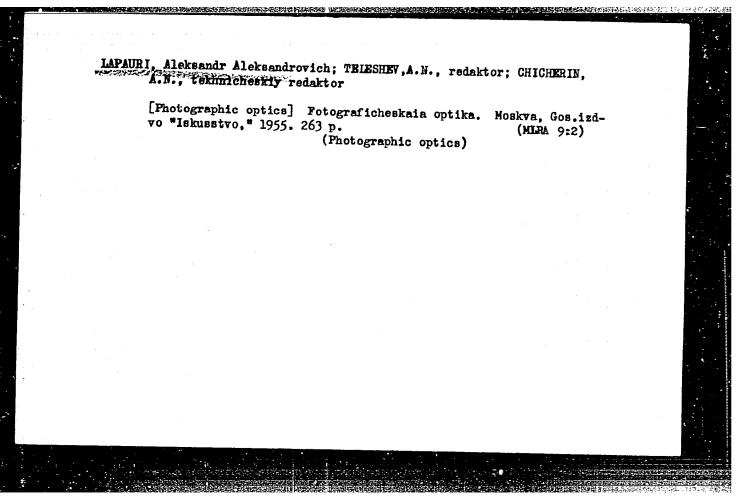
IAPAURI, A.A. [author]; MINCHENKOV, Ye.Ya. [reviewer].

"Illuminated photo-objectives." A.A. Iapauri. Reviewed by E. IA. Minchenkov.
Piz. v shkole 13 no.5:81 S-0 '53.

(Lenses, Photographic)



IAPAURI. A.A., redaktor; SHBERSTOV, V.I., redaktor; TEISSHEV, A.N., redaktor; MATISSRN, Z.M., tekhnicheskiy redaktor

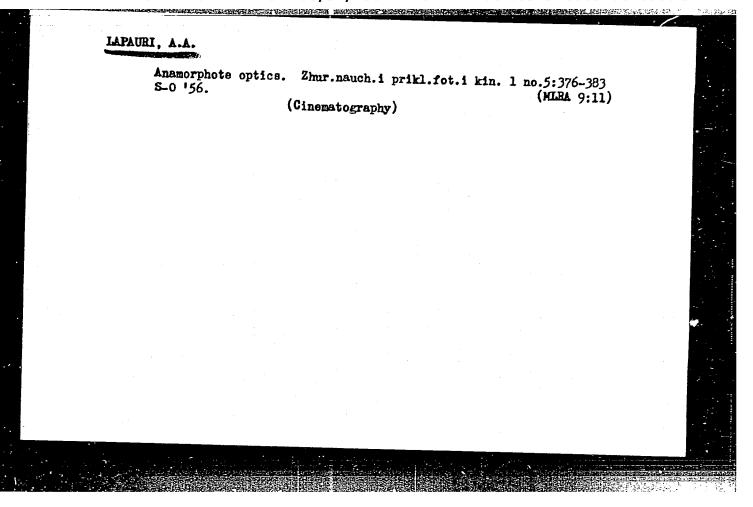
[Goncise photographic dictionary] Kratkii fotograficheskii slovar'.

Pod obshchei red. A.A.Iapauri i V.I.Sheberstova. [Moskva] Gos. izd-vo

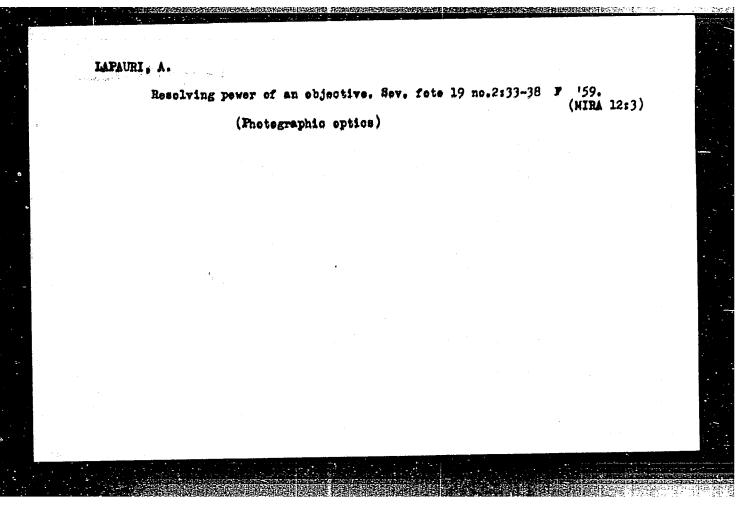
"Iskusstvo," 1956. 385 p.

(Photography--Dictionaries)

(Photography--Dictionaries)



# Lenses with variable focal length. Fiz. v shkole 19 no.1:43-46 Ja-F '59. 1. Nauchno-issledovatel'skiy kino-foto institut. (Lenses)



 RI, A.						
Attachment	lenses. Sov.	foto 20 no.4	:32-33 Ap	'60. (MIRA	13:8)	
	(Lerse	s, Photograp	hic)			
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				•••• • • • • • • • • • • • • • • • • •	namento e mario de la Presidente. La companio de la Carte d	parents.

BARINOV, L.V.; GEODAKOV, A.I.; GRINEVICH, G.Ya.; IOFIS, Ye.A., kand. tekhn. nauk; KRIMERMAN, P.M.; LAPAURI, A.A.; MINENKOV, I.B.; PANFILOV, N.D.; PELL!, V.G., kand. tekhn. nauk; PERTSIK, A.G.; POIYANSKIY, N.N.; POPOV, A.N.; SIMONOV, A.G.; SUROV, S.G.; SHASHLOV, B.A.; TELESHEV, A.N., red.; MALEK, Z.N., tekhn. red.

