrast characteristics of glass fiber elements under laser irradiation. IN: Sb 22, 85-87. (RZhF, 5/75, 5D1398)
349. Golovachev, V. (0). Laser ranging of the Salyut-4 orbital space station. Trud, 1 June 1975, p. 2.
350. Gusev, V. G., and L. N. Popov (47). Some methods for detecting FM radiation in the optical range. IN: Tr 3, 3-10. (RZhRadiot, 3/75, 3Ye223)

351. Jagoszewski, E. (NS). Optical waveguides and their properties.  
Pr. nauk. Inst. fiz. techn. PWr., no. 8, 1974, 3-22.  
(RZhRadiot, 3/75, 3Ye230)
352. Kalinchuk, V. I. (30). Analyzer for measuring the angular  
coordinates of a pulsed radiation source. IN: Sb 23, 25-31.  
(RZhRadiot, 3/75, 3Ye253)
353. Kazarinov, R. F., and Ye. L. Portnoy (0). Principles of  
integrated optics. IN: Sb 24, 120-154. (RZhRadiot, 5/75, 5Ye189)
354. Kobzev, V. V., and V. A. Rozhanskiy, (161). Using a multi-  
frequency laser for transmitting pulse-code modulated signals.  
IN: Tr 11, 36-41. (RZhRadiot, 3/75, 3Ye224)
355. Korobkin, V. V., A. A. Malyutin, A. M. Prckhorov, R. V. Serov,  
and M. Ya. Shchelev (0). Application of image converter technique  
in quantum radiophysics and nonlinear optics (survey paper).  
IN: 25, 84-91. (RZhF, 3/75, 3D1296)
356. Mazan'ko, I. P., and M. V. Sviridov (0). Effect of slight  
disturbances on the operation of an optical t-w amplifier.  
RiE, no. 3, 1975, 575-581.
357. Polshkov, M. K., and A. I. Kuznetsov (0). Spatial filtration in  
diffraction-limited optical systems. IN: Sb 26, 3-14.
358. Potapov, O. A., and R. A. Khazanova (0). Calculating the  
parameters of optical systems designed for processing geophysical  
information. IN: Sb 26, 14-25.
359. Serov, V. V. (0). Noise rejection in a coherent communications  
system with relative phase manipulation in a channel with Rayleigh  
fading. Radiotekh, no. 2, 1975, 102-104.

360. Shchelkunov, K. N. (0). Evaluating the noise rejection of modems in optical communication lines. Radiotekh, no. 2, 1975, 24-28.
361. Taukchi, V. M. (30). Analyzing the operation of a pulse-phase optical DME. IVUZ Priboro, no. 3, 1975, 98-102.
362. Tisza, S., and P. Richter (NS). Study of the light-propagating capability of a single optical fiber at 6328 Å. Finommech., mikrotechn., v. 13, no. 9, 1974, 260-261, 288. (RZhRadiot, 3/75, 3Ye229).
363. Yevtikhiyev, N. N., and O. A. Mamontov (161). Methods for forming a local zone in an electrooptic self-locking device. IN: Tr 11, 102-111. (RZhRadiot, 3/75, 3Ye354)

#### C. COMPUTER TECHNOLOGY

364. Akayev, A., and S. A. Mayorov (30). Optimal relationships among the geometric parameters of a high capacity holographic digital memory. KE, no. 4, 1975, 693-700.
365. Akayev, A., and S. A. Mayorov (30). Recording a Fourier hologram matrix without mutual noise. KE, no. 5, 1975, 955-962.
366. Buzin, O. F., A. A. Mikhaylov, Yu. N. Slesarev, and G. N. Chizhukhin (0). Magneto optic readout system based on the Faraday effect. IN: Sb 16, 69-77. (RZhRadiot, 5/75, 5Ye167)
367. Khripchenko, I. A. (137). Dynamic regime of a thermal method for recording information. IVUZ Radiofiz, no. 3, 1975, 425-433.
368. Lipin, A. L., V. R. Malinin, F. M. Fekerman, and Ye. P. Khodikel' (0). Electroluminescent screen for image storing. IN: Sb 27, 84-86. (RZhElektrotekh, 21V, 4/75, 4V116)



369. Loshkareva, N. N., A. F. Plotnikov, A. N. Rodionov, A. A. Samokhvalov, and N. M. Chebotayev (1). Study of the properties of EuO films as a memory medium for reversible optical memory. KSpF, no. 9, 1974, 7-11.
370. Osinskiy, V. I., and L. P. Chaykovskiy (0). Principles for constructing semipermanent electrooptic memory devices based on raster and fiber optic systems. IN: Sb 28, 159-165. (RZhF, 5/75, 5D1577)
371. Plotnikov, A. F., V. N. Seleznev, D. N. Tokarchuk, and G. P. Ferchev (1). Photoelectric readout of information recorded on a metal-inorganic-semiconductor structure. KE, no. 3, 1975, 508-512.
372. Schilling, H., and H. Wiess (NS). Method and device for magneto-optic recording by laser beam with an inverse Faraday effect. Patent GDR, no. 105344, issued 12 April 1974. (RZhRadiot, 3/75, 3Ye258)
373. Schoennagel, H. (NS). Holographic device for fast optical storage with random access. Patent GDR, no. 103749, issued 5 February 1974. (RZhRadiot, 3/75, 3Ye278)
374. Shaverdyan, F. M. (0). Associative memory using lattice structures. IN: Sb 12, 325-334. (RZhF, 5/75, 5D1598)
375. Tolchin, V. G., and B. G. Turukhano (0). Disk system of holographic memory. IN: Sb 12, 303-324. (RZhF, 5/75, 5D1599)
376. Vlad, V. I. (NS). Information processing in conventional holography and in real-time holography. Studii si cercetari fizica, v. 26, no. 9, 1974, 915-946. (RZhF, 4/75, 4D1342)

377. Vul', V. A., O. V. Golosnoy, N. N. Yevtikhiyev, B. M. Milinkis, and K. P. Tsvetayev (0). Discrete electrooptic deflector for holographic memories. IN: Sb 14, 202-208. (RZhF, 5/75, 5D1592)

D. HOLOGRAPHY

378. Antonova, N. N., D. I. Mirovitskiy, and A. N. Titov (0). Processing of non-normalized electric signals in optical correlators. IN: Sb 14, 95-101. (RZhF, 5/75, 5D1589)
379. Aristov, V. V., and V. I. Teleshevskiy (0). Geometric analysis of acoustic interaction in a periodic space. IN: Sb 13, 42-50. (RZhRadiot, 3/75, 3Ye310)
380. Arutyunyan, A. A., Dzh. S. Arutyunyan, P. M. Geruni, L. A. Tatevosyan, and B. Ye. Khaykin (0). Machine modeling of antenna directional patterns from a radiohologram of the field in the aperture. IN: Sb 14, 144-148. (RZhF, 5/75, 5Zh351)
381. Arutyunyan, A. A., and Dzh. S. Arutyunyan (0). Optical modeling (reconstruction) of vector fields. IN: Sb 14, 149-151. (RZhF, 5/75, 5D1325)
382. Arutyunyan, A. S., and A. D. Ter-Pogosyan (0). Measuring the directional patterns of large antennas according to the radiohologram of the field in small-size wave fronts. IN: Sb 14, 152-155. (RZhF, 5/75, 5Zh352)
383. Aver'yanova, G. I., N. P. Larionov, A. V. Lukin, K. S. Mustafin, and R. A. Rafikov (7). Controlling large aspherical surfaces by circular artificial holograms. OMP, no. 6, 1975, 60-63.
384. Avetisov, E. G. (0). Invariance to the rotation and scale of complex-conjugated filtration. IN: Sb 12, 287-302. (RZhF, 5/75, 5D1333)

385. Avetisov, Zh., Dzh. Berbekar, A. Podmanitskiy, L. A. Tatevosyan, and V. S. Khitrova (37). Problem of synthesizing machine holograms based on the summation of zone plates. IN: Tr 12, 118-121. (RZhRadiot, 5/75, 5Ye249)
386. Bazadze, M. A., R. Sh. Megrelishvili, V. V. Chavchanidze, and T. D. Ebralidze (39). An effect obtained in the reconstruction of images from very small parts of holograms. Akademiya nauk Gruzinskoy SSR. Soobshcheniya, v. 78, no. 1, 1975, 77-80.
387. Berezin, N. P. (7). Method for checking the resolution of optical systems for reconstructing images from one-dimensional multi-channel holograms. OMP, no. 2, 1975, 70-71.
388. Bogomolov, A. S., Ye. S. Romashev, and V. G. Seleznev (0). Use of thick-layer holograms in holographic interferometry. OiS, v. 38, no. 5, 1975, 999-1000.
389. Budagyan, I. F. (0). Electrooptic elements for integral holography. IN: Sb 12, 507-519. (RZhF, 5/75, 5D1338)
390. Bykovskiy, Yu. A., V. A. Yelkhov, and A. I. Larkin (16). Coherent emission from semiconductor lasers and their use in holography (review). KE, no. 4, 1975, 645-656.
391. Bykovskiy, Yu. A., N. N. Yevtikhiyev, V. A. Yelkhov, and A. I. Larkin (16). Obtaining holograms by single pulse, single mode semiconductor lasers. KE, no. 5, 1975, 1074-1078.
392. Bykovskiy, Yu. A., V. A. Yelkhov, and A. I. Larkin (0). Semiconductor lasers in holography. IN: Sb 13, 3-12. (RZhRadiot, 3/75, 3Ye288)
393. Buylova, N. A., and A. M. Seleznev (149). Problem of applying holography in hydroaerodynamic research. IN: Tr 13, 7-10. (RZh Vodnyy transport, 9/74, 9A70)

394. Buynov, G. N., and K. S. Mustafin (0). Holographic image multiplication with high resolution in a large field. IN: Sb 14, 47-50. (RZhF, 5/75, 5D1348)
395. Chernevich, T. G., K. N. Baranskiy, T. S. Velichkina, O. A. Shustin, and I. A. Yakovlev (2). Working session in holography. UFN, v. 115, no. 4, 1975, 621-622.
396. Chirkov, L. Ye. (0). Elements of the general theory of dynamic phase holograms. IN: Sb 12, 212-227. (RZhF, 5/75, 5D1315)
397. Denisyuk, Yu. N. (0). Imaging properties of traveling intensity waves in the recording of dynamic three-dimensional holograms. IN: Sb 12, 3-14. (RZhF, 5/75, 5D1319)
398. Deryugin, I. A., and V. N. Kurashov (0). Quantum limitations of informational properties of holographic systems. IN: Sb 14, 41-46. (RZhF, 5/75, 5D1322)
399. Dzyubenko, M. I., V. A. Krishtal', A. P. Pyatikop, and V. V. Shevchenko (0). Study of the parameters of three-dimensional holograms in high resolution emulsions. Ois, v. 38, no. 4, 1975, 757-760.
400. Filenko, Yu. I. (0). Methods of reconstructing the index of refraction of phase objects according to holographic interferometry data. IN: Sb 12, 269-284. (RZhF, 5/75, 5D1336)
401. Ginzburg, V. M., A. S. Dubovik, B. M. Stepanov, L. S. Ushakov, and Yu. I. Filenko (141). Holographic motion picture interferometry with a high resolution time. ZhNiPFIK, no. 2, 1975, 147-149.
402. Gorskiy, S. M., and V. P. Lebedev (0). Fourier spectroscopy of high resolution in a wide spectral range. IN: Sb 14, 51-55. (RZhF, 5/75, 5D1508)

403. Ivakin, Ye. V., I. P. Petrovich, and A. S. Rubanov (0). Some problems in the application of nonstationary holography. IN: Sb 14, 35-40. (RZhF, 5/75, 5D1349)
404. Klimenko, I. S., and G. V. Skrotskiy (0). Focused intensity holograms without a reference beam. IN: Sb 12, 355-368. (RZhF, 5/75, 5D1334)
405. Klimenko, I. S. (0). Extra-axial focused intensity holograms without a reference beam. IN: Sb 13, 33-42. (RZhRadiot, 3/75, 3Ye273)
406. Klimenko, I. S., and Ye. G. Matinyan (0). Achievements and efficiency of the method of focused image holography. IN: Sb 13, 64-73. (RZhRadiot, 3/75, 3Ye270)
407. Komar, V. G. (0). Possibility of designing a holographic motion picture theater with a three-dimensional color image. TKiT, no. 4, 1975, 31-39.
408. Korostelev, A. A., and A. S. Kasatkin (0). Vector holograms. IN: Sb 14, 4-7. (RZhF, 5/75, 5D1308)
409. Krasnov, V. A., F. S. Markus, and E. M. Shor (0). Determining the radius of spatial correlation of phase noise in photofilm and thermoplastic. Selection of optimal conditions for processing information in a coherent optical system. IN: Sb 13, 104-106. (RZhRadiot, 3/75, 3Ye218)
410. Krupitskiy, E. I., and B. K. Chernov (0). Rigorous theory of three-dimensional holographic lattices and prospects for their development. IN: Sb 12, 46-80. (RZhF, 5/75, 5D1317)
411. Krupitskiy, E. I. (0). Basic theorems of holography for a linear stationary medium. IN: Sb 12, 128-164. (RZhF, 5/75, 5D1316)

412. Larkin, A. I. (0). Holography as a branch of radiophysics.  
IN: Sb 12, 437-493. (RZhF, 5/75, 5Zh356)
413. Luizova, L. A., and V. N. Kirpichnikov (0). Using an optical Fourier transform in processing spectrograms. IN: Sb 14, 30-34.  
(RZhF, 5/75, 5D1592)
414. Lukin, A. V., and R. A. Rafikov (7). Obtaining artificial holograms by a deformation method. OMP, no. 1, 1975, 72-73.
415. Mandrosov, V. I., and D. A. Tsirul'nikov (231). Spectral properties of holograms. ZhNiPfiK, no. 2, 1975, 139-141.
416. Mirovitskiy, D. I. (0). Some electrodynamic aspects of holography. Part 1. IN: Sb 14, 24-29. (RZhF, 5/75, 5D1307)
417. Mirovitskiy, D. I., N. N. Antonova, A. N. Titov, and I. V. Krasnov (0). Study of the advantages of coherent optical processing of electrical signals. IN: Sb 14, 84-94. (RZhF, 5/75, 5D1590)
418. Mirovitskiy, D. I. (0). Basic stages in the development of integral holography. IN: Sb 12, 494-506. (RZhF, 5/75, 5D1337)
419. Mustafin, K. S. (0). Methods for compensation of aberration in a hologram lens caused by shift in wavelength. IN: Sb 12, 238-249.  
(RZhF, 5/75, 5D1340)
420. Nalimov, I. P., V. D. Petrov, and I. U. Fedchuk (0). Systems and methods of holographic motion picture photography. IN: Sb 13, 133-138. (RZhRadiot, 3/75, 3Ye290)
421. Nemtinov, V. B., and O. V. Rozhkov (0). Method for evaluating the quality of a holographic process. IN: Sb 12, 191-211.  
(RZhF, 5/75, 5D1331)

422. Nikashin, V. A., S. T. Ostrin, G. I. Rukman, and V. K. Sakharov (0). Holographic method for obtaining stereoscopic images of large scenes. TKiT, no. 3, 1975, 27-28.
423. Odulov, S. G., and M. S. Soskin (0). Recording phase holograms in semiconductor crystals. IN: Sb 12, 532-559. (RZhF, 5/75, 5D1342)
424. Paritskaya, G. G., and V. Ye. Medvedev (7). Calculating the passage of beams through optical systems containing holographic diffraction lattices. OMP, no. 3, 1975, 25-27.
425. Petrov, M. P. (0). Magnetic holography. IN: Sb 24, 257-279. (RZhF, 5/75, 5D1311)
426. Protas, I. R., V. I. Mikhaylova, Yu. A. Krakau, G. M. Shepetukha, I. V. Baranova, Yu. Ye. Usanov, L. V. Matsiyevich, and Ye. I. Mikhaylova (0). LOI-2 photographic plates for recording holograms by the Denisyuk method. IN: Sb 12, 528-531. (RZhF, 5/75, 5D1343)
427. Ryazanov, M. I. (0). Theory of holography in turbid media. IN: Sb 12, 178-190. (RZhF, 5/75, 5D1314)
428. Safronova, A. P., and G. S. Safronov (0). Using sensitized radioholograms in radio broadcasting. IN: Sb 14, 58-62. (RZhF, 5/75, 5Zh353)
429. Shapov, V. S., A. P. Pichugin, D. I. Mirovitskiy, and V. I. Shanin (0). Study of criticality and optimization of coherent optical methods for recognizing electric signals by optical analogs. IN: Sb 14, 133-143. (RZhF, 5/75, 5D1594)



430. Shtyrkov, Ye. I., I. B. Khaybullin, M. F. Galyautdinov, and M. M. Zaripov (0). The ion-doped layer: a new material for recording holograms. OIS, v. 38, no. 5, 1975, 1031-1034.
431. Sidorovich, V. G., and D. I. Stasel'ko (0). Conversion of light beams by three-dimensional dynamic holograms. IN: Sb 12, 231-237. (RZhF, 5/75, 5D1318)
432. Skrotskiy, G. V. (0). Interference and coherence. IN: Sb 12, 37-45. (RZhF, 5/75, 5D1320)
433. Smirnov, V. V. (0). Some methods of holographic compensation of stationary inhomogeneous media, and the possibility of using them in observation through fiber-optic elements. IN: Sb 12, 520-525. (RZhF, 5/75, 5D1335)
434. Soroko, L. M. (0). The Young-Wall experiment and logical holography. IN: Sb 12, 81-127. (RZhF, 5/75, 5D1313)
435. Spornik, N. M. (7). Reducing the effect of substrate inhomogeneities during the study of phase objects. OMP, no. 1, 1975, 74-75.
436. Teleshevskiy, V. I. (0). Elements of the general theory and methods of acoustooptic holography. IN: Sb 12, 400-461. (RZhF, 5/75, 5D1312)
437. Vasil'yev, S. A. (0). Some results of a rigorous theory on forming real holographic images by a scalar field. IN: Sb 12, 176-177. (RZhF, 5/75, 5D1321)
438. Vasil'yev, V. N., N. N. Kolachevskiy, and L. V. Strygin (118). Reconstruction of object images from measurements of scattered light in the far zone. IN: Tr 14, 201-205. (RZhF, 3/75, 3D1347)