[Manual for the amateur-photographer] Spravochnik fotoliubitelia. Pod obshchei red. E.A.Iofisa i V.G.Pellia. Moskva, Iskusstvo, 1961. 530 p. (MIRA 15:7)

(Photography—Handbooks, manuals, etc.)

BARINOV, L.V.; GEODAKOV, A.I.; GRINEVICH, G.Ya.; IOFIS, Ye.A., kand. tekhn. nauk; KRIMERMAN, P.M.; LAPAURI, A.A.; MINENKOV, I.B.; PANFILOV, N.D.; PELL', V.G., kand. tekhn. nauk; PERTTSIK, A.G.; POLYANSKIY, N.N.; POPOV, N.A.; SIMONOV, A.G.; SUROV, S.G.; SHASHLOV, B.A.; TEJESHEV. A.N., red.

[Handbook for the amateur photographer] Spravochnik fotoliubitelia. Izd.2., ispr. i dop. Moskva, Iskusstvo, 1964. 472 p. (MIRA 18:1)

ROZEN, A.M., doktor khim. nguk; IAPAVOK, L.I., inzh.; YELZERIZEN, B.V., inzh.

Hydraulic modeling of reflux apparatus of large diameter. Ehim.
i neft. mashinosur. no.M:14-18 0 '64. (MIPA 17:12)

ACC NR. AP6035941

SOURCE CODE: UR/0413/66/000/020/0199/0199

INVENTOR: Adler, M. V.; Gorbachev, L. M.; Lapavok, V. S.; Lovchev, S. V.; Sokolov, G. I.; Frenk, M. Ts.; Churikov, Ye. P.

ORG: none

TITLE: Ventilating unit for aircraft. Class 62, No. 187540

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 20, 1966, 199

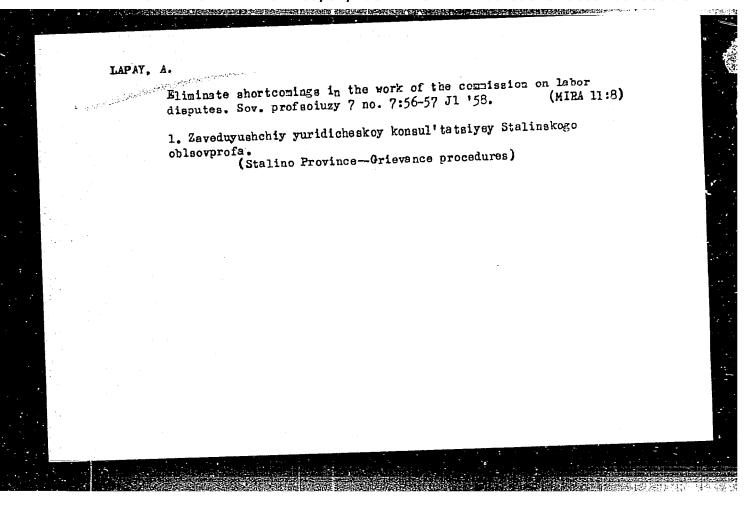
TOPIC TAGS: aircraft cabin environment, aircraft cabin equipment, centrifugal blower, air conditioning equipment

ABSTRACT: An Author Certificate has been issued for a ventilating unit for aircraft which contains a fan with a drive. To assure the unit's efficient operation in ground-based and airborne applications, the fan is mounted on a separate shaft and is operated by an electric drive through an axial over-riding clutch; a centrifugal clutch is used for operation on turbine drive. [WA-98]

SUB CODE: 01, 13/ SUBM DATE: 10Feb64

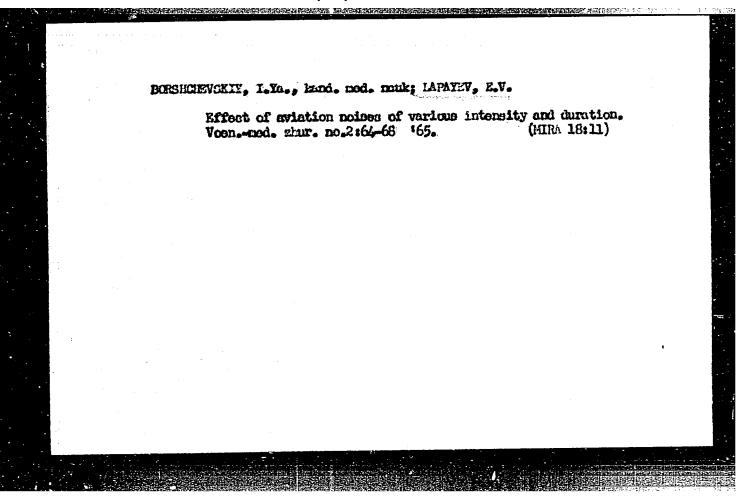
Cord 1/1

VDC: 629.13.01/06



[How to solve labor disputes] Kak reshaiutsia trudovye spory; konstul'tatsii. Izd.2. dop. Moskva, Profizdat, 1960. 119 p. (MIRA 16:3)

(Arbitration, Industrial)



EBO-2/EWG(a)-2/EWG(c)/EWG(1)/EWG(r)/EBC(k)-2/EWG(v)/EWT(1)/FS(v)-3/ Pa=5/Pi=1/Pe=1/Pq=1/Pac-1/Pac-2 TT/DD/UR/0209/65/000/097/0075/0077 AP5017036 AUTHOR: Borshchevskiy, I. (Candidate of medical sciences); Lapayev, E. (Major of 66 medical service) The noise problem SOURCE: Aviatsiya i kosmonavtika, no. 7, 1965, 75-77 TOPIC TAGS: noise, high frequency noise, biological effect, life support system, earplug, earphone, noise control, manned space flight ABSTRACT: Depending on the duration and level, noise has more or less severe deleterious effect on man. In some people, auditory disruptions occur as a result of minor but repeated chronic irritations of the auditory system. Depending on conditions and the individual stability of the organism, noise can sometimes decrease the ability to hear. The long-term effects of noise can disrupt the vestibular apparatus: there have been cases where noise has affected visual acuity, respiratory rhythm, cardiac activity, blood pressure, the volume of the kidneys and spleen, and the amplitude of stomach contractions. Some workers complain of headache, fatigue, and poor appetite following prolonged exposure to noise. According to publications dealing with the problem of noise in rockets and spacecraft, rocket-en-Cord 1/2

L-58967-65 ACCESSION NR: AP5017036  gine noise can exceed 1.70 db at a from the surface of the nose of the main sources of noise in a space atmospheric turbulence, and various. The latter is not regarded as a serious posed that the noise factor during sponant characteristics of the cabin and the serious of the serious of the cabin and the serious of the serious of the cabin and the serious of the serious of the cabin and the serious of	a rocket at take-off is craft are aerodynamics, life-support systems dun ous danger to cosmonauts pace flight need not be re compensated for by the	a steady 145—150 db when passing through ring orbital flight. Moreover, it is p dangerous if the res	ro-
tic materials. In addition, various which minimize the biological effects	types of earphones and s of noise in and around	earplugs are availab.	le •
which minimize the biological effects and ground installations serving ther ASSOCIATION: none	s of noise in and around	spacecraft, sircraft	+
which minimize the biological effects and ground installations serving ther ASEOCIATION: none	s of noise in and around n. Orig. art. has: 3 fi	spacecraft, sircraft	+
which minimize the biological effects and ground installations serving them ASSOCIATION: none SUBMITTED: 00	s of noise in and around n. Orig. art. has: 3 fi	spacecraft, aircraf gures. [C	+

CHARLES STATE TO SELECT THE PARTY OF THE PAR L 04805-67 EWT(1) SCTB ACC NR: AP6027253 SOURCE CODE: UR/0177/66/000/007/0061/0064 AUTHOR: Udalov. Yu. F. (Lieutenant colonel, Medical corps, Doctor of medical sciences); Lapsvev. E. V. (Major, Medical corps, Candicate of medical sciences; Syzrantsev, Yu. K. (Lieutenant colonel, Medical corps) ORG: none TITLE: Effect of aviation noise on some indices of protein and vitamin SOURCE: Voyenno-meditsinskiy zhurnal, no. 7, 1966, 61-64 TOPIC TAGS: aerodynamic noise, man, vitamin, protein, metabolic disease, biologic vibration effect ABSTRACT: A total of 44 tests were conducted on 10 healthy individuals 20-36 years of age, following 3 hours noise of 110 db intensity in a chamber. Indices were: urinary excretion of total nitrogen, ures and ammonium nitrogen and urinary oxygen; chromatographic determination in the blood of free amino acids and glutamine; excretion of the vitamins B1, B2, C, N1-methylnicotinamide and 4-pyridoxic acid. They were determined prior, during and after the effect of noise. Results showed that the nitrogen metabolism underwent no significant changes except for Card 1/2 UDC: 612.014.45:629.13