439. Vasil'yev, V. N. (118). Resolving power of bleached holograms.  
IN: Tr 14, 206-210. (RZhF, 4/75, 4D1335)
440. Vlasov, N. G., and Yu. P. Presnyakov (0). Spatial correlation of intensity in diffuse-coherent radiation, and interference measurements based on it. IN: Sb 13, 13-32. (RZhRadiot, 3/75, 3Ye289)
441. Vlasov, N. G., V. N. Protsenko, and A. Ye. Shtan'ko (0). Determining the order number of interference bands in holographic interferometry of reflecting objects. IN: Sb 13, 74-79. (RZhRadiot, 3/75, 3Ye272)
442. Vlasov, N. G., and G. V. Skrotskiy (0). Photography with a space carrier and holography. IN: Sb 12, 165-175. (RZhF, 5/75, 5D1339)
443. Vlasov, N. G., and A. Ye. Shtan'ko (0). Calculating holographic interferograms of reflecting objects. IN: Sb 12, 259-268. (RZhF, 5/75, 5D1332)
444. Volkov, I. V. (0). Studying the mechanics of deformations of natural objects with concentrators by "speckle" holography. IN: Sb 12, 369-382. (RZhF, 5/75, 5D1351)
445. Vorob'yeva, Ye. F., D. I. Mirovitskiy, and G. V. Pereverzev (0). Informativeness of correlation analysis in the problem of holographic character recognition. Part 1. IN: Sb 14, 102-132. (RZhF, 5/75, 5D1350)
446. Yakimovich, A. P. (75). Method for reducing noise in holograms with spatially modulated reference waves. KE, no. 3, 1975, 615-618.
447. Yevtikhiyev, N. N., and A. A. Pastushkov (0). Simulator of two-dimensional random processes for studying the noise rejection of optical systems. IN: Sb 14, 182-187. (RZhF, 5/75, 5D1593)

448. Zubov, V. A., and T. I. Kuznetsova (0). Problem of holographic interferometry under nonstationary conditions. IN: Sb 13, 57-59. (RZhRadiot, 3/75, 3Ye271)

E. LASER-INDUCED CHEMICAL REACTIONS

449. Abramov, A. P., I. N. Abramova, M. N. Tolstoy, and V. A. Tsekhomskiy (0). Kinetics of tinting photochromic glass under pulsed irradiation. ZhNiPfiK, no. 2, 1975, 121-125.
450. Alimpiyev, S. S., N. V. Karlov, A. M. Prokhorov, and B. G. Sartakov (1). Deflection of a beam of vibrationally excited molecules in a nonuniform electric field. ZhETF P, v. 21, no. 5, 1975, 257-259.
451. Ambartsumyan, R. V., Yu. A. Gorokhov, V. S. Letokhov, and G. N. Makarov (72). Separation of isotopes of sulfur with an enrichment factor greater than  $10^3$ , using  $CO_2$  laser radiation on an  $SF_6$  molecule. ZhETF P, v. 21, no. 6, 1975, 375-378.
452. Basov, N. G., E. M. Belenov, V. A. Isakov, Ye. P. Markin, A. N. Orayevskiy, V. I. Romanenko, and N. B. Ferapontov (1). Laser-induced chemical reactions and isotope separation. KE, no. 5, 1975, 938-945.
453. Gordon, Ye. B., and Yu. L. Moskvin (67). Photostimulated chemical chain reactions in optically dense media. ZhETF, v. 68, no. 4, 1975, 1252-1264.
454. Ivanov, L. N., and V. S. Letokhov (72). Selective ionization of atoms by an optical and electrical field. KE, no. 3, 1975, 585-590.
455. Larichev, M. N., I. O. Leypunskiy, I. I. Morozov, and V. L. Tal'roze (0). Mass-spectrometric study of elementary photochemical processes. IN: Sb 6, 142-143. (RZhKh, 19AB, 5/75, 5Bi344)

456. Letokhov, V. S., and A. A. Makarov (0). Selectivity of chemical reactions stimulated by infrared laser radiation in molecular gas mixtures. Journal of Photochemistry, v. 3, no. 4, 1974, 249-265. (RZhKh, 19AB, 5/75, 5B1343)
457. Letokhov, V. S. (77). Use of laser radiation in autoelectronic and autoionic microscopy for observing biological molecules. KE, no. 5, 1975, 930-937.
458. Orayevskiy, A. N., V. P. Pimenov, and V. A. Shcheglov (1). Thermal effects on photochemical waves. ZhTF, no. 4, 1975, 838-843.
459. Petelin, A. N. (0). Effect of intense infrared radiation on the vibrational-rotational state of multiatomic molecules. IN: Sb 7, 102-103. (RZhKh, 19AB, 7/75, 7B311)
460. Petelin, A. N., and L. I. Plimak (0). Perturbation of the rotational spectrum of a diatomic molecule by strong infrared radiation. IN: Sb 7, 104-105. (RZhRadiot, 4/75, 4Ye20)
461. Voronov, G. (0). Lasers and radiation [laser control of radioactive decay]. Khimiya i zhizn', no. 3, 1975, 8.
462. Zel'dovich, Ya. B., and I. I. Sobel'man (1). Optical excitation of isotopes, selective according to nuclear spin. ZhETF P, v. 21, no. 6, 1975, 368-370.

F. INSTRUMENTATION AND MEASUREMENTS

1. Measurement of Laser Parameters

463. Afinogenov, V. N. (255). Intensity distribution in self-focused laser radiation. IN: Tr 5, 61-63. (RZhF, 4/75, 4D1304)
464. Borukhman, A. N., V. P. Kubrak, and I. S. Oleynik (163). Selection of photodetectors for measuring time parameters of a Q-switched laser. IN: Tr 4, 140-142. (RZhF, 3/75, 3D1295)
465. Goloyadova, V. I., V. D. Ovsyannikov, V. I. Rovinskiy, B. I. Rubinshteyn, and Yu. I. Fomin (163). Instruments for measuring the wavelength and spectral width of pulsed ruby laser radiation. IN: Tr 4, 110-117. (RZhMetrolog, 2/75, 2.32.1106)
466. Goncharov, V. K., and A. N. Loparev (0). Instrument for measuring the spatial distribution of optical energy. ZhPS, v. 22, no. 3, 1975, 557-560.
467. Gravel', L. A., Yu. E. Novikov, Yu. G. Dzharashneli, and Ye. P. Semenov (7). Feasibility of studying the spectral dependence of the index of absorption of transparent materials, according to their thermal radiation. OMP, no. 2, 1975, 77-78.
468. Kuz'michev, V. M., and Yu. M. Latynin (34). Meter for measuring the polarization components of the energy and the direction of the polarization of laser radiation. Otkr izobr, no. 6, 1975, 460452.
469. Lavrovskiy, L. A., Yu. F. Mergun, M. A. Muravitskiy, and V. A. Pilipovich (299). Measuring the spectral width of single frequency pulsed laser emission with high resolution. IAN B, no. 2, 1975, 59-63.

470. Odintsov, A. I., N. G. Turkin, and V. P. Yakunin (0). Spatial coherence and angular divergence of pulsed neon superradiance. OIS, v. 38, no. 3, 1975, 428-431.
471. Rotar', S. V., V. S. Solov'yev, and B. V. Telegin (0). An error in measuring the contour of a laser amplification curve. OIS, v. 38, no. 4, 1975, 795-797.
472. Solov'yev, V. S., O. N. Miroshnichenko, and A. M. Fisher (163). Analyzing the errors in measuring laser wavelengths in the submillimeter range. IN: Tr 4, 90-100. (RZhMetrolog, 2/75, 2.32.1105)
473. Vishenskiy, A. A., I. A. Deryugin, and V. N. Kurashov (0). Problem of phase measurements in quantum optics. OIS, v. 38, no. 4, 1975, 751-756.
474. Zimokosov, G. A. (163). Instrument for measuring angular divergence of c-w laser radiation. IN: Tr 4, 118-122. (RZhMetrolog, 2/75, 2.32.1109)

## 2. Miscellaneous Measurement Applications

475. Abakumov, V. G., and V. V. Tatarinov (106). Device for determining the surface coordinates of a model. Author's certificate USSR, no. 418710, issued 20 August 1974. (RZhRadiot, 4/75, 4Ye228)
476. Abrukov, S. A., E. S. Voronin, A. Ye. Davydov, and Yu. Ya. Maksimov (346). Possibility of using holographic interferometry for studying a "singing" flame. KE, no. 5, 1975, 1101-1103.

477. Alekseyev, E. I., and Ye. N. Bazarov (15). Optical shifts in a quantum frequency standard with pulsed optical pumping and indication of the Ramsey line with suppression of the side maxima. KE, no. 5, 1975, 1035-1042.
478. Alekseyev, V. A., B. Ya. Zel'dovich, and I. I. Sobel'man (1). Sensitivity and resolving power of a Fabry-Perot interferometer and the spectroscopy of optical mixing. KE, no. 5, 1975, 1007-1018.
479. Antipov, B. A., V. Ye. Zuyev, P. D. Pyrsikova, and V. A. Sapozhnikova (0). Using the tunable transverse magnetic field of a laser at  $3.39\mu$  to study the methane absorption line at  $\nu_0 = 2947.8 \text{ cm}^{-1}$ . DiS, v. 38, no. 4, 1975, 681-684.
480. Bikmukhametov, K. A., and V. M. Klement'yev (0). Measuring small displacements by a two-frequency gas laser. IT, no. 3, 1975, 34-35.
481. Bogorodskiy, V. V., V. P. Gavriilo, and I. P. Ivanov (175). Using the Doppler effect in lasers for studying the stress state of ice. IN: Tr 15, 114-117. (RZhGeofiz, 5/75, 5V39)
482. Bulygin, V. S., V. B. Lebedev, G. A. Pryanikova, V. V. Ryukkert, S. S. Tsitsiashvili, and V. A. Yakovlev (0). Study of a vacuum commutator with laser ignition. ZhTF, no. 4, 1975, 892-897.
483. Device for crystallographic orientation of semiconductor single crystals by laser beam. IN: Sb 29, 83-85. (RZhF, 5/75, 5D1574)
484. Dubnishchev, Yu. N., A. R. Yevseyev, V. S. Sobolev, and Ye. N. Utkin (0). Studying gas-saturated turbulent flows by a laser Doppler velocimeter. ZhPMTF, no. 1, 1975, 147-153.



485. Gegus, E. (NS). Study of steels by laser microspectroscopy. Vasipari kut. intez. evk., no. 5, 1973, 476-488, 505, 513, 523, 532. (RZhMetal, 2/75, 21808)
486. Ginzburg, V. M., and V. M. Meshchankin (0). Solving various problems of antenna engineering using holography. Methods and equipment. IN: Sb 12, 336-399. (RZhF, 5/75, 5Zh354)
487. Ginzburg, V. M., A. A. Zolotarev, Ye. N. Likhtsiyer, E. G. Semenov, and B. M. Stepanov (0). The MGI-1 holographic microscope. IN: Sb 13, 80-82. (RZhRadiot, 3/75, 3Ye291)
488. Glebov, G. D., and M. S. Chupina (199). Laser mass-spectrometer as an instrument for local gas analysis of ceramics. IN: Tr 16, 10-14. (RZhRadiot, 3/75, 3Ye328)
489. Godlevskiy, A. P., V. P. Lopasov, and S. F. Luk'yanenko (78) High-sensitivity high-resolution (ruby) laser spectrometer based on the selective loss method. KF, no. 4, 1975, 701-710.
490. Golovashkin, A. I., K. V. Mitsen, and G. P. Motulevich (1). Experimental studies of nonequilibrium states of superconductors under laser excitation. ZhETF, v. 68, no. 4, 1975, 1408-1412.
491. Ionescu, A. (NS). Measuring flow speed by the Doppler effect with laser beams. Studii si cercetari fizica, v. 26, no. 7, 1974, 779-790. (RZhF, 3/75, 3D1337)
492. Ivanishchev, V. I. (0). Geodetic instruments with gas lasers. GiK, no. 3, 1975, 23-28.
493. Ivanov, N. I., A. Ya. Leykin, and N. S. Fertik (0). Fluctuations in quantum frequency standards. IT, no. 3, 1975, 44-45.

494. Kolyadin, A. I., and A. A. Malygina (7). Instrument for measuring light scattering by bleaching coatings. OMP, no. 4, 1975, 29-33.
495. Krylov, K. I., A. S. Aliyev, S. A. Ashurbekov, and A. S. Mitrofanov (30). Methods for studying inhomogeneities of transparent materials by transillumination with laser radiation. IN: Tr 1, 20-25. (RZhRadiot, 5/75, 5Ye212)
496. Kurbatov, V. M., and G. N. Pavlygin (0). Using an interference method for measuring the thickness of precipitates. IN: Sb 13, 98-103. (RZhRadiot, 3/75, 3Ye339)
497. Kuznechik, O. P. (87). Simplified method for designing simple optical systems for lasers. Belorusskiy universitet. Vestnik, ser. 1, no. 3, 1974, 42-45. (RZhF, 3/75, 3D1314)
498. Lekhtsiyer, Ye. N., and E. G. Semenov (0). Holographic microscopy. IN: Sb 12, 462-471. (RZhF, 5/75, 5D1354)
499. Leonov, R. K., G. I. Bryukhnevich, B. M. Stepanov, N. F. Taurin, and P. A. Yampol'skiy (141). Using a pulsed electro-optic ultramicroscope with extreme sensitivity for studying inclusions in transparent condensed media. KE, no. 5, 1975, 946-954.
500. Levites, A. F., and V. I. Teleshevskiy (0). Phase laser interferometer for measuring linear displacements. IN: Tr 17, 13-17. (RZhF, 3/75, 3D1520)
501. Makarenko, V. V. (0). Metrological possibilities for an optical method of linear measurements with laser light. IN: Tr 17, 3-12. (RZhF, 3/75, 3D1325)

502. Mitin, G. G., V. S. Gorelik, M. M. Sushchinskiy, and A. A. Khalezov (1). Polarization measurements of Raman scattering spectra in the region of vibrational excitons for phase IV ammonium chloride. KSpF, no. 10, 1974, 8-13.
503. Morozov, B. A., V. S. Aistov, and O. G. Lisin (0). Measuring spatial displacements by double-exposure holographic interferometry using a single hologram. IN: Sb 13, 94-97. (RZhRadiot, 3/75, 3Ye286)
504. Nalimov, I. P., V. D. Petrov, and I. U. Fedchuk (0). Using holographic methods in stereoscopy. IN: Sb 13, 125-132. (RZhRadiot, 3/75, 3Ye292)
505. Pashchenko, V. Z., L. B. Rubin, A. B. Rubin, V. B. Tusov, and V. A. Frolov (2). Pulsed fluorometer with high time resolution and sensitivity with recording by an electrooptic converter. ZhTF, no. 5, 1975, 1122-1127.
506. Peshkov, A. V., B. A. Nechayev, V. G. Vlasov, and S. M. Press (0). Laser probing of a relativistic electron ring. IN: Sb 8, 144-146. (RZhRadiot, 4/75, 4Ye198)
507. Petrak, D. (NS). Optical studies of a free particle flow. Chemische Technik, v. 26, no. 11, 1974, 701-703. (RZhKh, 19I, 8/75, 8I137)
508. Pletneva, N. I., G. Ya. Konayeva, I. P. Gryaznova, and D. K. Sattarov (7). Method for measuring the resolving power of microchannel plates. OMP, no. 2, 1975, 73-74.
509. Popela, B. (NS). Laser interferometer. Patent Czechoslovakia, no. 145147, issued 15 August 1972. (RZhRadiot, 3/75, 3Ye294)

510. Sadovskiy, A. B., G. P. Pashev, E. V. Zuyev, and A. I. Pikhteleev (0). Analysis of time errors in adjustable electron clocks based on quantum frequency standards. IT, no. 3, 1975, 45-46.
511. Safronov, G. S. (0). Radioholography and its application. IN: Sb 12, 472-486. (RZhF, 5/75, 5Zh355)
512. Seleznev, V. G. (0). Accuracy in determining displacements and stresses by holographic interferometry. IN: Sb 13, 83-90. (RZhRadiot, 3/75, 3Ye284)
513. Serov, O. B., and G. A. Scholev (0). Use of holograms in museum exhibits. IN: Sb 13, 161-166. (RZhRadiot, 3/75, 3Ye285)
514. Ushakov, L. S., and Yu. I. Filenko (0). Holographic motion picture interferometry of fast-flow processes. IN: Sb 12, 253-258. (RZhF, 5/75, 5D1353)
515. Vagin, L. N., L. G. Nazarova, T. M. Arsen'yeva, and V. A. Vanin (0). Holographic miniaturization of scientific and technical documents. Ois, v. 38, no. 5, 1975, 994-998.
516. Vasiliu, V., M. Ristici, and V. Blaj (NS). The LGA-2 sighting system with an He-Ne laser. Studii si cercetari fizica, v. 26, no. 7, 1974, 801-805. (RZhF, 4/75, 4D1318)
517. Yarovoy, P. N. (0). Phototransfer of charge carriers in ion crystals under laser irradiation. Ois, v. 38, no. 4, 1975, 827-829.
518. Yevtikhiyev, N. N., and A. L. Landau (0). Laser interferometer for measuring angular displacements. IN: Sb 14, 162-170. (RZhRadiot, 5/75, 5Ye231)
519. Yevtikhiyev, N. N., K. P. Tsvetayev, and G. R. Levinson (0). Features in processing of laser microprinting. IN: Sb 14, 209-212. (RZhRadiot, 5/75, 5Ye266)

520. Zakharenko, Yu. G., N. A. Mel'nikov, and V. Ye. Privalov (163). Effect of the power supply stability of a ring laser on the parameters of an angular velocity converter measuring instrument. IN: Tr 9, 125-129. (RZhF, 5/75, 5D1295)
521. Zlobin, V. V., and A. Z. Rozenshteyn (0). Optical method for measuring the distribution of solid impurities in two-phase flows. ZhPMTF, no. 1, 1975, 142-146.
522. Zuyev, V. Ye. (0). Symposium on High and Superhigh Resolution Molecular Spectroscopy, Novosibirsk, 11-13 September 1974. VAN, no. 3, 1975, 110-112.