L 04805-67

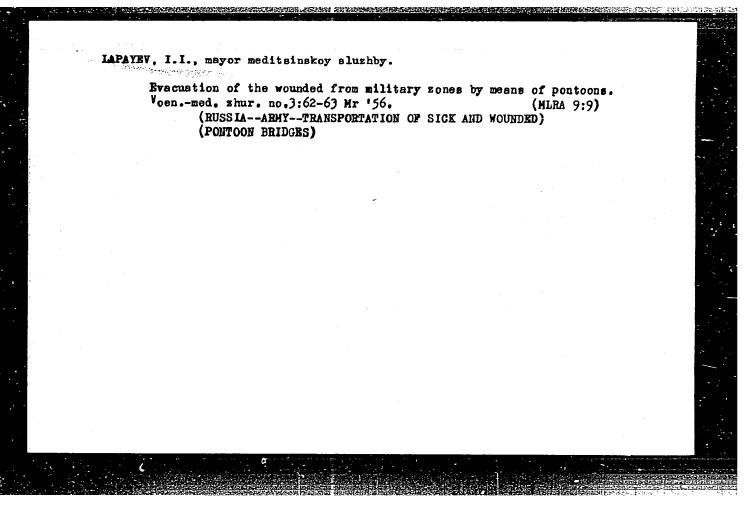
ACC NR: AP6027253

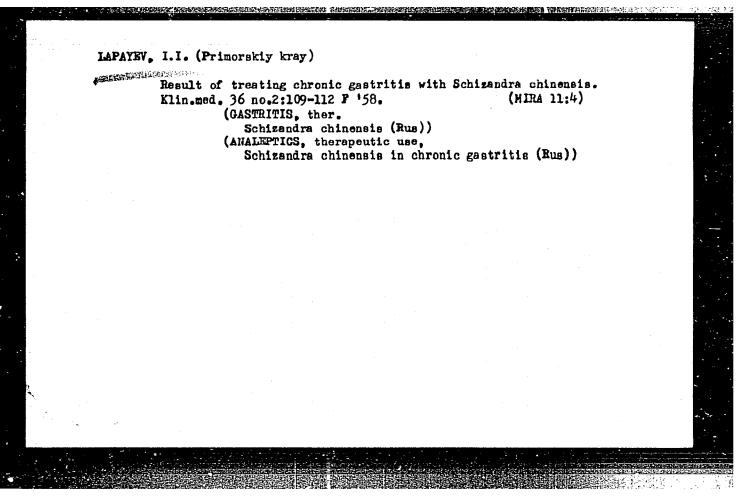
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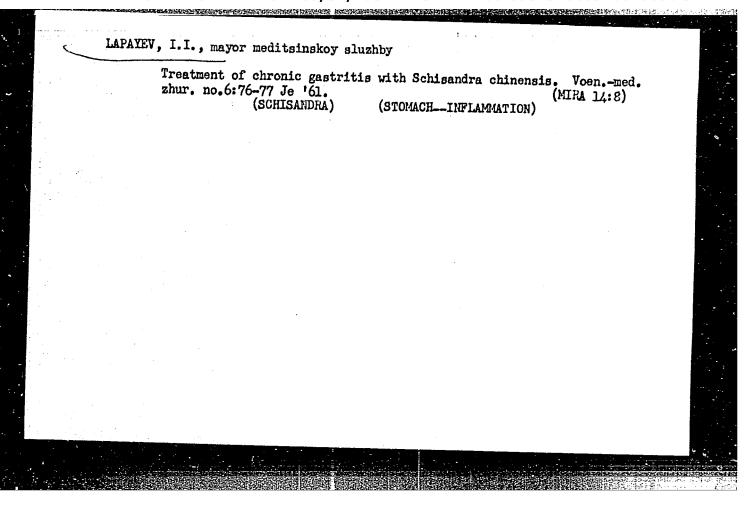
findings of free amino acids in the blood, specifically tryptophan (it may be assumed that the brain tissue uses more amino acids during noise) and changes in the level of substituted amino acids: reduced glutamic acid and increased glutamine and slamine. Addition of glutamic acid to the diet results in an increased level of both glutamic acid and glutamine. A decrease in metabolic indices for the vitamins B1, PP and B6 which participate in transfer of neural alertness was noted, paralleling tryptophan changes. Excretion of ascorbic acid which binds ammonia in the brain was reduced. After administration to test subjects of a vitamin complex and measuring of their operative efficiency according to rate of sensomotor and response (to signals) reaction upon repeated testing with the standard complex of 4 irritants, it was found that while initial performance was satisfactory, later reactions were slower for both tests in the controls who had received no vitamins. Thus intensive and long-lesting noise causes considerable changes in protein and vitamin metabolism, which can be compensated for by appropriate vitamins and glutamic acid. Orig. art. has: 3 figures.

SUB CODE: 06, 07, 01/ SUBM DATE: none

Card 2/2 gd







LAPAYEV, I.I., podpolkovnik meditsinskoy sluzbby

Effectiveness of the juice of schizandra chinensis in thrombocytoponia. Voen.-med.zhur. no.1:79-80 165.

(MIRA 18:10)

LAPAYEV, F. S.

Agriculture

Machine-Tractor Station and the consolidation of collective farms. Moskva, Sel'khozgiz, 1951.

Monthly List of Russian Accessions, Library of Congress, October 1952. UNCLASSIFIED.

LAPAYEV, P. 5

Agricultural Research

Scientific-research work in the field of economics and organization of agriculture. Sots. sel'khoz. no. 2, 1952.

Monthly List of Russian Accessions, Library of Congress, July 1952. Unclassified.

- 1. LAPAYEV, P.S.
- 2. USSR (600)
- h. Machine-Tractor Stations
- 7. Untapped potentialities for highly productive exploitation of agricultural technology, Sots. sel'khoz, 24, no. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

## Theoretical head of centrifugal coal suction pumps. Trudy VNIIGidrouglia no.1:90-100 '62. (MIRA 16:12) 1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-konstruktorskiy institut dobychi uglya gidravlicheskim sposobom.

LAPAYEV, V.S.

Effect of the size and shape of the discharge connection on the characteristics of a hydraulic coal dredge. Trudy VNIIGidrouglia no.4:93-103 '64. (MIRA 18:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-konstruktorskiy institut dobychi uglya gidravlicheskim sposobom.

ZAKHAROVA, M.S., LAPAYEVA, I. STEPANOVA, E.A.

The preparation and study of bordella pertussis protection antigen.

Report submitted to the Intl. Congress for Microbiology Montreal, Canada 19-25 Aug 1962

### LAPAYEVA, I.A.

Serological analysis of a defense antigen obtained from B. pertussis by the method of ether-water extraction. Zhur. mikrobiol., epid. i immun. 33 no.1:103-109 Ja '62. (MIRA 15:3)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

(MEMOPHILUS PERTUSSIS)
(ANTIGENS AND ANTIBODIES)

### FAN KOVSKAYA, E.K.; LAPAYEVA, I.A.

Study of the serological activity of strains of Bordetella pertussis in prolonged cultivation on casein-charcoal agar and Bordet-Gengoux media. Zhur. mikrobiol. epid. i immun. 33 no.10:58-65 0.62 (MIRA 17:4)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

### LAPAYEVA, I.A.

Serological analysis of the antigen structure of Bordetella pertussis (first phase). Zhur. mikrobiol., epid. i immun. 33 no.11:115-120 N '62. (MIRA 17:1)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

ZAKHAROVA, M.S.; LAPAYEVA, I.A.

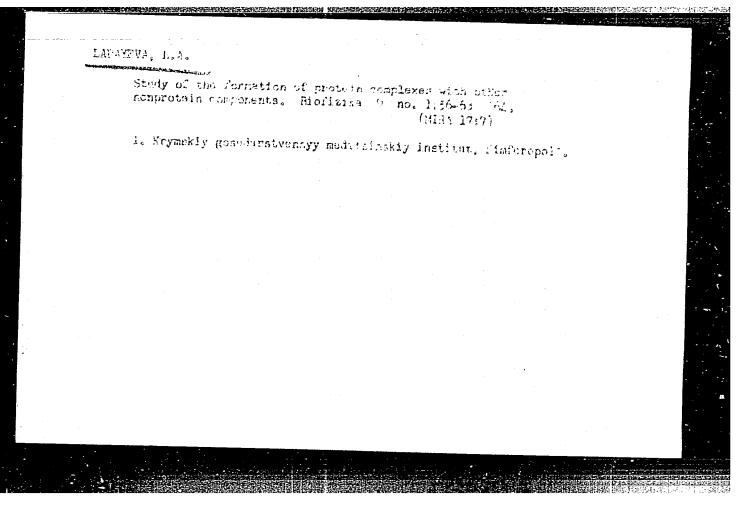
Serological study of protective ultrasound-treated sorbed whooping cough antigen. Zhur. mikrobiol., epid. i immun. 33 no.11:110-115 N '62. (MIRA 17:1)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

### LAPAYEVA, L.A.

High voltage multichamber electrodialyzer for simultaneous dialysis of two different solutions of a substance to be purified. Lab. delo no.1: 58-61 '64. (MIRA 17:4)

1. Kafedra biokhimii (zaveduyushchiy - prof.G.V.Troitskiy) Krymskogo meditsinskogo instituta.

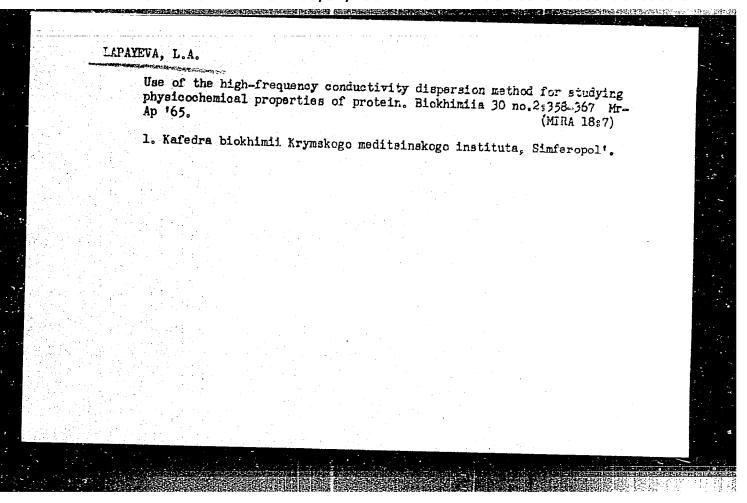


### LAPAYEVA, I.A.

Use of zymosan for the sorption of pertussis antigen. Zhur. mikrobiol., epid. i immun. 42 no.9:145 S '65.

(MIRA 18:12)

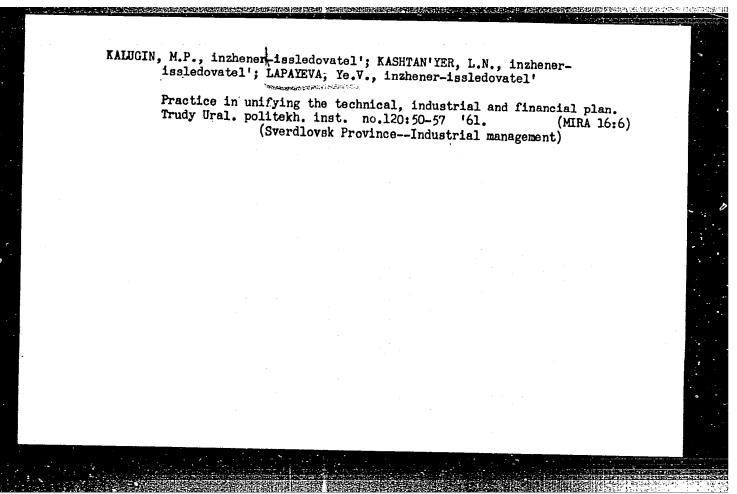
1. Institut epidemiologii i mikrobiologii imeni Gamalei ANN SSSR. Submitted August 1, 1964.



STRELYAYEVA, V.M.; LAPAYEVA, N.I.; MEL'KUMOVA, L.P.

Natural tularemia foci in the Turkmen S.S.R.Zdrav. Turk. 8 no.2231-34 F164 (MIRA 17:4)

1. Iz Turkmenskoy respublikanskoy sanitarno-epidemiologicheskoy stantsii (glavnyy vrach V.Mamayev).



YUGOSLAVIA

LAPCEVIC E., et al. of the Pirst Internal Medicine Clinic (I Interna Klinika) and the Institute of Pathology (Institut za patologija).

"An Enzootic Occurrence of Liver Dystrophy in Horses."

Belgrade, Acta Veterinaria, Vol 12, No 3-4, 1962, pp 13-19.

Abstract: /Authors' German summary/ The authors describe an enzeotic occurrence of scute liver dystrophy in some castrated horses in eight villages 40 to 50 days subsequent to the castration. The hepatocerebral syndrome was present in all the horses affected. Oral intoxication was excluded, inaudich as older castrated horses were not infected. The parenchyma of the liver was apparently destroyed on the basis of allergic liver damage arising out of the area of the castration wound via the blood yessels.

Illustrations, 20 references to recent Yugoslav, German, Hungarian, and Czechoslovakian work.

NIKOLIC, B.; NIKOLIC, V.; PAVLOVIC-KENTERA, V.; LARCEVIC, E.;
PAVLOVIC, O., PAUNOVIC, S.; CIRIC, O.; KNEZEVIC, N.;
MIHAILOVIC, M.

Experimental intoxication of dogs with venoms from Vipera berus and Vipera ammodites. II. Blochemical blood changes.
Vojnosanit. pregl. 20 no.1/2:7-13 Ja.F '63.

1. Veterinarski fakultet u Beogradu, Fizioloski institut is Interna klinika, Institut za medicinska istrazivanja u Beogradu.
(VENOMS) (ERITHROCITE COUNT) (BLOOD VOLUME)
(ELODO COAGULATION) (BLOOD PLATKLETS)
(CAPILLARIES) (PROTHROMBIN TIME)
(BLOOD CHEMICAL ANALYSIS)

"Aristolochia clematitis poisoning in horses." Ass. prof. Vet. Fac., Beograd Botulin Intoxication in Horses.