G. BEAM-TARGET INTERACTION

1. Metal Targets

523. Fedoseyev, D. V., B. V. Deryagin, I. G. Varshavskaya, and A. V. Lavrent'yev (287). Growth of filamentary graphite crystals. DAN SSSR, v. 221, no. 1, 1975, 149-152.
524. Krylov, K. I., A. S. Mitrofanov, L. N. Stepanov, and A. S. Tsarev (30). Laser processing equipment. IVUZ Priboro, no. 2, 1975, 108-110.
525. Larina, R. R., and L. I. Mirkin (0). Dislocations in molybdenum after laser irradiation. IVUZ Fiz, no. 4, 1975, 159-160.
526. Rudnev, A. N., V. N. Sivers, and Ye. A. Buznitskiy (0). Coagulation of free aluminum films under the effect of a laser beam. IN: Sb 30, 79-81. (RZhF, 4/75, 4Ye986)

527. Smyslov, Ye. F., G. V. Davydov, and Ye. P. Alebastrova (162). X-ray metallographic study of molybdenum exposed to shock waves and laser beams. DAN B, no. 5, 1975, 435-438.

## 2. Dielectric Targets

528. Aleshin, I. V., G. D. Dvornikov, Ya. A. Imas, V. I. Proshin, V. S. Salyadinov, and A. V. Shatilov (7). Relationship of thresholds of optical breakdown of glasses with their structure. OMP, no. 3, 1975, 17-20.
529. Andreyev, V. G. (0). Induced crack formation in glass under the effect of a CO<sub>2</sub> laser beam. I-FZh, v. 28, no. 4, 1975, 739.
530. Bonch-Bruyevich, A. M., Ya. A. Imas, V. L. Komolov, V. S. Salyadinov, and V. N. Smirnov (0). Character of absorption and heatup of optical glass by a quasi-c-w radiation pulse of a neodymium laser. ZhTF, no. 5, 1975, 1117-1121.
531. Buzhinskiy, I. M., A. Ye. Pozdnyakov, and S. A. Ushakov (7). Character of the breakdown of optical surfaces of various glasses with large areas exposed to short optical pulse irradiation. OMP, no. 2, 1975, 46-49.
532. Darvoyd, T. I., Ye. K. Karlova, N. V. Karlov, G. P. Kuz'min, I. S. Lisitskiy, and Ye. V. Sisakyan (1). Study of various properties of KPC (TlBr-TlI; TlBr-TlCl) crystals in the 10 micron region. KE, no. 4, 1975, 765-772.
533. Larina, R. R., and L. I. Mirkin (2,253). Thermal mechanism of plastic deformation and destruction of crystal dielectrics under the effect of a laser beam. NM, no. 3, 1975, 447-449.

534. Lokhov, Yu. N., V. S. Mospanov, and Yu. D. Fiveyskiy (16). Vaporization and destruction of the ends of a transparent solid dielectric by a single laser pulse. KE, no. 5, 1975, 898-901.
535. Tribel'skiy, M. I., and A. Yu. Grosberg (0). Laser heating of a transparent medium with random absorption inhomogeneities. ZhETF, v. 68, no. 3, 1975, 1060-1065.
536. Vigasin, A. A., S. A. Kazakov, D. P. Krindach, A. P. Sukhorukov, and Kho Ngok Khoang (2). Residual deformation of a dielectric plate irradiated by a laser beam. KE, no. 4, 1975, 688-692.
537. Vinogradov, A. V. (1). Absorption of high intensity light by free carriers in dielectrics. ZhETF, v. 68, no. 3, 1975, 1091-1098.

### 3. Semiconductor Targets

538. Brodin, M. S., I. L. Romanenko, and I. Yu. Shabliy (0). Conductivity switching and photoelectric memory in CdS single crystals following the effect of high power ruby laser pulses. IN: Sb 27, 18-19. (RZhRadiot, 4/75, 4Ye187)
539. Pilipovich, V. A., G. D. Ivlev, Yu. F. Morgun, N. V. Nechayev, V. I. Osinskiy, and A. Ya. Peshko (0). Forming p-n junctions in GaAs by laser radiation. ZhPS, v. 22, no. 3, 1975, 431-437.
540. Vaytkus, Yu. Yu., and K. Yu. Yarashyunas (49). Self-diffraction of light by a photoinduced phase lattice in CdSe. Litovskiy fizicheskiy sbornik, no. 6, 1974, 1001-1003.
541. Vitkin, E. I., and Nguen Min' Khiyen (87). Development of thermal breakdown with time in semiconductors exposed to laser radiation. DAN B, no. 6, 1975, 502-505.



542. Zakharov, V. P., I. F. Kopinets, I. M. Migolinets, I. M. Protas, and D. V. Chepur (136). Preparation, composition and properties of amorphous films of complex chalcogenide semiconductors. NM, no. 4, 1975, 626-628.

#### 4. Liquid Targets

543. Bukzdorf, N. V., V. A. Pogodayev, and L. K. Chistyakova (78). Correlation of inhomogeneities in an internal optical field of an irradiated droplet with its explosion. KE, no. 5, 1975, 1062-1064.
544. Gordin, M. P., and G. M. Strelkov (0). Analytical and numerical solution of the problem of diffusion evaporation of a water droplet in a field of optical radiation. IN: Sb 19, 151-165. (RZhRadiot, 5/75, 5Ye246)
545. Gordin, M. P., and G. M. Strelkov (15). Supercondensation effect in diffuse evaporation of an aqueous aerosol in a radiation field. KE, no. 3, 1975, 559-566.
546. Malyarovskiy, A. I., O. G. Semenov, K. F. Shipilov, and T. A. Shmaonov (118). Study of the scattering of a ruby laser pulse on the surface of liquid CO<sub>2</sub>. IN: Tr 14, 195-200. (RZhF, 3/75, 3D1279)
547. Rysakov, V. M., and V. I. Korotkov (4). Cavitation phenomena and track formation in aqueous solutions of alcohol and acetone under the effect of laser radiation. KE, no. 5, 1975, 1087-1090.

## 5. Miscellaneous Studies

548. Alekseyev, P. A., B. M. Zhiryakov, and A. K. Fannibo (16). Using a quasistationary laser pulse in polarization-optical studies of optical destruction of materials. KE, no. 5, 1975, 1019-1023.
549. Amigud, Z. G., I. Ye. Bolotov, F. I. Bragin, L. V. Rabinovich, and S. B. Fischeleva (7). Change in the structure of zinc sulfide films under electron and laser irradiation. OMP, no. 1, 1975, 51-54.
550. Gusev, A. V. (0). Origin of thermoelastic stress and temperature waves from the effect of an electromagnetic pulse of finite duration. Problemy prochnosti, no. 2, 1975, 8-11.
551. Kaminskiy, V. V., A. I. Shelykh, T. T. Dedegkayev, T. B. Zhukova, S. G. Shul'man, and I. A. Smirnov (4). Metal-to-semiconductor phase transition in SmS under laser irradiation. FTT, no. 5, 1975, 1546-1548.
552. Karamzin, Yu. N., and A. P. Sukhorukov (71). Interfocusing of high power optical beams in media with square-law nonlinearity. ZhETF, v. 68, no. 3, 1975, 834-847.
553. Ol'skaya, M. A., Ye. K. Karlova, and L. A. Radushkevich (95). Study of the effect of the surface layer state of KPC-5 crystals on their stability under laser radiation. IN: Tr 18, 80-86. (RZhF, 5/75, 5D1242)
554. Pivovarov, V. M. (7). Third All-Union Conference on the Physics of the Interaction of Optical Radiation with Condensed Media. OMP, no. 5, 1975, 70.

H. PLASMA GENERATION AND DIAGNOSTICS

555. Aleksandrov, A. F., V. V. Perebeynos, A. T. Savichev, I. B. Timofeyev, and V. A. Chernikov (0). Absorption of laser radiation by a plasma discharge formed by the explosion of an aluminum wire in the atmosphere. Fizika plazmy, no. 1, 1975, 114-116. (LC)
556. Andreyev, N. Ye., V. V. Pustovalov, V. P. Silin, and V. T. Tikhonchuk (0). Study of nonlinear integro-differential equations for a turbulent plasma in a high power radiation field. IN: Sb 9, 176. (RZhMekh, 3/75, 3B304)
557. Arzuov, M. I., A. I. Barchukov, F. V. Bunkin, V. I. Konov, and A. M. Prokhorov (1). Spontaneous ignition of a c-w optical discharge in gases near solid targets. KE, no. 5, 1975, 963-966.
558. Basov, N. G., O. N. Krokhin, Yu. A. Mikhaylov, V. V. Pustovalov, A. A. Rupasov, V. P. Silin, G. V. Sklizkov, V. T. Tikhonchuk, and A. S. Shikanov (0). Anomalous interaction of high power laser radiation with a dense plasma. IN: Sb 9, 198. (RZhMekh, 3/75, 3B371)
559. Basov, N. G., V. A. Boyko, V. A. Gribkov, S. M. Zakharov, O. N. Krokhin, V. Ya. Nikulin, and G. V. Sklizkov (0). High speed interferometry of an expanding and collapsing laser-produced plasma. IN: Sb 25, 248-251. (RZhF, 3/75, 3D1310)
560. Baykov, I. S., and V. P. Silin (0). Anomalous heating of a plasma by a strong electromagnetic field. IN: Sb 9, 189. (RZhMekh, 3/75, 3B199)
561. Boyko, V. A., O. N. Krokhin, S. A. Pikuz, A. Ya. Fayenov, and A. Yu. Chugunov (1). Study of spectra of c-w x-radiation from a laser plasma and reflection of the heating radiation. Fizika plazmy, no. 2, 1975, 309-319. (LC)

562. Bykovskiy, Yu. A., S. M. Sil'nov, B. Yu. Sharkov, and S. M. Shuvalov (16). Electrons in a laser plasma. KE, no. 5, 1975, 989-994.
563. Dabu, R., M. Isbasescu, and A. Stratan (NS). Laser breakdown of air at 1.06  $\mu$ . Revue roumaine de physique, v. 19, no. 4, 1974, 391-395. (RZhF, 3/75, 3G266)
564. Dreyden, G. V., A. N. Zaydel', G. V. Ostrovskaya, Yu. I. Ostrovskiy, N. A. Pobedonostseva, L. V. Tanin, V. N. Filippov, and Ye. N. Shedova (0). Using methods of resonance interferometry and holography for plasma diagnostics. Fizika plazmy, no. 3, 1975, 462-482. (LC)
565. Gacek, A., S. Kaliski, and A. Sarzynski (NS). Problem of thermal waves in a plasma, taking into account the influence of hot electrons. BAPS, no. 12, 1974, 135(1095)-144(1104)
566. Gamaliy, Ye. G., S. Yu. Gus'kov, O. N. Krokhin, and V. B. Rozanov (0). Kinetic processes in a laser plasma. IN: Sb 9, 167. (RZhMekh, 3/75, 3B186)
567. Gamaliy, Ye. G., A. I. Isakov, Yu. A. Merkul'yev, A. I. Nikitenko, Ye. R. Rychkova, and G. V. Sklizkov (1). Targets for experiments on the heating and compression of materials under spherical irradiation by laser light. KE, no. 5, 1975, 1043-1047.
568. Gribkov, V. A., O. N. Krokhin, V. Ya. Nikulin, O. G. Semenov, and G. V. Sklizkov (1). Experimental study of nonspherical cumulative configurations of a laser plasma. KE, no. 5, 1975, 975-988.

- 56). Grinchuk, V. A., G. A. Delone, and K. B. Petrosyan (1). Experimental study of the disturbance of the cesium atom spectrum by multiphoton ionization. Fizika plazmy, no. 2, 1975, 320-323. (LC)
570. Jach, K., and S. Kaliski (NS). Concentric homothermal shock in a spherical gas ball. BAPS, no. 12, 1974, 607(1017)-614(1024).
571. Jach, K., S. Kaliski, and R. Swierczynski (NS). Verification of the method of averaged description of the heating process of plasma, taking into consideration the thermal and shock wave fronts. Proceedings of Vibration Problems. Polish Academy of Sciences, v. 15, no. 3, 1974, 247-258. (RZhMekh, 4/75, 4B397)
572. Kaliski, S., and B. Kaminski (NS). Ablation of the outer layer of a body of two-temperature plasma during laser heating, the fusion energy being taken into consideration. Proceedings of Vibration Problems. Polish Academy of Sciences, v. 15, no. 3, 1974, 191-203. (RZhMekh, 4/75, 4B1149)
573. Kaliski, S. (NS). Laser-driven compression type chain reaction microfusion. BAPS, no. 12, 1974, 127(1087)-134(1094)
574. Kaliski, S. (NS). Plane homothermal shock wave in a half-space of an ideal gas. BAPS, no. 12, 1974, 615(1025)-621(1031).
575. Karapetyan, R. V., and M. V. Fedorov (1). Amplification of electromagnetic waves in a magnetoactive plasma with nonisotropic distribution of electrons according to velocity. KE, no. 4, 1975, 717-722.
576. Karpov, O. V., E. F. Yurchuk, and G. D. Petrov (140). Determining the parameters of a plasma according to the relative intensity of laser radiation scattered at various angles. TVT, no. 2, 1975, 435-438.

577. Koshelev, K. N., and S. S. Churilov (72). A possible interpretation of the superradiance observed in the spectrum of an Al IV ion in the plasma of a laser flare. KE, no. 4, 1975, 723-727.
578. Makarevich, A. A., and V. A. Rodichkin (0). Study of electron and ion beams emitted by a laser plasma in strong electric fields. IN: Sb 8, 234-236. (RZhRadiot, 5/75, 5Ye201)
579. Min'ko, L. Ya. (0). Laser plasma accelerators and plasmotrons. IN: Sb 32, 142-180. (RZhF, 5/75, 5G396)
580. Rubenchik, A. M. (0). Anomalous absorption of the energy of an e-m wave near the plasma double frequency. IN: Sb 9, 162. (RZhMekh, 3/75, 3B238)
581. Rychkova, Ye. R. (1). Subminiature suspension of samples of fusion targets. KE, no. 5, 1975, 1048-1049.
582. Semenov, V. K., L. A. Spektorov, and A. O. Sundeva (253). Disturbances in a plasma jet under optical probing. IN: Tr 19, 27-35. (RZhF, 3/75, 3G291)
583. Silin, V. P. (1). Quantity of fast ions in a laser plasma. ZhETF P. v. 21, no. 6, 1975, 333-336.
584. Vul'fson, Ye. K., A. V. Karyakin, and A. F. Yanushkevich (0). Temperature and thermal equilibrium in a laser flare. ZhPS, v. 22, no. 3, 1975, 411-417.

585. Yemel'yanov, V. I., and Yu. L. Klimontovich (0). Self-modulation of stimulated scattering of light in a plasma. IN: Sb 9, 191. (RZhMekh, 3/75, 3B129)
586. Zhdanov, S. K., and B. A. Trubnikov (16). Optimal compression of a plasma in a Z - and theta pinch. ZhETF P, v. 21, no. 6, 1975, 371-374.