Vet: Qlasnik 5, 418-429, 1951

Vet: 1: 69-80, 1954

LAPCEVIC, Emanuel M.

YUGOSLAVIA / Diseases of Farm Animals. Diseases Caused by R-2

Viruses and Rickettsiae.

: Ref Zhur - Biol., No 17, 1958, No 78953 Abs Jour

: Inprevio. E.; Nikolic, B.; Ciric, V.; Stosic, N.; Author

Pavlovic, 0.

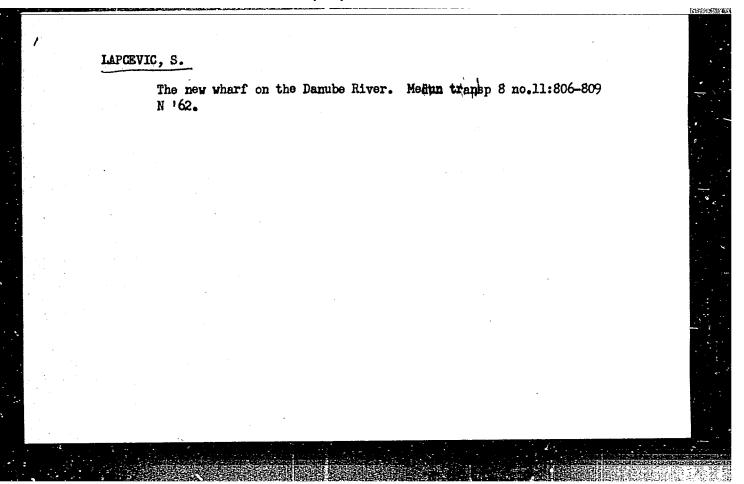
Inst : Not given

: New Febrile, Henorrhagic and Infectious Illness in Dogs. Title

: Veterin. glasnik, 1957, 11, No 8, 752-760 Orig Pub

: A feverish condition, bleeding from all nucous membranes Abstract and skin henorrhaging were basic symptoms. There were noted: thrombo-cytopenia, increase of the coagulation time of the blood, depression of the formation of thrompoplastin, increase of the quantity of alpha and bata globulins and decrease of the quantity of the garma globulin. The illness proceeded into an acute (death in 1 - 2 days) or subacute form. In the latter case, hemor-

Card 1/2



LAPCHENKO, G.D., kand. sel'khoz. nauk; ZAGORSKIY, G., red.; SHIXK, M., tekhn. red.

[Winter wheat] Ozimaia pahenitsa. Moskva, Mosk. rabochii, 1961. 19 p.

(Wheat)

(Wheat)

ACC NR. AP6030240 (AN) SOURCE CODE: UR/0394/66/004/007/0030/0031

AUTHOR: Bobyshev, V. G.; Lapchenko, G. Ya.

18

ORG: Don Agricultural Institute (Donskiy sel'skokhozyaystvennyy institut)

TITLE: Influence of herbicides on the microflora of the soil

SOURCE: Khimiya v sel'skom khozyaystve, v. 4, no. 7, 1966, 30-31

TOPIC TAGS: herbicide, soil, microflora, corn, millet

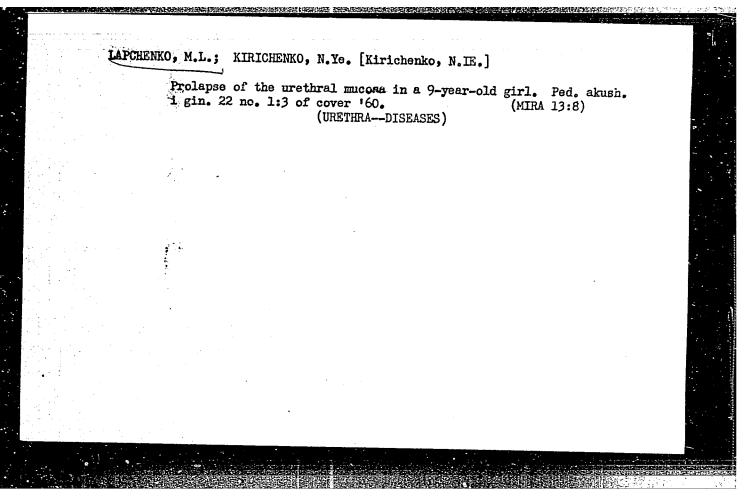
ABSTRACT: In 1963—1964, experiments were made in Rostov Oblast to determine the effect of herbicides on the microflora of soils sown with millet and corn. It was found that simazine, atrazine and 2,4-D amino salts are favorable for the development of microorganisms, particularly those of nitrogen fixing bacteria. Table 1 presents data on the number of bacteria and of nitrogen fixing bacteria, considered separately, in soils sown with millet. Table 2 shows the influence exerted by herbicides on the microorganisms existing in a 0—10 cm layer of soil sown with corn. No adverse effect of herbicides on microflora was found. Orig. art. has: 2 tables. [W.A.50]

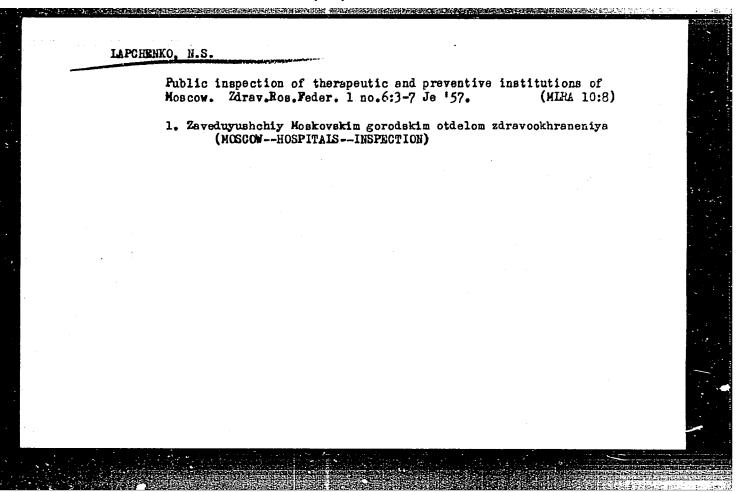
SUB CODE: 02, 06, 07/ SUBM DATE: 29Jun65/ ORIG REF: 006/