### III. MONOGRAPHS

587. Afon'kin, I. V., Yu. G. Zakharenko, V. Ye. Privalov, and G. A. Stokovskiy (30). Lazernyy girometr (Laser gyrometer). Leningradskiy institut tochnoy mekhaniki i optiki. Deposit at TsNIITEI priborostroyeniya, no. 289, 1974, 10 p. (RZhF, 5/75, 5D1296)
588. Andreyev, G. A., A. Yu. Zrazhevskiy, A. O. Izyumov, and V. G. Malinkin (15). Strukturnyye kharakteristiki pokazatelya prelomleniya turbulentnoy pogloshchayushchey atmosfery v submillimetrovom diapazone voln (Structural characteristics of the index of refraction of turbulent absorption of the atmosphere in the submillimeter range). AN SSSR. Institut radiotekhniki i elektroniki. Preprint, no. 28(177), 1974, 12 p. (RZhF, 5/75, 5Zh254)
589. Banakh, V. A., and V. L. Mironov (78). Spektry vremennykh fluktuatsiy intensivnosti lazernogo izlucheniya, rasprostranyayushchegosya v turbulentnoy atmosfere (Spectra of time fluctuations of intensity of laser radiation propagating in a turbulent atmosphere). SOAN. Institut optiki atmosfery. Preprint, no. 1, 1974, 22 p. (RZhF, 5/75, 5Zh156)
590. Biryukov, A. S., A. Yu. Volkov, A. I. Demin, Ye. M. Kudryavtsev, Yu. A. Kulagin, N. N. Sobolev, and L. A. Shelepin (1). Eksperimental'noye i teoreticheskoye issledovaniye gazodinamicheskogo  $N_2O$ -lazera (Experimental and theoretical study of the  $N_2O$  gasdynamic laser). Fizicheskiy institut AN SSSR. Preprint, no. 140, 1974, 47 p. (RZhF, 5/75, 5D1216)

591. Butylkin, V. S., D. Yu. Kozyarskiy, E. N. Plyusnina, P. S. Fisher, and Yu. G. Khronopulo (15). Generatsiya rezonansnogo IK-izlucheniya pri vynuzhdennom kombinatsionnom rasseyanii v gazakh (Generation of resonant IR radiation from stimulated Raman scattering in gases). AN SSSR. Institut radiotekhniki i elektroniki. Preprint, no. 26(175), 1974, 26 p. (RZhF, 3/75, 3D1168)
592. Denisyuk, Yu. N., et al., ed. (0). Opticheskaya golografiya i yeye primeneniye (Optical holography and its applications). Leningrad, Znaniye, 1974, 142 p. (KL, 11/75, 9107)
593. Ginzburg, V. M., B. M. Stepanov, Ye. A. Antonov, N. G. Vlasov, V. M. Kurbatov, G. G. Levin, V. M. Meshchankin, G. N. Pavlygin, E. G. Semenov, S. P. Tolpina, V. Ya. Tsarfin, and Yu. I. Filenko (0). Golografiya. Metody i apparatura (Holography. Methods and equipment). Moskva, Sovetskoye radio, 1974, 376 p. (RZhF, 4/75, 4D1339)
594. Gol'din, V. Ya., and B. N. Chetverushkin (71). Issledovaniye okhlazhdeniya i razleta sfericheskoy misheni. razogretoy izlucheniye lazera (Study of the cooling and disintegration of a spherical target heated by laser radiation). Institut prikladnoy matematiki AN SSSR. Preprint, no. 95, 1974, 11 p. (RZhF, 3/75, 3D1265)
595. Issledovaniya v oblasti radioizmereniy, kvantovykh mer chastoty, OKG i stabilizatsii chastoty (Research in the field of radio-measurements, quantum frequency standards, lasers and frequency stabilization). Trudy metrologicheskikh institutov SSSR. VNII metrologii, no. 159(219), Leningrad, 1974, 165 p. (RZhF, 4/75, 4D1172)

596. Kompaneyets, O. N., V. S. Letokhov, and V. G. Minogin (72). O modulyatsii gamma-izlucheniya yader Os pri возбuzhdenii kolebaniy molekuly  $\text{OsO}_4$  v pole  $\text{CO}_2$ -lazera (Modulation of gamma radiation from Os nuclei during the excitation of  $\text{OsO}_4$  molecule vibrations in a  $\text{CO}_2$  laser field). AN SSSR. Institut spektroskopii. Preprint, no. 6/138, 1974, 38 p. (RZhF, 5/75, 5G417)
597. Kononenko, V. K. (0). Poluprovodnikovyye lazery i ikh primeneniye v nauke i tekhnike (Semiconductor lasers and their application in science and technology). Minsk, Nauka i tekhnika, 1975, 56 p.
598. Kovarskiy, V. A. (0). Mnogokvantovyye perekhody (Multiquantum transitions). Kishinev, Shtiintsa, 1974, 228 p. (RZhF, 5/75, 5D1074)
599. Krylov, K. I., ed. (30). Voprosy kvantovoy elektroniki (Problems of quantum electronics). Leningradskiy institut tochnoy mekhaniki i optiki. Trudy, no. 79, 1975, 116 p. (RZhRadiot, 5/75, 5Ye131)
600. Kudrin, L. P. (23). Ob eksperimentakh po razdeleniyu izotopov v pole infrakrasnogo izlucheniya lazera (Experiments on isotope separation in the infrared radiation field of a laser). Institut atomnoy energii. IAE-2412, Moskva, 1974, 16 p. (RZhKh, 19AB, 10/75, 10B789)
601. Lisitsa, V. S., and S. I. Yakovlenko (23). Opticheskiye stolknoveniya i nelineynoye pogloshcheniye sveta sredoy (Optical collisions and nonlinear absorption of light by a medium). Institut atomnoy energii, IAE-2392, 1974, 36 p. (RZhF, 4/75, 4D1152)

602. Pen'kov, A. A., and R. A. Shevchenko (312). Modulyatsionnyy usilitel' televizionnogo lazernogo peredatchika (Modulation amplifier for a laser television transmitter). Kiyevskiy institut inzhenerov grazhdanskoy aviatsii. Deposit at TsNIITEIPriborostroyeniya, no. 261, 4 October 1974, 5 p. (RZhRadiot, 3/75, 3Ye255)
603. Slavnov, S. G. (30). Kontrol' raskhodimosti i neodnorodnosti po recheniyu lazernogo luchu pri pomoshchi linzy Allara (Control of divergence and inhomogeneity along the cross-section of a laser beam by an Allard lens). Leningradskiy institut tochnoy mekhaniki i optiki. Deposit at TsNIITEIpriborostroyeniya, no. 279, 30 October 1974, 11 p. (RZhF, 5/75, 5D1270)
604. Sovremennyye problemy prikladnoy golografii. Materialy Seminara (Current problems in applied holography. Materials of the Seminar). Moskva, Znaniye, 1974, 168 p. (RZhF, 3/75, 3D1363)
605. Suchkov, A. F., and B. M. Urin (1). Raschet energeticheskikh kharakteristik elektroionizatsionnogo CO<sub>2</sub>-lazera (Calculating the energy characteristics of a CO<sub>2</sub> electroionization laser). Fizicheskiy institut AN SSSR. Laboratoriya kvantovoy radiofiziki. Preprint, no. 117, 1974, 43 p. (RZhF, 3/75, 3D1248)
606. Suminov, V. M., and A. K. Skvorchevskiy (0). Uravnoveshivaniye vrashchayushchikhsya tel luchom lazera (Balancing of rotating objects by a laser beam). Moskva, Mashinostroyeniye, 1974, 176 p.
607. Velikotnyy, M. A., and E. D. Pankov (30). Raschet pogreshnosti sistemy PUL s uchetom vliyaniya turbulentsnosti atmosfery (Calculating the errors in a linear control point system taking into account atmospheric turbulence). Leningradskiy institut tochnoy mekhaniki i optiki. Deposit at TsNIITEIpriborostroyeniya, no. 288, 30 October 1974, 6 p. (RZhRadiot, 4/75, 4Ye159)

608. Zav'yalov, V. D., I. K. Kmitsikevich, N. S. Rakova, and L. I. Tsimbrovskaya (344). Rezul'taty eksperimental'nykh issledovaniy po seysmicheskoy golografii. Obzor (Results of experimental studies on seismic holography. Review). Otrasleyvoy tsentr nauchno-tekhnicheskoy informatsii. Seriya 9. Regional'naya, razvedochnaya i promyslennaya geofizika. Moskva, VIEMS, 1974, 35 p. (KLDV, 3/75, 4144)

#### IV. SOURCE ABBREVIATIONS

APP	-	Acta physica polonica
BAPS	-	Bulletin de l'Academie Polonaise des Sciences. Serie des Sciences Techniques
DAN B	-	Akademiya nauk Belorusskoy SSR. Doklady
DAN SSSR	-	Akademiya nauk SSSR. Doklady
DBAN	-	Bulgarska akademiya na naukite. Doklady
FAiO	-	Akademiya nauk SSSR. Izvestiya. Fizika atmosfery i okeana
FTP	-	Fizika i tekhnika poluprovodnikov
FTT	-	Fizika tverdogo tela
GiK	-	Geodeziya i kartografiya
IAN B	-	Akademiya nauk Belorusskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk
IAN Khim	-	Akademiya nauk SSSR. Izvestiya. Seriya khimicheskaya
IAN Mold	-	Akademiya nauk Moldavskoy SSR. Izvestiya. Seriya fiziko-tekhnicheskikh i matematicheskikh nauk
IAN Uz	-	Akademiya nauk Uzbekskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk
I-FZh	-	Inzhenerno-fizicheskiy zhurnal
IT	-	Izmeritel'naya tekhnika
IVUZ Fiz	-	Izvestiya vysshikh uchebnykh zavedeniy. Fizika
IVUZ Priboro	-	Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye
IVUZ Radiofiz	-	Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika
KE	-	Kvantovaya elektronika
KhVE	-	Khimiya vysokikh energiy
KiK	-	Kinetika i kataliz

KL	-	Knizhnaya letopis'
KLDV	-	Knizhnaya letopis'. Dopolnitel'nyy vypusk
Kristal	-	Kristallografiya
KSpF	-	Kratkiye soobshcheniya po fizike
LC	-	Received at Library of Congress
NM	-	Akademiya nauk SSSR. Izvestiya. Neorganicheskiye materialy
OiS	-	Optika i spektroskopiya
OMP	-	Optiko-mekhanicheskaya promyshlennost'
Otkr izobr	-	Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki
PSS	-	Physica status solidi
Radiotekh	-	Radiotekhnika
RiE	-	Radiotekhnika i elektronika
RZhElektr	-	Referativnyy zhurnal. Elektronika i yeye primeneniye
RZhF	-	Referativnyy zhurnal. Fizika
RZhGeofiz	-	Referativnyy zhurnal. Geofizika
RZhKh	-	Referativnyy zhurnal. Khimiya
RZhMekh	-	Referativnyy zhurnal. Mekhanika
RZhMetal	-	Referativnyy zhurnal. Metallurgiya
RZhMetrolog	-	Referativnyy zhurnal. Metrologiya i izmeritel'naya tekhnika
RZhRadiot	-	Referativnyy zhurnal. Radiotekhnika
Sb1	-	Sbornik. Radioelektronika letatel'nykh apparatov, no. 6, Khar'kov, Aviatsionnyy institut, 1974.
Sb2	-	Arsenid galliya, no. 4, Tomsk, Tomskiy universitet, 1974.
Sb3	-	Vsesoyuznaya konferentsiya. Fizicheskiye protsessy v geteroperekhodakh, 1974. Tezisy. Kishinev, 1974.



- Sb4 - Yadernofizicheskiye metody analiza i kontrolya tekhnologicheskikh protsessov. Tashkent, Fan, 1974.
- Sb5 - Voprosy kibernetiki, no. 70, Tashkent, 1974.
- Sb6 - Vsesoyuznaya konferentsiya po mass-spektrometrii. 2nd, 1974. Tezisy dokladov. Leningrad, Nauka, 1974.
- Sb7 - Simpozium po molekulyarnoy spektroskopii vysokogo i sverkhvysokogo razresheniya. 2nd, Novosibirsk, September 1974. Tezisy dokladov. Tomsk, 1974.
- Sb8 - Ukrainskaya respublikanskaya konferentsiya po elektronnoy optike i yeye primeneniya, posvyashchennaya 250-letiyu AN SSSR. 3rd. Tezisy dokladov. Part 2, Khar'kov, 1974.
- Sb9 - Mezhdunarodnaya konferentsiya po teorii plazmy. 2nd, 1974. Annotatsii dokladov. Kiyev, 1974.
- Sb10 - Moskovskiy institut elektronnoy tekhniki. Sbornik nauchnykh trudov po problemam mikroelektroniki, no. 16, 1974.
- Sb11 - Problemy dielektricheskoy elektroniki. Tashkent, Fan, 1974.
- Sb12 - Vsesoyuznaya shkola po golografii. 6th, Yerevan, 11-17 February 1974. Materialy. Leningrad, 1974.
- Sb13 - Sovremennyye problemy prikladnoy golografii. Moskva, 1974.
- Sb14 - Problemy golografii, no. 4, Moskva, 1974.
- Sb15 - Issledovaniya po akusticheskoy elektrofiziki i radioelektroniki, no. 2, Kuybyshev, 1974.
- Sb16 - Vychislitel'naya tekhnika, no. 3, Penza, 1974.
- Sb17 - Problemy issledovaniy svoystv segneto-elektrikov. Part 2, Uzhgorod, 1974.
- Sb18 - Stsintillyatory i organicheskiye lyuminofory, no. 3, Khar'kov, 1974.
- Sb19 - Issledovaniya v oblasti radiotekhniki i elektroniki. 1964-1974. Part 1. Moskva, 1974.

- Sb20 - Pole rasseyaniya izlucheniya v zemnoy atmosfere. Alma-Ata, Nauka, 1974.
- Sb21 - Poverkhnostnyye yavleniya v rasplavakh i vznikayushchikh iz nih tverdykh fazakh. Kishinev, Shtiintsa, 1974.
- Sb22 - Fizicheskaya elektronika, no. 9, 1974.
- Sb23 - Leningradskiy institut tochnoy mekhaniki i optiki. Sbornik nauchnykh trudov aspirantov, Leningrad, 1974.
- Sb24 - Zimnaya shkola po fizike poluprovodnikov, 6th, 1975. Materialy. Leningrad, 1974
- Sb25 - Actes de 10-eme Congres international cinematographique ultra-rapide, Nice, 1972. Paris, s. a.
- Sb26 - Prikladnaya geofizika, no. 77, 1975.
- Sb27 - Effekty pamyati i fotoprovodimosti v neodnorodnykh poluprovodnikakh. Kiyev, 1974.
- Sb28 - Vychislitel'naya tekhnika v mashinostroyenii, no. 1(32), Minsk, 1974.
- Sb29 - Nauchnyye pribory, no. 5, Moskva, 1974.
- Sb30 - Fizicheskaya elektronika, no. 8, 1974.
- Sb31 - Fizika atomnogo yadra i plazmy. Nad chem dumayut fiziki, no. 10, Moskva, 1974.
- Sb32 - Fizika i primeneniye plazmennyykh uskoriteley. Minsk, Nauka i tekhnika, 1974.
- TKiT - Tekhnika kino i televideniya
- Tr1 - Leningradskiy institut tochnoy mekhaniki i optiki. Trudy, no. 79, 1975.
- Tr2 - Moskovskiy fiziko-tekhnicheskiy institut. Trudy. Seriya Radiotekhnika i elektronika, no. 7, 1974.
- Tr3 - Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom universitete. Trudy, no. 5, 1974.
- Tr4 - Trudy metrologicheskikh institutov SSSR. VNII metrologii, no. 159(219), 1974.
- Tr5 - Tallinskiy politekhnicheskiy institut. Trudy, no. 358, 1974.

Tr6	-	Dal'nevostochnyy universitet. Laboratoriya analiza sluchaynykh protsessov. Soobshcheniya, v. 90, no. 1, 1974.
Tr7	-	Leningradskiy institut tochnoy mekhaniki i optiki. Trudy, no. 76, 1974.
Tr8	-	Moskovskiy fiziko-tekhnicheskiiy institut. Trudy. Seriya Radiotekhnika i elektronika, no. 8, 1974.
Tr9	-	Trudy metrologicheskikh institutov SSSR. VNII metrologii, no. 156(216), 1974.
Tr10	-	Trudy uchebnykh institutov svyazi. Ministerstvo svyazi SSSR, no. 69, 1974.
Tr11	-	Moskovskiy institut radiotekhniki, elektroniki i avtomatiki. Trudy, no. 71, 1974.
Tr12	-	Yerevanskiy universitet. Uchenyye zapiski. Yestestvennyye nauki, no. 3(127), 1974.
Tr13	-	Leningradskiy korablestroitel'nyy institut. Trudy, no. 84, 1973.
Tr14	-	Moskovskiy fiziko-tekhnicheskiiy institut. Trudy. Seriya Obshchaya i molekulyarnaya fizika, no. 5, 1974.
Tr15	-	Arkticheskiiy i Antarkticheskiiy NII. Trudy, no. 324, 1974.
Tr16	-	Moskovskiy institut elekt onnogo mashinostroyeniya. Trudy, no. 42, 1974.
Tr17	-	Trudy NII metrologicheskikh vysshikh zavedeniy, no. 12, 1974.
Tr18	-	Ni i proyektnyy institut redkometallicheskoy promyshlennosti. Nauchnyye trudy, no. 60, 1974.
Tr19	-	Kirgizskiy universitet. Trudy. Seriya fizicheskikh nauk, no. 4, 1974.
TVT	-	Teplofizika vysokikh temperatur
UFN	-	Uspekhi fizicheskikh nauk
UFZh	-	Ukrainskiy fizicheskiiy zhurnal
VAN	-	Akademiya nauk SSSR. Vestnik
VLU	-	Leningradskiy universitet. Vestnik: Fizika, khimiya

ZhETF	-	Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhETF P	-	Pis'ma v Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhNiPFIK	-	Zhurnal nauchnoy i prikladnoy fotografii i kinematografii
ZhPMTF	-	Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki
ZhPS	-	Zhurnal prikladnoy spektroskopii
ZhTF	-	Zhurnal tekhnicheskoy fiziki

## V. CUMULATIVE AFFILIATIONS LIST

### NS. Non-Soviet

0. Affiliation not given
1. Physics Institute im. Lebedev, AN SSSR, Moscow (Fizicheskiy institut im. Lebedeva AN SSSR).
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, Sibirekoye otdeleniye 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 University (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. Lumunby).
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 (VNIU tekstil'nogo i legkogo mashinostroyeniya).
28. Leningrad Opticomechanical Society (Leningradskoye optiko-mekhanicheskoye 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 NII 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-tekhniicheskiy institut niskikh temperatur AN UkrSSR).
37. Yerevan State University (Yerevanskiy gos. universitet).
38. Kazan' Physicotechnical Institute (Kazanskiy fiziko-tekhniicheskiy 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 politekhniicheskiy 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-tekhniicheskiy institut im. Kuznetsova).
48. Tomsk Institute of Radio Engineering and Electronics (Tomskiy institut radiotekhniki i elektroniki).
49. Vilnius State University (Vil'nyuskiy gos. universitet).
50. Institute of Semiconductor Physics, AN LitSSR, Vilnius (Institut fiziki poluprovodnikov, AN LitSSR).
51. Kiev State University (Kiyevskiy gos. universitet).
52. Joint Institute of Nuclear Research, Dubna (Ob'yedinennyy institut yadernykh issledovaniy).
53. Chernovtsy State University (Chernovitskiy gos. universitet).
54. Taganrog Radio Engineering Institute (Taganrozhskiy radiotekhnicheskiy institut).
55. Physicotechnical Institute, AN TurkSSR, Ashkhabad (Fiziko-tekhniicheskiy 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 issledovaniy 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 SOAN).
76. Institute of Hydrodynamics, Siberian Branch AN SSSR (Institut gidrodinamiki SOAN).
77. Institute of Inorganic Chemistry, Siberian Branch AN SSSR (Institut neorganicheskoy khimii SOAN).
78. Institute of Atmospheric Optics, Siberian Branch AN SSSR (Institut optiki atmosfery SOAN).
79. Institute of Nuclear Physics, Siberian Branch AN SSSR (Institut yadernoy fiziki SOAN).
80. Computer Center, Siberian Branch AN SSSR (Vychislitel'nyy tsentr SOAN).
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. Azerbaydzhani State University (Azerbaydzhanskiy gos. universitet).
87. Belorussian State University (Beloruskiy gos. universitet).
88. Dagestan State University (Dagestanskiy gos. universitet).
89. Donetsk State University (Donetskiy gos. universitet).
90. Electrotechnical 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'kiy Physicotechnical Research Institute at Gor'kiy State University (Gor'kovskiy issledovatel'skiy fiziko-tekhnicheskiy institut pri Gor'kovskom gos. universitete).
94. Gor'kiy State University (Gor'kovskiy gos. universitet).
95. State Scientific Research and Planning Institute of the Rare Metals Industry (GIREDMET, Gos. NI proyektnyy institut redkometallicheskooy promyshlennosti).
96. State Scientific Research Institute of Photochemical Planning (GOSNIKHIMFOTOPROYEKT).
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 Chemicochemical Institute (Ivanovskiy khimiko-tekhnologicheskiy institut).
103. Ivanovo Pedagogical Institute (Ivanovskiy pedagogicheskiy institut).
104. Kaunas Polytechnical Institute (Kaurasskiy politekhnicheskiy institut).
105. Kazan' Civil Engineering Institute (Kazanskiy inzhenernoostroitel'skiy institut).
106. Kiev Polytechnic Institute (Kiyevskiy politekhnicheskiy institut).
107. Khar'kov State Scientific Research Institute of Metrology (Khar'kovskiy gos. NI 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 elektronnoy tekhniki).
120. Moscow Institute of Engineers of Geodesy, Aerial Photography and Cartography (Moskovskiy institut inzhenerov geodezii, aerofoto"yemki i kartografii).
121. Moscow Institute of Chemical Machinery (Moskovskiy institut khimicheskogo mashinostroyeniya).
122. Scientific Research Institute of Physicochemistry im. Karpov (NI fiziko-khimicheskiy institut im. Karpova).
123. Novosibirsk Institute of Automation and Electrometallurgy (Novosibirskiy institut avtomatiki i elektrometallurgii).
124. Odessa Scientific Research Institute of Eye Diseases and Tissue Therapy (Odesskiy NII 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. NII metrologii).
130. Tadzhik State University (Tadzhikskiy gos. universitet).
131. Tartu State University (Tartuskii gos. universitet).
132. Tomsk State University (Tomskiy gos. universitet).
133. Central Aerohydrodynamic Institute im. Zhukovskiy (Tsentral'nyy aerodinamicheskiy institut im. Zhukovskogo).
134. Central Aerological Observatory (Tsentral'naya aerologicheskaya observatoriya).
135. Central Scientific Research Institute of Communications (Tsentral'nyy NII 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 (VNII fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy, VNIFTRI).
141. All Union Scientific Research Institute of Opticophysical Measurements (VNII optiko-fizicheskikh izmereniy).
142. All Union Scientific Research Institute for Synthesis of Mineral Ore (VNII sinteza mineral'nogo syr'ya).
143. All Union Scientific Research Institute of Synthetic Rubber (VNII sinteticheskogo kauchuka).
144. All Union Scientific Research Institute of Television and Radio Broadcasting (VNI teledeniya i radioveshchaniya).
145. All Union Correspondence Electrotechnical Institute of Communications (Vsesoyuznyy zaочnyy elektrotekhnicheskiy institut svyazi).
146. Yerevan Physics Institute (Yerevanskiy fizicheskii 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 AN SSSR, IZMIRAN).
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 Ossetian 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 elektroaparatorov).
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 gidrometeorologicheskogo 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. Mendeleev (VNI metrologii im. Mendeleeva).
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 UkrSSR).
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 NII 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 Dyes, 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 grazhdanskoj aviatsii).
178. Moscow Institute of Chemical Technology im. Mendeleev (Moskovskiy khimiko-tekhnicheskij institut im. Mendeleeva).
179. Moscow Institute of Fine Chemical Technology im. Lomonosov (Moskovskiy institut tonkoj 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 vysshoye 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. Gamaleya, AMN SSSR, Moscow (Institut epidemiologii i mikrobiologii im Gamalei AMN SSSR).
188. All Union Scientific Research Institute of Single Crystals, Khar'kov (VNI monokristallov).
189. Novocherkassk Polytechnic Institute (Novocherkasskiy politekhnicheskiy institut).
190. Central Scientific Research Institute of the Maritime Fleet (Tsentra'lnyy 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 zaachnyy politekhnicheskiy institut).
196. Institute of Organic Chemistry im. Zelinskiy, AN SSSR (Institut organicheskoy khimii im Zelinikogo 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 elektronogo mashinostroyeniya).
200. Khar'kov Aviation Institute (Khar'kovskiy aviatsionnyy 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 NI 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 geodesii, aerofotos"yemki i kartografii).
231. Scientific Research Institute of Motion Pictures and Photography (NI 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 grazhdanskoj 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 marksheyerskogo dela).
237. Department of the Physics of Nondestructive Control, AN BSSR (Otdel fiziki nerazrushayushchego kontrolya AN BSSR).
238. Institute of High Pressure Physics, 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 proyektno-izyskatel'skiy i NII 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 NI tel-vizionnyy 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 yestestvennykh 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 matematiki AN LitSSR).
260. Kazan' Institute of Chemical Technology im. Kirov (Kazanskiy khimiko-tekhnologicheskyy institut im Kirova).
261. Rybinsk Evening Technological Institute (Rybinskiy vecherniy tekhnologicheskyy institut).
262. Physicotechnical Institute, AN UzSSR (Fiziko-tekhnicheskyy institut AN UzSSR).
263. Astrophysical Institute, AN KazSSR (Astrofizicheskyy institut AN KazSSR).
264. Institute of Radiophysics and Electronics, AN ArmSSR (Institut radiofiziki i elektroniki AN ArmSSR).
265. Irkutsk Polytechnical Institute (Irkutskiy politekhnicheskyy 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 metallurgicheskyy 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 gos pedagogicheskyy 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. Donetsk Physico-technical institute, AN UkrSSR (Donetskiy fiziko-tekhnicheskyy institut AN UkrSSR).
275. Moscow Electrotechnical Institute of Communications (Moskovskiy elektrotekhnicheskyy 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).
281. Institute for Improving the Qualifications of Supervisory Workers and Specialists (Institut povysheniya kvalifikatsii rukovodyashchikh rabotnikov i spetsialistov).
282. Scientific Research Institute of Physics, Odessa (NII fiziki, Odessa).
283. Institute of Physics of Metals, AN UkrSSR, Kiev (Institut metallofiziki AN UkrSSR).
284. Dnepropetrovsk Metallurgical Institute (Dnepropetrovskiy metallurgicheskyy institut).
285. Institute of Problems of Control (Institut problem upravleniya).
286. Institute of Biological Physics, ANSSSR, Pushchino (Institut biologicheskoy fiziki AN SSSR).
287. Institute of Physical Chemistry, AN SSSR (Institut fizicheskoy khimii AN SSSR).
288. Moscow Electrovacuum Instruments Plant (Moskovskiy zavod elektrovakuumnykh priborov).
289. Central Scientific Research Institute of Geodesy, Aerial Surveying and Cartography (Tsentral'nyy NII geodezii, aereo"yemki i kartografii).
290. All Union Scientific Research Institute of Medical Instrument Manufacture (VNIi meditsinskogo priborostroyeniya).

291. Rostov-on-Don Institute of Railroad Transportation Engineers (Rostovskiy-na-Donu inzhenerov zheleznodorozhnogo transporta).
292. Naval Academy, Leningrad (Voyenno-morskaya akademiya).
293. Moscow Institute of Transport Engineers (Moskovskiy institut inzhenerov transporta).
294. Institute of Chemistry, Bashkir Branch, AN SSSR (Institut khimii Bashkirskego filiala AN SSSR).
295. Institute of Chemical Kinetics and Combustion, Siberian Branch, AN SSSR, Novosibirsk (Institut khimicheskoy kinetiki i goreniya SOAN).
296. Tbilisi Branch of the All Union Correspondence Electrotechnical Institute of Communications (Tbiliskiy filial Vsesoyuznogo sochnogo elektrotekhnicheskogo instituta svyazi).
297. Institute of Chemistry, AN SSSR, Gor'kiy (Institut khimii AN SSSR).
298. Institute of Electrodynamics, AN UkrSSR (Institut elektrodinamiki AN UkrSSR).
299. Institute of Electronics, AN BSSR (Institut elektroniki AN BSSR).
300. Institute of Cybernetics, AN UzSSR (Institut kibernetiki AN UzSSR).
301. All Union Scientific Research Institute of Luminophors and High Purity substances (VNI lyuminesforov i osobo chistykh veshchestv).
302. State Scientific Research Institute of Radio (Gosudarstvennyy NII radio).
303. L'vov Branch of Mathematical Physics of the Institute of Mathematics, AN UkrSSR (L'vovskiy filial matematicheskoy fiziki Instituta matematiki AN UkrSSR).
304. Institute of Organic Chemistry, AN UkrSSR, Kiev (Institut organicheskoy khimii AN UkrSSR).
305. Central Construction Bureau of Motion Picture Equipment (Tsentral'noye konstruktorskoye byuro kinoapparaty).
306. State Oceanographic Institute (Gosudarstvennyy okeanograficheskiy institut).
307. Institute of Thermophysics and Electrophysics, AN EstSSR (Institut termofiziki i elektrofiziki AN EstSSR).
308. Moscow Institute of Railroad Transport Engineers (Moskovskiy institut inzhenerov zheleznodorozhnogo transporta).
309. Pervomayskugol' combine (Kombinat "Pervomayskugol").
310. Kadiyevka Branch of the Kommunarsk Mining-Metallurgical Institute (Kadiyevskiy filial Kommunarskogo gorno-metallurgicheskogo instituta).
311. All Union Scientific Research Institute of Mineral Resources, Moscow (VNI mineral'nogo syr'ya).
312. Kiev Institute of Civil Aviation Engineers (Kiyevskiy institut inzhenerov grazhdanskoj aviatcii).
313. Scientific Research Institute of Applied Physics at Irkutsk State University (NII prikladnoy fiziki pri Irkutskom gos universitete).
314. Moscow Oncological Scientific Research Institute im Gertsen (Moskovskiy NI onkologicheskii institut im Gertsena).
315. Tbilisi Branch of the All-Union Scientific Research Institute of Metrology im Mendeleev (Tbiliskiy filial VNI metrologii im Mendeleeva).
316. Dagestan Polytechnic Institute, Mekhachkala (Dagestanskiy politekhnicheskii institut).
317. Saratov Polytechnic Institute (Saratovskiy politekhnicheskii institut).
318. Scientific Research Institute of Direct Current (NII postoyannogo toka).
319. Alma-Ata State Medical Institute (Alma-Atinskiy gosudarstvennyy meditsinskiy institut).
320. Kaliningrad State University (Kaliningradskiy gos universitet).
321. Mogilev Branch of the Institute of Physics, AN BSSR (Mogilevskiy filial Instituta fiziki AN BSSR).
322. Lower Volga Civil Engineering Surveys Trust (Nizhne-Volzhskiy trust inzhenerno-stroitel'skikh izyskaniy).
323. Leningrad Institute of Motion Picture Engineers (Leningradskiy institut kinoinzhenerov).



324. Physicotechnical Institute, Sukhumi (Fiziko-tekhnicheskiy institut).
325. Scientific Research Institute of Physics, Rostov-on-Don (NII fiziki, Rostov-na-Donu).
326. Institute of Radioelectronics, AN SSSR (Institut radioelektroniki AN SSSR).
327. Novosibirsk Electrotechnical Institut (Novosibirskiy elektrotekhnicheskiy institut).
328. All-Union Civil Engineering Correspondence Institut, Moscow (Vsesoyuznyy nauchnyy inzhenerno-stroitel'nyy institut).
329. Leningrad Scientific Research and Planning Institute of the Basic Chemical Industry (Leningradskiy NI i proyektnyy institut osnovnoy khimicheskoy promyshlennosti).
330. Microbiology Sector, AN AzSSR (Sektor mikrobiologii AN AzSSR).
331. Rovenskiy Pedagogical Institute Im Manuil'skiy (Rovenskiy pedagogicheskiy institut im Manuil'skogo).
332. Frunze Polytechnic Institute (Frunziyskiy politekhnicheskiy institut).
333. Chernorechenskiy Chemical Combine, Dzerzhinsk (Chernorechenskiy khimicheskiy kombinat).
334. Scientific Research Institute of Applied Physical Problems at Belorussian State University (NII prikladnykh fizicheskikh problem pri Belorusskom gos universitete).
335. Institute of Electrochemistry, AN SSSR (Institut elektrokhimii AN SSSR).
336. Scientific Research Institute of Nuclear Physics, Electronics and Automation at Tomsk Polytechnic Institute (NII yadernoy fiziki, elektroniki i avtomatiki pri Tomskom politekhnicheskoy institut).
337. Computer Center AN SSSR (Vychislitel'nyy tsentr AN SSSR).
338. Ministry of Geology, USSR (Ministerstvo geologii SSSR).
339. Computer Center, AN ArmSSR (Vychislitel'nyy tsentr AN ArmSSR).
340. All-Union Scientific Research Institute of Light and Textile Machine Building, Moscow (VNII legkogo i tekstil'nogo mashinostroyeniya).
341. All-Union Scientific Research Institute of Heat Engineering in Metallurgy, Sverdlovsk (VNII metal'burgicheskoy teplotekhniki).
342. Scientific Research, Design and Technological Institute of Heavy Machine Building, Ural Heavy Machinery Plant (NI konstruktorsko-tekhnologicheskoy institut tyazhelogo mashinostroyeniya Ural'skogo zavoda tyazhelogo mashinostroyeniya, NII YaAhMASH Uralmashzavoda).
343. North Caucasus Scientific Center of Higher Education (Severo-Kavkazskiy nauchnyy tsentr vysshey shkoly).
344. All-Union Scientific Research Institute of Economics of Mineral Raw Materials and Geological Exploration (VNII ekonomiki mineral'nogo syr'ya i geologorazvedochnykh rabot, VIFMS).
345. Institute of Physical Problems, Siberian Branch AN SSSR (Institut fizicheskikh problem SOANI).
346. Chuvash State University (Chuvashskiy GU).



## VL AUTHOR INDEX

A	
ABAKUMOV, V. G.	62
ABDULLIN, U. A.	9, 33
ABRAMOV, A. P.	59
ABRAMOV, K. D.	46
ABRAMOVA, L. N.	59
ABRUKOV, S. A.	62
ADIKS, T. G.	43
ADRIANOVA, I. L.	29
AFINOGENOV, V. N.	61
AFON'KIN, I. V.	78
AGANBEKYAN, K. A.	43
AGRANOV, A. KH.	21
AISTOV, V. S.	66
AKAYEV, A.	49
AKCHURIN, G. G.	30
AKHMANOV, S. A.	33
AKHMEDOV, F. A.	21, 22
AKRAMOV, KH. T.	21
AL'PEROVICH, M. A.	7
AL'TSHULER, G. B.	46
ALEBASTROVA, YE. P.	69
ALEKSANDROV, A. F.	73
ALEKSANDROV, I. V.	33
ALEKSANDROV, YE. B.	12
ALEKSEYENKO, L. L.	27
ALEKSEYEV, E. I.	13, 40, 63
ALEKSEYEV, N. YE.	9, 38
ALEKSEYEV, P. A.	72
ALEKSEYEV, V. A.	8, 37, 63
ALEKSEYEV, V. N.	6
ALESHIN, I. V.	69
ALEXIEWICZ, W.	37
ALFYOROV, ZH. I.	5, 22
ALIMPIYEV, S. S.	59
ALIYEV, A. S.	65
ALTYNBAYEV, R.	4
AMBARTSUMYAN, R. V.	59
AMIGUD, Z. G.	72
ANAN'YEV, YU. A.	18, 19
ANDREYEV, A. V.	40
ANDREYEV, G. A.	78
ANDREYEV, N. YE.	73
ANDREYEV, S. I.	11, 20
ANDREYEV, V. G.	69
ANISIMOV, N. A.	39
ANISIMOVA, I. D.	22
ANTIPOV, B. A.	63
ANTONENKO, T. I.	45
ANTONOV, YE. A.	79
ANTONOVA, N. N.	51, 55
ANTSIFEROV, V. V.	1, 41
APOSTOL, D.	9
ARAMA, YE. D.	28
ARAPOV, A. P.	47
ARBATSKAYA, A. N.	33
AREF'YEV, V. N.	43
ARISTOV, V. V.	51
ARMENCHA, N. N.	22
ARPISHKIN, V. M.	47
ARSEN'YEV, P. A.	3
ARSEN'YEVA, T. M.	67
ARUTYUNYAN, A. A.	51
ARUTYUNYAN, A. S.	51
ARUTYUNYAN, DZH. S.	51
ARUTYUNYAN, E. A.	30
ARZUOV, M. I.	73
ASEYEV, G. I.	3
ASHURBEKOV, S. A.	65
ATAKOVA, M. M.	22
ATUTOV, S. N.	10
AVDEYEVA, V. I.	7
AVER'YANOV, N. YE.	11
AVER'YANOVA, G. I.	51
AVERBUKH, B. B.	37
AVETISOV, E. G.	51
AVETISOV, ZH.	52
AZAMATOV, Z. T.	12
AZIMKHODZHAYEV, KH. E.	23
P	
BABENKO, V. A.	7
BADIKOV, V. V.	30, 32
BAKHRAMOV, S. A.	13
BAKHSHIYEV, N. G.	8
BAKLANOV, YE. V.	38, 40
BALAKIN, V. A.	10
BALOSHIN, YU. A.	11
BALSHEN, L. I.	28
BALTAKOV, F. N.	20
BALYKIN, V. I.	16
BANAKH, V. A.	44, 78
BANCEWICZ, T.	37
BARANOV, V. YU.	41
BARANOVA, I. V.	56
BARANSKIY, K. N.	53
BARCHUKOV, A. I.	73
BARIKHIN, B. A.	20
BARZHIN, V. YA.	20
BASHUK, R. P.	3
BASOV, N. G.	59, 73
BASOV, YU. G.	20
BASUN, S. A.	38
BATRAKOV, A. S.	47
BAYEV, V. M.	38
BAYKOV, I. S.	73
BAYKOV, V. I.	20
BAZADZE, M. A.	52
BAZAROV, YE. N.	13, 40, 63
BEDILOV, M. R.	2, 7
BELABAYEV, K. G.	2
BEIENOV, E. M.	59
BELIKOVA, G. S.	30
BELONUCHKIN, V. YE.	23
BELOUSOV, N. D.	2
BELOUSOVA, L. N.	11
BELYY, V. N.	31
BENDA, O.	46
BERBEKAR, DZH.	52
BERCHENKO, N. N.	27
BEREZHNOY, A. A.	29
BEREZIN, N. P.	52
BERGMANN, YA. V.	21
BESPALOV, V. I.	45
BEYSEMBAYEVA, KH. B.	2
BIENERT, K. E.	3
BIKMUKHAMEDOV, K. A.	13, 63
BILAK, V. I.	2
BILYY, YA. M.	47
BERMAN, A. YA.	15
BIRYUKOV, A. S.	78
BISYARIN, V. P.	43
BLAGOVESHCHENSKIY, V. V.	20
BLAJ, C.	9
BLAJ, V.	67
BLANK, L. M.	47
BOBOVICH, YA. S.	33
BOBRIK, V. I.	18
BOCHKOV, YU. V.	28
BOGATOV, A. P.	5
BOGDANOV, V. L.	38
BOGOMOLOV, A. S.	52
BOGORODSKIY, V. V.	63
BOKHONOV, A. F.	29
BOLOTOV, I. YE.	72
BOLOTSKIY, L. T.	37
BONCH-BRUYEVICH, A. M.	69
BORISOV, N. A.	5
BORISOV, V. F.	19
ZORISOV, V. M.	41
BORISOVA, M. S.	12
BORSCH, A. A.	5
BORTKEVICH, A. V.	33
BORUKHMAN, A. N.	23, 61
BOYKO, V. A.	73
BOYTSOV, V. F.	18
BOZHKOVA, A. I.	45
BRAGIN, F. I.	72
BRAZHE, R. A.	36
BREKHOVSKIKH, G. L.	33
BRILINSKIY, M. I.	47
BRODIN, M. S.	5, 70
BRUNNER, W.	39
BRYUKHNEVICH, G. I.	65
BUCHENKOV, V. A.	7
BUDAGYAN, I. F.	29, 52
BUKHONIN, YU. S.	47
BUKZDORF, N. V.	71