Card 1/3 UDC: 632,954,576,8

	Table 1. Influence of herbicides on number of bacteria growing on beef extract agar on millet crops (in thousand per ha of absolutely dry soil)									0
	Variants of experiment	cite Tayer of 8011		prior to rearing		No. of azotobacter in the layer of soil		No. of azotobacter in the layer of soil before reaping		
		0-10 cm	10—20 cm	C-10 cm	10-20 cm	6—13 cm	10-20 cm	0—10 cm	10-20 cm	
	Control (without weeding)	2180, 1730	1630/1680	4300,74180	3300,45360	J. 43, 70.83	0.73/0.96	C.57, U.123	0.163,6.01	
	Simazine inserted in soil, in ls/ha (a. w.) 3	1520/1820 1620/1430	1720, 1300 1980/1740	4500, 4170 4400/3930	100, 5400 2700/5250	0.46/0.101 0.42/0.107	0.36/0.112	0.51/0.115	0.116/0.119 0.123/0.203	
	inserted in soil, in kg/ha (a. w.)	1980/1900 1840/1760	2200/1670 1610/1650	4100/4600 4800/4700	3400,⁄4900 4300/5600	0.51/0.97 0.49/0.106	0.94/0.116 0.97/0.109	0.71/0.198 0.67/0.100	0.126/0.132	
	2,4-DA used on the sprouts, in 0.7 kg/ha (a. w.)	2060/1530	1830/1730	4200/3650	3600/5800	0.54/0.98	0.106/0.107	0.64/0.137	0.131/0.149	
	Remarks: In the numerator: 1963 data; In the denominator: 1964 data.									
Card	2/3	ara denomin	196	4 data.			\$ 15 			

	Table 12,	Infl 010 c	ence of herbicide m layer of soil (	s on the numb	per of microorga per ha of absolu	anisms on corn cro ately dry soil)	ps =	
	Variants of experiment	No	of soil microor in heading pha	ganisms se	No. of 3011 microorganisms in milk-wax stage of ripeness			
		Total	Oligonitrophyls	Clostridium	Actinomycetes	Oligonitrophyls	Clostridium	ું કર્
	Control (without weeding)	1610	101	10	5960	183	10	
-	Insertion of soil after corn sowing: simazine, 3 kg/ha chlorazine, 3 kg/ha	1820 1483	78 92	10 <sup>4</sup>	3480 3240	95 70	16.4 16.4	A TOTAL STREET
	Used on aprouts: 2,4-DA, 0.9 kg/ha crotilin, 0.7 kg/ha celatox, 0.7 kg/ha rankotex, 3 kg/ha	1408 1407 930 1486	85 103 109 73	10 10 10 10 10	3720 3680 3220 3520	72 5) 87 52	10 10 10 10	
	, Cultura	eu ou n	r of microorganism shby agar. The m nogradskiy medium	umner of ring	mber of oligoni tridium bacteri	A		





LAPCHENKO, N.S. (Moskva)

Plans for the development of the public health network in Moscow during 1959-65 [with summary in English]. Sov.zdrav. 18 no.4:6-11
'59.

(FUBLIC HEALTH,
in Russia, 7-year plan (Rus))

IAPCHENO, N.S., zasluzhennyy vrach RSFSR

Concern for the health of the inhabitants of Moscow. Gor.khoz.

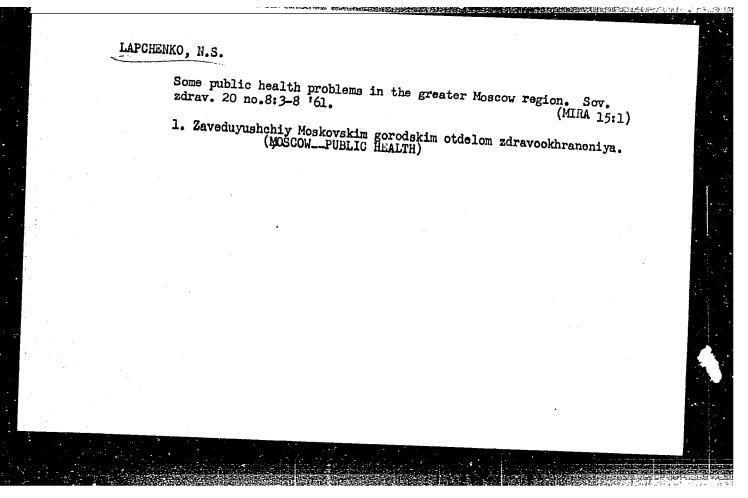
Mosk. 33 no.6:21-23 Je '59. (MIRA 12:10)

1. Zaveduyushchiy Moskovskim gorodskim otdelom zdravookhraneniya.

(Moscow--Public health)

# Organization of disability evaluation in Moscow medical institutions. Zdrav. Ros. Feder. 4 no.5:24-28 My 160. (MIRA 13:12)

.1. Zaveduyushchiy Moskovskim gorodskim otdelom zdravookhraneniya. (MOSCOW...DISABILITY EVALUATION)



LAPCHENKO, P. 1.