BULYARSKIY, S. V.	23
BULYGIN, V. S.	63
BUNKIN, F. V.	73
BURAKOV, V. S.	29
BURBULYAVICHYUS, L. I.	23
BURSHTEYN, A. I.	15
BUTYLKIN, V. S.	79
BUYLOVA, N. A.	52
BUYNOV, G. N.	53
BUZHINSKIY, I. M.	69
BUZIN, O. F.	49
BUZNITSKIY, YE. A.	68
BYKH, A. I.	41
BYKOVSKIY, YU. A.	3, 30, 47, 52, 74

C

CHAPURSKIY, L. I.	44
CHAVCHANDZE, V. V.	52
CHAYKOVSKIY, I. A.	41
CHAYKOVSKIY, L. P.	50
CHEBOTAREV, N. F.	16
CHEBOTAYEV, N. M.	50
CHEBOTAYEV, V. P.	11, 13, 38, 40
CHEKHLOVA, T. K.	8
CHELNOKOV, L. L.	11
CHEPUR, D. V.	71
CHEREMISKIN, I. V.	8
CHEREPOV, N. I.	32
CHERESHANSKIY, V. A.	27
CHERKASOV, A. S.	8
CHERKASOV, YE. M.	12
CHERMAKADZE, R. A.	5
CHERNENKO, A. A.	8
CHERNEVICH, T. G.	53
CHERNIKOV, V. A.	73
CHERNOUSOV, N. P.	2
CHERNOV, B. K.	54
CHERNOV, V. S.	42
CHERNYSHEV, YU. A.	17
CHESNOKOV, A. V.	3
CHETVERUSHKIN, B. N.	79
CHIKHACHEVA, V. A.	26
CHIKOVANI, R. I.	5
CHIRKOV, L. YE.	53
CHISTYAKOVA, L. K.	71
CHIZHUKHIN, G. N.	36, 49
CHKUASELI, Z. D.	12
CHOJNACKI, J.	19
CHU DINH THUY	33
CHUGUNOV, A. YU.	73
CHUGUNOVA, S. I.	4
CHUMAK, V. A.	22
CHUPINA, M. S.	64
CHURILOV, S. S.	76
CHYTI, B.	44

D

D'YAKOV, YU. YE.	33
DABU, R.	29, 74
DANILEYKO, M. V.	10, 15
DANILYUK, YU. V.	27
DARVOYD, T. I.	69
DAS'KO, A. D.	8
DASHUK, P. N.	11
DAVLETCHIN, I. I.	14
DAVYDOV, A. YE.	62
DAVYDOV, G. V.	69
DEDEGKAYEV, T. T.	72
DEDUSHENKO, K. B.	4
DELONE, G. A.	75
DELONE, N. B.	37
DEMCHENKO, A. M.	23
DEMENT'YEV, I. V.	23
DEMIN, A. I.	78
DENISYUK, YU. N.	53, 79
DERBOV, V. L.	34, 41
DEREVENKO, N. K.	18
DERYAGIN, B. V.	68
DERYAGIN, V. N.	4
DERYUGIN, I. A.	53, 62
DERYUGIN, L. N.	8
DIANOV-KLOKOV, V. I.	43
DITCHUK, V. A.	24

DMITRIYEV, V. G.	31
DMYTRUK, V. P.	47
DOBRO, L. F.	12
DOBPOKHOTOVA, V. K.	3
DOKHMYAN, R. G.	36
DOKUCHAYEV, N. R.	2
DONU, V. S.	28
DOROSH, V. S.	12
DOSSON, N. I.	23
DOVGII, YA. O.	47
DRABOVICH, K. N.	41
DREYDEN, G. V.	74
DROBYAZKO, S. V.	36
DROZDOV, M. A.	24
DROZDOV, V. A.	24
DUBININ, V. V.	19
DUBNISHCHEV, YU. N.	63
DUBOVIK, A. S.	53
DUBROVIN, V. F.	29
DUERR, H.	39
DUYSEN BAYEV, M.	26
DVORNIKOV, G. D.	69
DZHAKHUTASHVILI, T. V.	5
DZHARASHNELI, YU. G.	61
DZYUBENKO, M. I.	53

E

EBRALIDZE, T. D.	52
EFENDIYEV, T. SH.	8
EGAMOV, U.	2, 7

F

FALENCHUK, A. D.	24
FANNIBO, A. K.	72
FAYENOV, A. YA.	73
FAYNBERG, YA. B.	16
FAYNSHTEYN, S. M.	35
FAYZULLAYEV, YA. Z.	13
FEDCHUK, I. U.	55, 66
FEDOROV, M. S.	4
FEDOROV, M. V.	75
FEDOROVA, G. A.	25
FEDOROVA, I. V.	4
FEDOROVA, YE. I.	25
FEDORUS, G. A.	25, 26, 27
FEDOSEYEV, D. V.	68
FEDOTOV, YA. A.	28
FEL'DMAN, G. A.	47
FERAPONTOV, N. B.	59
FERCHEV, G. P.	50
FERDMAN, N. A.	24
FERTIK, N. S.	20, 64
FILATOVA, A. K.	27
FILENKO, YU. I.	53, 67, 79
FILIPCHENKO, V. YA.	25
FILIPPOV, V. N.	74
FISHELEVA, S. B.	72
FISHER, A. M.	62
FISHER, P. S.	79
FIVEYSKIY, YU. D.	70
FOLIN, K. G.	1, 41
FOMIN, YU. I.	61
FRADKIN, E. YE.	15
FROLOV, S. I.	26
FROLOV, V. A.	66
FURSENKO, V. D.	25
FUTORSKIY, D. -L. L.	27

G

GACEK, A.	74
GAL'PERN, D. YU.	4
GALYAUDINOV, M. F.	57
GAMALIY, YE. G.	74
GANINA, N. A.	14
GAPONTSEV, V. P.	38
GARBUZOV, D. Z.	22
GASHIN, P. A.	24
GAVRILENKO, N. V.	24
GAVRILO, V. P.	63
GAYNER, A. V.	41
GAYSINSKAYA, L. B.	6

GEGUS, E.	64	ISYCHENKO, V. N.	8
GENERALOV, N. A.	11	ISMAILOV, I.	4
GEORGOBIANI, A. N.	28	ITTU, M.	29
GERASIMOV, V. B.	35	IVAKIN, YE. V.	54
GERASIMOVA, S. A.	35	IVANCHENKO, A. I.	20
GERLIVANOVA, O. G.	11	IVANCHENKO, I. A.	27
GERUNI, P. M.	51	IVANISHCHEV, V. I.	64
GINZBURG, V. M.	53, 64, 79	IVANOV, A. P.	44
GLADCHENKO, L. F.	8	IVANOV, I. P.	63
GLAUBERMAN, A. YE.	24	IVANOV, L. N.	59
GLEBOV, G. D.	64	IVANOV, N. I.	64
GNATOVSKIY, A. V.	10	IVANOV, V. A.	24
GNATYUK, L. N.	31	IVANOV, V. B.	17
GNYP, R. G.	47	IVANOV, V. M.	24
GODLINNIK, T. B.	22	IVANOV, V. N.	12
GODLEVSKIY, A. P.	64	IVANOV, V. V.	20
GOL'DEN, V. YA.	79	IVANUSHKINA, L. V.	20
GOL'DINOV, L. L.	12	IVLEV, G. D.	1, 70
GOLOSNOY, O. V.	51	IVLEV, L. S.	45
GOLOVACHEV, V.	47	IZYNEYEV, A. A.	33
GOLOVASHKIN, A. I.	64	IZYUMOV, A. O.	43, 78
GOLOVEY, M. I.	31		
GOLOVEY, M. P.	30		
GOLOYADOVA, V. I.	61		
GOLUBENKO, I. V.	29	J	
GONCHAROV, I. G.	4	JACH, K.	75
GONCHAROV, V. K.	61	JAGOSZEWSKI, E.	18, 48
GORDI, V.	38		
GORDIN, M. P.	71	K	
GORDON, YE. B.	59	KABAYEV, N. I.	41
GORELIK, V. S.	66	KAGAN, M. B.	24
GOROBCHENKO, V. S.	3	KALABUSHKIN, O. I.	9
GOROKHOV, A. A.	6	KALACHEV, B. V.	8
GOROKHOV, YU. A.	59	KALENKOV, S. G.	6
GOROKHOVSKIY, A. A.	1	KALINCHUK, V. I.	48
GORSHKOV, V. A.	9	KALININ, V. P.	19
GORSKIY, S. M.	53	KALINKIN, I. P.	24
GRAVEL', L. A.	61	KALISKI, S.	74, 75
GRACHUSHNIKOV, B. N.	1	KAMENETSKAYA, S. A.	16
GRIBKOV, V. A.	73, 74	KAMINSKI, B.	75
GRIBKOVSKIY, V. P.	4	KAMINSKIY, A. A.	2
GRIDNEVA, I. V.	4	KAMINSKIY, V. V.	72
GRIGOR'YEV, A. O.	43	KANCHEVA, L. S.	41
GRIGOR'YEV, M. A.	36	KAPLYANSKIY, A. A.	38
GRIGOR'YEV, O. N.	4	KAPORSKIY, L. N.	9
GRIGORYAN, A. L.	39	KARABUL, E. K.	14
GRINCHUK, V. A.	75	KARAMZIN, YU. N.	31, 72
GRISHCHENKO, L. V.	11	KARAPETYAN, G. O.	6
GRISHMANOVA, N. I.	18	KARAPETYAN, R. V.	75
GROMOV, A. K.	38	KARAPETYAN, S. S.	39
GROBERG, A. YU.	70	KARAU'L'NIK, A. YE.	29
GRUSHKO, N. S.	26	KARINSKIY, S. S.	36
GRYAZNOVA, I. P.	66	KARLOV, N. V.	11, 15, 59, 69
GUDKOV, N. V.	27	KARLOVA, YE. K.	69, 72
GULYAMOV, U. G.	2	KARPENKO, I. V.	24
GULYAYEV, A. M.	27	KARPENKO, S. G.	31
GUREVICH, A. I.	15	KARPINSKAS, S. CH.	23
GUREVICH, S. A.	5	KARPOV, O. V.	75
GURVICH, A. S.	44	KARYAKIN, A. V.	76
GUS'KOV, S. YU.	74	KASATKIN, A. S.	54
GUSEV, A. V.	72	KATS, M. L.	3
GUSEV, V. G.	47	KATSNEL'SON, B. G.	42
GUSEVA, T. V.	18	KAZARIN, L. N.	23
GUTKIN, A. A.	23, 26	KAZARINOV, R. F.	5, 48
GVALADZE, T. V.	1	KAZARYAN, M. A.	13
		KAZARYAN, R. A.	44
H		KAZAKOV, S. A.	70
HARSANYI, A.	21	KESAMANLY, F. P.	28
HORVATH, Z. CY.	40	KESKINOVA, E. N.	39
		KHAIMOV-MAL'KOV, V. YA.	1
I		KHALEZOV, A. A.	66
IGOSHIN, V. I.	15	KHAPOV, YU. I.	16
IL'IN, V. G.	6	KHARITONOV, I. M.	29
IL'INSKIY, YU. A.	40	KHARTUNG, K.	12
IM TKHEK-DE	32	KHATKEVICH, A. G.	31
IMAS, YA. A.	69	KHAYBULLIN, I. B.	57
INYUSHIN, A. I.	47	KHAYDAROV, A. V.	6
IONESCU, A.	9, 64	KHAYDAROV, K.	7
IRTUGANOV, V. M.	19	KHAYKIN, B. YE.	51
ISAKOV, A. I.	74	KHAYTUN, F. I.	46
ISAKOV, V. A.	59	KHAZANOVA, R. A.	48
ISAYEV, A. A.	13	KHAZOV, L. D.	43
ISBASESCU, M.	74	KHINRIKUS, KH. V.	25
		KHITROVA, V. S.	52
		KHLEBNIKOV, N. N.	5

KHO NGOK KHOANG	70	KOSYNKIN, V. D.	11
KHODIKEL', YE. P.	49	KOTOV, V. V.	26
KHOLODNYKH, A. I.	33	KOVACH, R. I.	23
KHRAMTSOV, A. P.	4	KOVALENKO, V. F.	28
KHRIPCHENKO, I. A.	49	KOVALENKO, YE. S.	1
KHROMOV, B. M.	43	KOVARSKIY, V. A.	24, 80
KHRONOPULO, YU. G.	79	KOVNER, M. A.	41
KHUDENSKIY, YU. K.	41	KOWALIK, W.	18
KHUSANOV, M. M.	21	KOZHEVNIKOV, A. V.	4
KHUTKO, I. S.	44	KOZMANYAN, A. A.	39
KIELICH, S.	32, 37	KOZUBOVSKIY, V. R.	15
KIOSEV, V. K.	25	KOZYARSKIY, D. YU.	79
KIR'YASHKINA, Z. I.	25	KRAKAU, YU. A.	56
KIRCHEVA, P. P.	39	KRASAVINA, YE. M.	4
KIREYEV, P. S.	26	KRASHNOTSVETOVA, I. YE.	43
KIRILLOV, G. A.	17	KRASNOV, I. V.	55
KIRPICHNIKOV, V. N.	55	KRASNOV, V. A.	54
KISELEV, A. M.	45	KRASTIN, V. G.	29
KISENKO, V. YE.	28	KRAVCHENKO, V. B.	38
KLEIN, J.	33	KRAVCHENKO, V. F.	14
KLEMENT'YEV, V. M.	13, 63	KRAYSKIY, A. V.	34
KLENN, S. A.	21	KREKOV, G. M.	45
KLIMENKO, I. S.	54	KREMENCHUGSKIY, L. S.	25
KLIMENTOVA, T. M.	10	KRINDACH, D. P.	70
KLIMKIN, V. M.	14	KRISHTAL', V. A.	53
KLIMONTOVICH, YU. L.	34, 77	KRIVOSHCHIEKOV, G. V.	1, 35
KLOCHKOV, V. P.	38	KROKHIN, O. N.	73, 74
KLOSE, E.	39	KROO, N.	40
KLYKOV, V. I.	28	KROPOTKIN, M. A.	45
KLYUKACH, I. L.	9	KRULITSKIY, F.	25
KMITSKEVICH, I. K.	82	KRUPITSKIY, E. I.	54
KNEIPP, K.	33	KRUZHILIN, YU. I.	37
KNEIPP, K. D.	34	KRYACHKO, V. V.	26
KNIZHNIKOV, V. N.	36	KRYLOV, K. I.	1, 65, 68, 80
KOBZEV, V. V.	48	KRYLOV, V. N.	31
KOCHEMASOV, G. G.	17	KRYUKOVA, I. V.	4
KOENIG, P.	40	KSENDZATSKAYA, YU. N.	24
KOFMAN, A. G.	15	KUBAREV, A. M.	45
KOLACHEVSKIY, N. N.	57	KUBRAK, V. P.	61
KOLCHIN, YE. YE.	43	KUCH'YANOV, A. S.	1
KOLESNICHENKO, V. P.	27	KUDRIN, L. P.	80
KOLESNIKOV, B. N.	7	KUDRYAVTSEV, YI. M.	78
KOLESNIKOV, V. M.	1	KUKLEV, YU. I.	11
KOLOKOLOV, A. A.	41	KULAGIN, YU. A.	78
KOLOMIYETS, B. T.	25	KULIKOV, S. M.	17
KOLOMIYSKIY, YU. R.	16	KULYASOV, V. N.	12
KOLOMNIKOV, YU. D.	18	KUPERSHMDT, V. YA.	42
KOLYADIN, A. I.	65	KUPRIYANOV, S. YE.	12
KOLYSHKIN, V. I.	6	KURASHOV, V. N.	53, 62
KOMAR, V. G.	54	KURATEV, I. I.	3
KOMAROV, K. P.	41	KURBATOV, V. M.	65, 79
KOMAROV, V. N.	12	KUZ'MICHEV, V. M.	61
KOMASHCHENKO, V. N.	25	KUZ'MIN, G. F.	11, 69
KOMKOV, B. G.	20	KUZ'MIN, R. N.	29
KOMOLOV, V. L.	69	KUZ'MINOV, YU. S.	32
KOMPANEYETS, O. N.	80	KUZNECHIK, O. P.	65
KONAYEVA, G. YA.	66	KUZNETSOV, A. I.	48
KONJEVIC, N.	44	KUZNETSOV, YU. A.	28
KONNIKOV, S. G.	22	KUZNETSOVA, T. I.	59
KONONENKO, V. K.	80	KVAPIL, J.	40
KONOV, V. I.	73	KVAPIL, JOS.	40
KONOVALOV, I. P.	10		
KONOVALOV, V. A.	31		
KONYUKHOV, V. K.	14		
KOPICZYNSKI, T.	14		
KOPINETS, I. F.	71		
KOPTSIK, V. A.	2		
KORDA, I. M.	39		
KORMER, S. B.	17		
KORNIYENKO, N. YE.	31		
KOROBITSYN, B. V.	24		
KOROBKIN, V. V.	7, 48		
KOROLOV, O. YE.	5		
KOROL'KOV, V. I.	21, 22		
KOROLEV, V. I.	20		
KORONKEVICH, V. P.	10		
KOROSTELEV, A. A.	54		
KOROTEYEV, N. I.	33		
KOROTKOV, V. I.	71		
KORYAGIN, V. F.	1		
KOS'YANENKO, A. V.	44		
KOSHEL'KOV, V. A.	16		
KOSHELEV, K. N.	76		
KOSOROTOV, V. F.	25		
KOSTKO, O. K.	45		
		L	
		L'VOVA, N. A.	47
		LAKHNO, V. I.	2
		LANDAU, A. L.	67
		LANDIN, V. A.	23
		LAPTEV, V. A.	1
		LARICHEV, M. N.	59
		LARIN, V. L.	10
		LARINA, R. R.	68, 69
		LARINOV, N. P.	51
		LARIONOV, V. R.	5, 6, 22
		LARKIN, A. I.	52, 55
		LATUSH, YE. L.	14
		LATYNIN, YU. M.	61
		LAU, A.	33
		LAVRENT'YEV, A. V.	68
		LAVROV, A. V.	28
		LAVROVSKIY, L. J.	1, 61
		LAVRUSHIN, B. M.	5
		LAZ'KO, L. A.	30, 36
		LEBED'KO, YE. G.	46
		LEBEDEV, V. B.	63

LEBEDEV, V. P.	1, 53
LEF, I. YA.	46
LEKHTSIYER, YE. N.	65
LEONOV, R. K.	65
LEONT'YEV, K. L.	29
LEONT'YEV, V. G.	10
LETOKHOV, V. S.	59, 60, 80
LEUPOLD, D.	40
LEVIN, G. G.	79
LEVIN, M. B.	8
LEVINSON, G. R.	67
LEVITES, A. F.	65
LEVKOYEV, I. I.	7
LEYKIN, A. YA.	64
LEYPUNSKIY, I. O.	59
LEKHTSIYER, YE. N.	64
LINKER, B. YU.	20
LIPIN, A. L.	49
LIPINSKA, B.	18
LISENKOVA, T. V.	24
LISIN, O. G.	66
LISITSA, V. S.	80
LISITSKIY, I. S.	69
LISITSYN, V. N.	8
LISOVENKO, V. D.	23
LVSHITS, V. YA.	6
LOKHMATOV, A. I.	10
LOKHOV, YU. N.	70
LOMADZE, S. O.	44
LOPAREV, A. N.	61
LOPASOV, V. P.	64
LOSHKAREVA, N. N.	50
LOTKOVA, E. N.	12
LOYKO, N. A.	19, 41
LUGINA, A. S.	31
LUIZOVA, L. A.	55
LUK'YANENKO, S. F.	64
LUK'YANOV, V. N.	4
LUKIN, A. V.	18, 51, 55
LUKOVNIKOV, A. I.	14
LUPIN, V. M.	26
LYAKHOV, G. A.	9
LYUBASHEVSKAYA, T. L.	24
LYUBIMOV, V. V.	18
LYUBIN, V. M.	25

M

MACHKUS, P. V.	26
MACHEVSKA, Z.	18
MAGDA, I. I.	16
MAK, A. A.	7
MAKARENKO, V. V.	65
MAKAREVICH, A. A.	76
MAKAROV, A. A.	60
MAKAROV, G. N.	59
MAKAROV, V. N.	20
MAKAROV, YE. F.	17
MAKARYCHEV, P. P.	36
MAKHVILADZE, T. M.	42
MAKOGON, M. M.	2
MAKOVKIN, A. V.	3, 47
MAKSIMOV, YU. YA.	62
MAKUKHA, V. K.	1
MALASHKO, YA. I.	9
MALININ, V. R.	49
MALINKIN, V. G.	78
MALOV, L. R.	31
MALYAROVSKIY, A. I.	71
MALYGINA, A. A.	65
MALYSHEV, V. I.	7
MALYUTIN, A. A.	4
MAMEDOV, A. M.	36
MAMONOV, S. K.	7
MAMONTOV, O. A.	49
MAMYSHEV, V. V.	21
MAN'KO, A. A.	31
MANDEL', A. YE.	1
MANDROSOV, V. I.	55
MANVELYAN, M. G.	39
MANYKIN, E. A.	30, 31
MARASIN, L. YE.	4
MARCHENKO, A. I.	26
MARCHENKO, L. S.	26

MARCHENKO, S. N.	31
MARCHENKO, V. M.	14
MARGARYAN, A. A.	39
MARKIN, YE. P.	59
MARKOVA, S. V.	13
MARKUS, F. S.	54
MARONCHUK, I. YE.	28
MARTYNOV, A. M.	36
MASENKO, B. P.	23, 28
MASKAYEV, YU. A.	2
MASLOV, V. G.	33
MASLOV, V. N.	5
MATINYAN, YE. G.	54
MATKOVA, I.	22
MATSIYEVICH, L. V.	56
MATSKEVICH, V. K.	42
MATYUSHKOV, V. YE.	29
MAYMISTOV, A. I.	31
MAYOROV, S. A.	49
MAYSTRENKO, A. S.	25
MAZAN'KO, I. P.	48
MAZURENKO, YU. T.	20
MEDVEDEV, B. A.	3
MEDVEDEV, V. YE.	56
MEGRELISHVILI, R. SH.	52
MEL'NIKOV, L. A.	10
MEL'NIKOV, M. M.	24
MEL'NIKOV, N. A.	68
MEL'NIKOVA, A. P.	43
MELIKYAN, A. O.	37
MELISHCHUK, M. V.	9
MERKUL'YEV, YU. A.	74
MESHCHANKIN, V. M.	64, 79
MESHKOV, G. G.	18
MICLAUS, V.	21
MIGOLETS, I. M.	71
MIKHAYEVSKIY, V. S.	14
MIKHAYLOV, A. A.	49
MIKHAYLOV, B. S.	20
MIKHAYLOV, YU. A.	73
MIKHAYLOVA, V. I.	56
MIKHAYLOVA, YE. I.	56
MIKHEYEV, L. D.	17
MIKHNOV, S. A.	29
MIL'MAN, YU. V.	4
MILINKIS, B. M.	51
MILIYANCHUK, M. V.	27
MILYUTIN, YE. R.	44
MIN'KO, L. YA.	76
MINOCIN, V. G.	80
MIRGALOVSKAYA, M. S.	6
MIRKIN, L. I.	68, 69
MIRONOV, V. L.	44, 78
MIROSHNICHENKO, O. N.	62
MIROVITSKIY, D. I.	29, 51, 55, 56, 58
MIRSAGATOV, SH. A.	26
MIRTALPOV, M. M.	27
MIT'KIN, V. M.	7
MITIN, G. G.	66
MITROFANOV, A. S.	65, 68
MITSEN, K. V.	64
MITYKO, G.	21
MIZERACZYK, J.	14, 19
MIZEROV, M. N.	5
MKRTCHYAN, V. S.	30
MOGIL'NITSKIY, B. S.	18
MOKRITSKIY, V. A.	28
MOLODYAN, I. P.	22, 26
MONASTYRSKIY, L. S.	27
MORGUN, YU. F.	1, 70
MOROZOV, B. A.	66
MOROZOV, B. N.	39
MOROZOV, I. I.	59
MOROZOVA, YE. A.	34
MORY, S.	40
MOSKALENKO, N. I.	39
MOSKVIN, YU. L.	59
MOSPANOV, V. S.	70
MOTULEVICH, G. P.	64
MURATOV, V. R.	1
MURAV'YEV, V. V.	12
MURAV'YEVA, K. K.	24
MURAVITSKIY, M. A.	1, 61
MURUGOV, V. M.	17
MUSTAFIN, K. S.	51, 53, 55

MUZALEVSKIY, YE. A. 26

N

NABOYKIN, YU. V. 3  
NAXHUTIN, I. YE. 30  
NALIMOV, I. P. 55, 66  
NAPARTOVICH, A. P. 41  
NAPARTOVICH, YE. SH. 41  
NARKHOVA, G. I. 20  
NASLEDOV, D. N. 26  
NAUMOVA, I. I. 2  
NAYANOV, V. E. 36  
NAZAROVA, L. G. 67  
NAZINTSEV, V. V. 22  
NAZVANOV, V. F. 25  
NECHAYEV, B. A. 66  
NECHAYEV, N. V. 70  
NEDAVNIY, A. P. 10, 15  
NEGODAYEV, G. D. 6  
NEMTINOV, V. B. 55  
NEPARENT, B. S. 38  
NESTEROVA, Z. V. 29  
NGUEN MIN' KHIYEN 70  
NIKASHIN, V. A. 56  
NIKIFOROV, S. M. 11  
NIKITENKO, A. I. 74  
NIKTIN, V. G. 21  
NEKOGOSYAN, D. N. 31  
NIKOL'SKIY, V. K. 3  
NIKOLAYEV, L. V. 44  
NIKOLAYEV, V. D. 17  
NIKONOVA, T. V. 26  
NIKULIN, V. YA. 73, 74  
NOVIK, A. YE. 43  
NOVIKOV, YU. B. 61  
NULLER, T. A. 24

O

OCHKIN, V. N. 12  
ODINTSOV, A. I. 62  
ODULOV, S. G. 56  
OGORODNEYCHUK, I. F. 41  
OGURTSOVA, L. A. 3  
OL'SKAYA, M. A. 72  
OLEYNIK, I. S. 23, 61  
ONIPKO, A. F. 24  
ONISHCHENKO, A. M. 2, 3  
OPARIN, D. A. 46  
OPRAN, M. E. 21  
ORAYEVSKIY, A. N. 15, 59, 60  
ORISHICH, A. M. 11, 16  
ORLOV, L. N. 10  
ORLOV, R. YU. 9  
ORLOV, V. K. 35  
OSIKO, V. V. 32  
OSINSKIY, V. I. 50, 70  
OSTAPCHENKO, YE. P. 10  
OSTRIN, S. T. 56  
OSTROVSKAYA, G. V. 74  
OSTROVSKIY, YU. I. 74  
OVANDER, L. N. 37  
OVCHAR, V. V. 5  
OVSYANNIKOV, V. D. 61  
OZGO, Z. 37

P

P'YANOV, V. V. 18  
PANASYUK, L. M. 23  
PANKOV, E. D. 81  
PAPAKIN, V. F. 14  
PARAMONOVA, N. A. 38  
PARITSKAYA, G. G. 56  
PASHCHENKO, V. Z. 66  
PASHEV, G. P. 67  
PASHKOV, V. A. 2  
PASHMANIK, G. A. 34, 45  
PASTUSHKOV, A. A. 58  
PATRUSHEV, G. YA. 44  
PAUL, H. 39  
PAVELETS, A. M. 27  
PAVELETS, S. YU. 27  
PAVLOVA, A. F. 43

PAVLOVA, Z. V. 23  
PAVLYGIN, G. N. 65, 79  
PEKAR, I. YE. 5  
PEKERMAN, F. M. 49  
PEN'KOV, A. A. 81  
PEREBEYNOS, V. V. 73  
PEREL'MAN, N. F. 24  
PEREVERZEV, G. V. 58  
PERKAL'SKIS, B. SH. 10  
PERLOV, D. I. 7  
PERNER, B. 40  
PESHKO, A. YA. 70  
PESHKOV, A. V. 66  
PETELIN, A. N. 60  
PETRAK, D. 66  
PETRASH, G. G. 13  
PETRASHKO, G. A. 31  
PETRENKO, A. D. 37  
PETRENKO, N. S. 26  
PETROSYAN, K. B. 75  
PETROV, A. I. 2  
PETROV, G. D. 75  
PETROV, M. P. 56  
PETROV, V. D. 55, 56  
PETROVA, I. M. 18  
PETROVICH, I. P. 54  
PICHUGIN, A. P. 56  
PIEKARA, A. 38  
PIKHTELEV, A. I. 67  
PIKULIK, L. G. 8  
PKUZ, S. A. 73  
PILIPOVICH, V. A. 61, 70  
PIMENOV, V. P. 60  
PISARENKO, V. V. 12  
PISAREVSKIY, V. K. 27  
PIVOVAROV, O. N. 30, 32  
PIVOVAROV, V. M. 72  
PIVTSOV, V. S. 1  
PLETNEVA, N. I. 66  
PL'MAK, L. I. 60  
PLOTNIKOV, A. F. 50  
PLYUSNINA, E. N. 79  
POBEDONOSTSEVA, N. A. 74  
PODAVALOVA, O. P. 32  
PODGORNIYY, A. P. 3  
PODMANITSKIY, A. 52  
POGODAYEV, V. A. 71  
POGOSYAN, K. P. 44  
POKASOV, V. V. 44  
POKROVSKAYA, F. S. 3  
POLSHKOV, M. K. 48  
POLUEKTOV, P. P. 30  
POLUKHIN, V. N. 7  
PONATH, H. E. 33, 34  
PONOMAREV, YU. N. 2  
PONOMARENKO, A. G. 11, 16  
POPEL', A. M. 29  
POPELA, B. 66  
POPOV, A. K. 32, 37  
POPOV, L. N. 47  
POPOV, V. S. 19  
POPOV, YU. V. 4, 26, 29  
PORFIR'YEV, L. F. 21  
PORTASOV, V. S. 45  
PORTNOY, YE. L. 5, 48  
POTAPENKO, YA. L. 24  
POTAPOV, O. A. 48  
POTAPOV, S. K. 34, 41  
POTEMKIN, A. V. 3  
POYZNER, B. N. 10  
POZDNYAKOV, A. YE. 69  
PRESNOV, V. A. 27  
PRESNYAKOV, YU. P. 58  
PRESS, S. M. 66  
PRIVALOV, V. YE. 68, 78  
PROKHORENKO, A. S. 4  
PROKHOROV, A. M. 11, 15, 32, 48, 59, 73  
PROSHIN, V. I. 69  
PROTAS, I. M. 71  
PROTAS, I. R. 56  
PROTSENKO, V. N. 58  
PROTSENKO, YE. D. 10  
PROVOROV, A. S. 11  
PRYANIKOVA, G. A. 63  
PRZHEVUSKIY, A. K. 1



PSHEZHETSKIY, S. YA. 16  
 PUCHKOVA, K. N. 24  
 PUKHOV, YU. G. 23  
 PUSTOVALOV, V. V. 73  
 PYATIKOP, A. P. 53  
 PYRSKOVA, P. D. 63  
 PYSHKIN, O. S. 42

R

RABINOVICH, L. V. 72  
 RACHIN, V. A. 38  
 RADAUTSAN, S. I. 23, 25, 26  
 RADUSHKEVICH, L. A. 72  
 RAFIKOV, R. A. 51, 55  
 RAKHIMOV, R. F. 45  
 RAKOVA, N. S. 82  
 RAMAZANOV, P. YE. 22, 26  
 RASHKOVICH, L. N. 2  
 RASULOV, D. T. 26  
 RATNER, A. M. 42  
 RAYKHMAN, B. A. 12  
 RAYZER, YU. P. 11  
 RAZMADZE, N. A. 12  
 RAZYKOV, T. M. 21  
 REZ, A. I. 42  
 REZAYEV, N. I. 34  
 RICHTER, P. 49  
 RESTICI, M. 9, 67  
 RODICHKIN, V. A. 76  
 RODIONOV, A. N. 50  
 ROKAKH, A. G. 25  
 ROM-KRICHEVSKAYA, I. A. 42  
 ROMANENKO, I. L. 70  
 ROMANENKO, V. I. 59  
 ROMASHEV, YE. S. 52  
 ROOZE, N. S. 39  
 ROTAR', S. V. 62  
 ROVINSKIY, A. P. 27  
 ROVINSKIY, V. I. 61  
 ROYTENBURG, D. I. 11  
 ROYTSYNA, O. V. 25  
 ROZANOV, V. B. 74  
 ROZENSHTeyN, A. Z. 68  
 ROZHANSKIY, V. A. 48  
 ROZHITSKIY, N. N. 41  
 ROZHKOVA, O. V. 55  
 RUBAN, M. A. 25  
 RUBANOV, A. S. 7, 19, 54  
 RUBENCHIK, A. M. 76  
 RUBEZHINYY, YU. G. 30  
 RUBIN, A. B. 66  
 RUBIN, L. B. 66  
 RUBININA, N. M. 29  
 RUBINOV, A. N. 8, 39  
 RUBINSHTeyN, B. I. 61  
 RUDNITSKIY, YU. P. 9, 38  
 RUDNEV, A. N. 68  
 RUDOVOL, T. V. 22  
 RUKMAN, G. I. 31, 56  
 RUMYANTSEV, V. D. 22  
 RUPASOV, A. A. 73  
 RUSSU, YE. V. 26  
 RYABENKO, A. G. 17  
 RYABTSEV, G. I. 4  
 RYAZANOV, M. I. 56  
 RYCHKOVA, YE. R. 74, 76  
 RYSAKOV, V. M. 71  
 RYUKKERT, V. V. 63  
 RYZHIY, V. I. 6

S

SADIYEV, A. 4  
 SADOVSKIY, A. B. 67  
 SAFRONOV, G. S. 56, 67  
 SAFRONOVA, A. P. 56  
 SAIDOV, M. S. 27  
 SAKHAROV, Y. K. 56  
 SAKSEYEV, D. A. 24  
 SAL'KOV, YE. A. 25  
 SALAMAKHIN, K. M. 44  
 SALLYADINOV, V. S. 69  
 SAMOKHVALOV, A. A. 50  
 SAMOYLOVICH, A. I. 20

SAMOYLYUKOVICH, V. A. 4  
 SAMSON, A. M. 19, 41  
 SAPOZHNIKOV, YU. YE. 31  
 SAPOZHNIKOVA, V. A. 63  
 SARKISOV, S. E. 2  
 SARTAKOV, B. G. 59  
 SARYCHEV, M. YE. 42  
 SARZYNSKI, A. 74  
 SATAROV, L. M. 15  
 SATOV, YU. A. 41  
 SATTAROV, D. K. 66  
 SAVICHEV, A. T. 73  
 SAVIN, B. M. 43  
 SAVIN, P. T. 28  
 SAVIN, V. V. 13  
 SAVITSKIY, V. G. 27  
 SAVKA, N. 25  
 SAVUSHKIN, A. F. 15  
 SCHILLING, H. 50  
 SCHOENNAGEL, H. 50  
 SEDEL'NIKOV, V. A. 10, 30  
 SEDLETSKIY, O. A. 24  
 SEDOV, B. M. 20  
 SELEZNEV, A. M. 52  
 SELEZNEV, V. G. 52, 67  
 SELEZNEV, V. N. 50  
 SELIVERSTOV, V. N. 29  
 SELYAKOV, V. I. 14  
 SEM, M. F. 14  
 SEMENOV, A. A. 3  
 SEMENOV, E. G. 64, 65, 79  
 SEMENOV, O. G. 71, 74  
 SEMENOV, V. K. 76  
 SEMENOV, YE. P. 12, 61  
 SEREBRYAKOV, V. A. 20  
 SEROV, O. B. 67  
 SEROV, R. V. 7, 48  
 SEPOV, V. V. 48  
 SHABLIY, I. YU. 70  
 SHAGDAROV, V. B. 29  
 SHALAYEV, YE. A. 31  
 SHALIMOVA, K. V. 27  
 SHAMURATOV, KH. A. 27  
 SHANN, V. I. 56  
 SHANSKIY, V. F. 16  
 SHAPOV, V. S. 56  
 SHARLAY, S. F. 1, 46  
 SHARKOV, B. YU. 74  
 SHATILOV, A. V. 69  
 SHAVEL', N. N. 4  
 SHAVERDYAN, F. M. 50  
 SHCHAVELEV, O. S. 7  
 SHCHAVLEV, L. I. 44  
 SHCHEDRIN, A. I. 16  
 SHCHEGLOV, V. A. 60  
 SHCHELEV, M. YA. 48  
 SHCHELKUNOV, K. N. 49  
 SHCHERBAKOV, A. A. 20  
 SHEDOVA, YE. N. 74  
 SHEFTAL', N. N. 28  
 SHELEPIN, L. A. 78  
 SHELKOV, N. V. 4  
 SHELOPUT, D. V. 36  
 SHELOVANOVA, G. N. 6, 22  
 SHELYKH, A. I. 72  
 SHEMETOV, V. V. 45  
 SHEMYAKOVA, T. D. 28  
 SHEPETUKHA, G. M. 56  
 SHEVCHENKO, R. A. 81  
 SHEVCHENKO, V. V. 53  
 SHEVEL', S. I. 5  
 SHEVELEVA, T. YU. 45  
 SHIBANOV, A. N. 7  
 SHIGORIN, V. D. 30  
 SHIKANOV, A. S. 73  
 SHIPILOV, K. F. 71  
 SHPULO, G. P. 30  
 SHIROKOV, V. I. 8  
 SHISHARIN, A. V. 21  
 SHKOL'NIK, A. L. 5  
 SHMAL'KO, A. V. 3  
 SHMAONOV, T. A. 71  
 SHOKHUDZHAYEV, N. 4  
 SHOR, E. M. 54  
 SHPAK, M. T. 9, 10, 15



SHPAKOV, YU.	43	SUCHKOV, A. F.	81
SHTAN'KO, A. YE.	58	SUDAKOV, V. V.	41
SHTYRKOV, YE. I.	57	SUKHAREV, S. A.	17
SHUKUROV, N.	12	SUKHONIN, YE. V.	43
SHUL'MAN, S. G.	72	SUKHORUKOV, A. P.	31, 35, 70, 72
SHUMEYKO, V. V.	25	SUMINOV, V. M.	81
SHUSTIN, O. A.	53	SUNDEYEVA, A. O.	76
SHUVALOV, S. M.	74	SUSHCHINSKIY, M. M.	33, 34, 66
SHUVALOV, V. V.	32	SVENTSITSKAYA, N. A.	18
SHVEYKIN, V. I.	3, 4	SVERDLOV, B. N.	5
SIDOROV, A. N.	11, 33	SVIRIDENKOV, E. A.	38
SIDOROVICH, V. G.	57	SVIRIDOV, M. V.	48
SIL'NITSKIY, A. F.	8	SWIERCZYNSKIY, R.	75
SIL'NOV, S. M.	74	SYCHEV, A. A.	7
SILIN, V. P.	73, 76	SYNAKH, V. S.	35
SILKINA, T. G.	3	SYNOROV, V. F.	27
SIMASHKEVICH, A. V.	24	SYRBU, A. V.	26
SIMKIN, YU. YE.	47	SYRBU, N. N.	25
SINYAVSKIY, E. P.	38	SYSOYEV, B. I.	27
SIROTYUK, S. N.	27	SYTS'KO, YU. I.	16
SISAKYAN, YE. V.	69		
SIVERS, V. N.	68		
SKACHEK, G. V.	16		
SKACHKOVA, L. M.	3		
SKLIZKOV, G. V.	73, 74		
SKOKOV, YU. V.	30		
SKORIK, K. I.	28		
SKOROBOGATOV, B. S.	2		
SKOROBOGATOV, G. A.	42		
SKREBNEVA, O. V.	30		
SKRELIN, A. L.	44		
SKRINSKIY, V. M.	24		
SKROTSKIY, G. V.	54, 57, 58		
SKVORCHEVSKIY, A. K.	81		
SLAVNOV, S. G.	81		
SLESAREV, YU. N.	49		
SLYUSARENKO, V. I.	24		
SMILGA, A. A.	26		
SMIRNOV, A. YA.	19		
SMIRNOV, G. I.	10		
SMIRNOV, I. A.	72		
SMIRNOV, S. A.	47		
SMIRNOV, V. L.	3, 47		
SMIRNOV, V. N.	69		
SMIRNOV, V. S.	8, 30		
SMIRNOV, V. V.	57		
SMYSLOV, YE. F.	69		
SNEGOV, M. I.	8		
SOBEL'MAN, I. I.	60, 63		
SOBOLEV, G. A.	67		
SOBOLEV, N. N.	12, 78		
SOBOLEV, V. S.	63		
SOKOLOV, A. V.	43		
SOKOLOV, I. I.	11		
SOKOLOV, I. V.	42		
SOKOLOV, V. A.	15		
SOKOLOVSKAYA, A. I.	34		
SOKOLOVSKIY, B. S.	27		
SOKOLOVSKIY, R. I.	37, 42		
SOLOMATIN, V. S.	32		
SOLOUKHIN, R. I.	11, 16, 20		
SOLOV'YEV, V. S.	11, 62		
SOROKIN, K. V.	29		
SOROKO, L. M.	57		
SOSKIN, M. S.	56		
SPEKTOROV, L. A.	76		
SPORNIK, N. M.	57		
STAFEYEV, V. I.	22		
STASEL'KO, D. I.	57		
STASYUK, I. V.	29		
STAVROV, A. A.	29		
STEL'MAKH, M. F.	2		
STEPANOV, A. I.	7, 47		
STEPANOV, B. M.	53, 64, 65, 79		
STEPANOV, L. N.	68		
STEPANOV, V. M.	47		
STOLYAROV, A. D.	32		
STRATAN, A.	74		
STREL'NIKOVA, I. A.	6		
STRELKOV, G. M.	71		
STRIZHEVSKIY, V. L.	31, 34		
STROKOVSKIY, G. A.	78		
STRYGIN, L. V.	57		
STUPAK, M. F.	35		
STUPNIKOV, V. K.	47		
		T	
		TABIBI, M. B.	34
		TAGIROV, R. B.	20
		TAKLAYA, A. A.	12
		TAL'ROZE, V. L.	17, 59
		TAMOYKIN, V. V.	35
		TANIN, L. V.	74
		TARASENKO, V. F.	13
		TARASOV, V. M.	1
		TARTAKOVSKIY, G. KH.	32
		TASHICHEYEV, V. M.	24
		TATANINOV, V. V.	62
		TATEVOSYAN, L. A.	51, 52
		TAUKCHI, V. M.	49
		TAURIN, N. F.	65
		TELEGIN, B. V.	62
		TELEGIN, G. I.	13
		TELEGIN, L. S.	9
		TELESHEVSKIY, V. I.	51, 57, 65
		TEN, A. P.	44
		TEN, V. P.	4
		TER-POGOSYAN, A. D.	51
		TERLETSKAYA, L. L.	28
		TESHABAYEV, A.	21
		TEZLEVAN, V. YE.	23
		TIBILOV, S. S.	39
		TIKHONCHUK, V. T.	73
		TIKHONOV, YE. A.	9
		TIMOFEYEV, I. B.	73
		TISZA, S.	49
		TITOV, A. N.	29, 51, 55
		TITOV, R. A.	38
		TKACH, YU. V.	16
		TOKARCHUK, D. N.	50
		TOKAREV, O. D.	44
		TOLCHEN, V. G.	50
		TOLPINA, S. P.	79
		TOLSTOY, M. N.	59
		TOMASZEWSKI, E.	10
		TOROPOVA, T. P.	44
		TRET'YAKOV, D. N.	22
		TRIBEL'SKIY, M. I.	70
		TRIFONOV, YE. D.	42
		TROFIM, V. G.	22, 26
		TROITSKIY, YU. V.	46
		TROTSENKO, N. K.	30
		TRUBACHEV, E. A.	12
		TRUBNIKOV, B. A.	77
		TSAREV, A. S.	68
		TSARFIN, V. YA.	79
		TSEKHOMSKIY, V. A.	59
		TSENER, M. YA.	33
		TSIMBROVSKAYA, L. I.	82
		TSIRUL'NIKOV, D. A.	55
		TSITSIASHVILI, S. S.	63
		TSUKERMAN, N. M.	25
		TSURKAN, A. YE.	28
		TSVETAYEV, K. P.	51, 67
		TSYVK, R. SH.	44
		TSYRLIN, L. E.	25
		TUCHIN, V. V.	10, 30
		TUMANOV, O. A.	16
		TUMAYKIN, A. M.	30

TURKIN, N. G. 62  
 TURUKHANO, B. G. 50  
 TURUNDAYEVSKIY, V. B. 36  
 TUSOV, V. B. 66  
 TUTELEA, S. 9  
 TYKVENKO, R. N. 24  
 TYURIN, YU. G. 28

U

UGOZHAYEV, V. D. 1  
 ULUGOVA, M. S. 28  
 URIN, B. M. 81  
 URLIN, V. D. 17  
 USANOV, YU. YE. 56  
 USHAKOV, L. S. 53, 67  
 USHAKOV, S. A. 69  
 JTKIN, YE. N. 63  
 UZKIY, A. F. 3, 4

V

VAGIN, L. N. 67  
 VAKHMYANIN, K. P. 20  
 VANIN, V. A. 67  
 VARGANOV, S. V. 27  
 VARGIN, A. N. 14  
 VARSHAVSKAYA, I. G. 68  
 VASIL'YEV, A. P. 40  
 VASIL'YEV, G. K. 17  
 VASIL'YEV, S. A. 57  
 VASIL'YEV, V. N. 57, 58  
 VASILIU, V. 67  
 VAYNSHTEYN, V. D. 46  
 VAYTKUS, YU. YU. 70  
 VDOVIN, YU. A. 42  
 VECHKANOVA, R. A. 32  
 VEDENOV, A. A. 36  
 VELICHKINA, T. S. 53  
 VELICHKO, I. A. 36  
 VELIKOTNYI, M. A. 81  
 VETITNEVA, M. M. 24  
 VIGASIN, A. A. 35, 70  
 VILENSKIY, YU. 43  
 VINOGRADOV, A. V. 76  
 VISHENSKIY, A. A. 62  
 VITKIN, E. I. 70  
 VIZHIN, V. V. 17  
 VLAD, V. I. 50  
 VLADIMIROV, V. V. 16  
 VLASOV, N. G. 58, 79  
 VLASOV, S. N. 35  
 VLASOV, V. G. 66  
 VLOKH, O. G. 30, 76  
 VOKHMIN, V. A. 10  
 VOLCHENOK, V. I. 12  
 VOLKOV, A. YU. 78  
 VOLKOV, I. V. 58  
 VOLKOV, L. A. 28  
 VOLKOV, V. I. 5  
 VOLOSOV, V. D. 31  
 VOROB'YEV, F. A. 42  
 VOROB'YEV, V. V. 45  
 VOROB'YEVA, YE. F. 58  
 VOROBAYCHIKOV, E. S. 10  
 VORONIN, E. S. 32, 62  
 VORONOV, G. 60  
 VORONOV, V. V. 32  
 VOYTOVICH, A. P. 19  
 VOYTSEKHOVSKAYA, O. K. 13  
 VUL', V. A. 51  
 VUL'FSON, YE. K. 76  
 VYGOVSKAYA, YE. A. 26

W

WERNCKE, W. 33, 38  
 WIESS, H. 50  
 WOLEJKO, L. 32  
 WREMBEL, H. Z. 43

Y

YAGUDAYEV, G. R. 28  
 YAKIMOVICH, A. P. 58  
 YAKOBI, YU. A. 20

YAKOVENKO, A. A. 21, 22  
 YAKOVLENKO, S. I. 16, 80  
 YAKOVLEV, I. A. 53  
 YAKOVLEV, V. A. 63  
 YAKUBOVICH, S. D. 4  
 YAKUNIN, V. P. 62  
 YALOVOY, V. I. 17  
 YAMPOL'SKIY, P. A. 65  
 YANOVSKIY, V. G. 29  
 YANUSHKEVICH, A. F. 76  
 YARASHYUNAS, K. YU. 70  
 YAROVOY, P. N. 67  
 YARYSHEVA, M. D. 11  
 YASHKIR, YU. N. 34  
 YATSENKO, S. P. 3  
 YEGOROV, A. L. 7  
 YEGOROV, G. S. 21  
 YEGOROV, N. P. 12  
 YELDYSHEV, N. N. 46  
 YEJISEYEV, P. G. 5, 6  
 YELKHOV, V. A. 52  
 YEMEL'YANOV, V. I. 34, 77  
 YERMACHENKO, V. M. 42  
 YERMAKOV, B. A. 18  
 YERMOLAYEV, V. L. 39  
 YESHMEMET'YEVA, YE. V. 20  
 YEVSEYEV, A. R. 63  
 YEVIKHIYEV, N. N. 49, 51, 52, 58, 67  
 YUABOV, YU. M. 28  
 YULDASHEV, B. D. 21  
 YUNOVICH, A. E. 4, 6  
 YURCHUK, E. F. 75

Z

ZABIYAKIN, YU. YE. 8  
 ZAKHARENKO, YU. G. 68, 78  
 ZAKHAROV, S. M. 73  
 ZAKHAROV, V. M. 45  
 ZAKHAROV, V. P. 71  
 ZAKHAROV, V. YE. 35  
 ZAKIN, V. G. 21  
 ZAKRZEWSKI, Z. 14  
 ZAPECHEL'NYUK, E. F. 20  
 ZAPRYAGAYEV, A. F. 10  
 ZARIPOV, M. M. 57  
 ZAROSLOV, D. YU. 11  
 ZASED, V. S. 28  
 ZAV'YALOV, V. D. 82  
 ZAVADSKIY, V. A. 28  
 ZAYDEL', A. N. 74  
 ZEL'MANOVICH, I. L. 46  
 ZEL'DOVICH, B. YA. 37, 63  
 ZEL'DOVICH, YA. B. 60  
 ZELENOV, A. A. 12  
 ZELENTSOVA, S. A. 38  
 ZEMSKOV, YE. M. 35  
 ZHDANOV, S. K. 77  
 ZHELTOV, G. I. 7, 18, 19  
 ZHELUDKOV, V. M. 77, 28  
 ZHIRYAKOV, B. M. 72  
 ZHITAR', V. F. 28  
 ZHORNOVYY, I. V. 24  
 ZHUKOV, A. F. 44  
 ZHUKOV, V. V. 14  
 ZHUKOVA, T. B. 72  
 ZHUKOVSKIY, V. V. 29  
 ZIMAKOV, V. P. 11  
 ZIMOGOROVA, N. S. 22  
 ZIMOKOSOV, G. A. 62  
 ZINOV'YEV, S. V. 3  
 ZLOBIN, V. V. 68  
 ZOBOV, YE. A. 11  
 ZOLOTAREV, A. A. 64  
 ZON, B. A. 42  
 ZORIKOV, V. V. 5  
 ZOTOV, O. V. 39  
 ZRAZHEVSKIY, A. YU. 43, 78  
 ZUBOV, V. A. 59  
 ZUBRILIN, N. G. 10  
 ZUBRINOV, I. I. 36  
 ZUYEV, E. V. 67  
 ZUYEV, V. S. 17  
 ZUYEV, V. YE. 45, 63, 68  
 ZVEREV, G. M. 3