8(5) AUTHOPS:

Ivanov-Smolenskiy, Aleksey Vladimirovich, SOV/161-58-2-15/30 Candidate of Technical Sciences, Docent at the Chair for Electrical Machines of the Moscow Power Engineering Institute, Lapchenko, Petr Ivanovich, Assistant at the Chair for Theoretical and General Electrical Engineering at the Novocherkassk Polytechnic Institute

TITLE:

Experimental Investigation of the Frequency-Characteristics of the Rotor Circuits of Salient Pole Synchronous Machines by Means of Physical Models (Eksperimental noye issledovaniye chastotnykh kharakteristik rotornykh tsepey yavnopolyusnykh sinkhronnykh mashin pri pomoshchi fizicheskikh modeley)

PERIODICAL:

Nauchnyye doklady vysshey shkoly. Elektromekhanika i avtomatika, 1958, Nr 2, pp 121 - 133 (USSR)

ABSTRACT:

It is shown that the equivalent rotor parameters at different frequencies can be determined by the aid of physical models. As far as the internal processes of a synchronous machine are investigated here, the geometrical similarity of the model dimensions and the original within the limits of pole pitch and the uniformity of the similitude conditions must

Card 1/2

Experimental Investigation of the Frequency-SOV/161-58-2-15/30 Characteristics of the Rotor Circuits of Salient Pole Synchronous Machines by Means of Physical Models

> be ensured. The initial equations expressing the investigated process by the model and by the original are Maxwell's equations. It is assumed that the model and the original are made of the same materials. The translation points are neglected. The device was built as a universal model for a large group of salient pole synchronous machines. The investigation showed that physical model that ensure a threedimensional similitude of fields can be used for investigating the parameters of electrical machines. The test values obtained may be used for the determination of rotor parameters of a large group of salient pole synchronous machines. There are 6 figures, 3 tables, and 7 references, 7 of which are Soviet.

ASSOCIATION:

Kafedra elektricheskikh mashin Moskovskogo energeticheskogo instituta (Chair for Electrical Machines of the Moscow Power

Engineering Institute)

SUBMITTED:

February 17, 1958

Card 2/2

LAPCHENKO, P. I., Cand Tech Sci -- (diss) "Experimental anvectivation of the frequency characteristics in the rotor chains of phaneropolar synchronous machines with the aid of physical models." Mos, 1958. 19 pp. (Min Higher Ed USSR, Mos Order of Lenin Power (Inst.), Chair of Electric Machines), 100 copies. (KL, 9-58, 118)

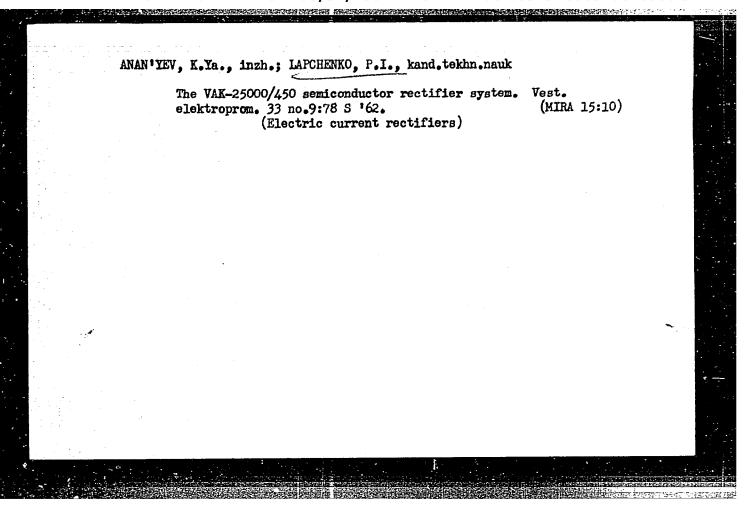
- 77 -

# IAPCHENKO, PETR IVANOVICH, kand.tekn.nauk, dotsent Experimental determination of the effect of the design of the pole on the parameters of the rotor of a synchronous machine. Izv. vys. ucheb. zav.; elektromekh. 4 no.5:15-22 '61. (MIRP. 14:7) 1. Kafedra elektricheskikh mashin i apparatov Zaporozhskogo mashinostroitel'nogo instituta. (Electric machinery, Synchronous)

LAPCHENKO, Petr Ivanovich, kand.tekhn.nauk, dotsent

Use of a similarity method for the determination of the rotor resistance of a salient-pole synchronous machine. Izv.vys.ucheb. zav.; elektromekh. 5 no.1:20-27 '62. (MIRA 15:2)

1. Kafedra elektricheskikh mashin i apparatov Zaporozhskogo mashinostroitel'nogo instituta. (Electric machinery, Synchronous)

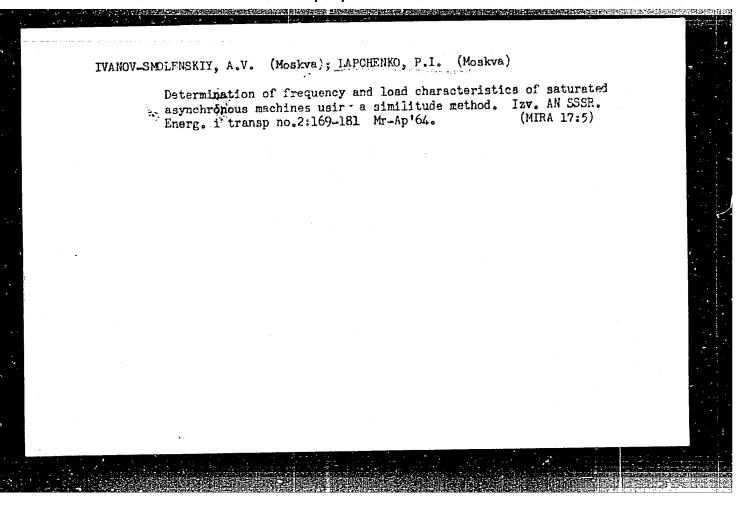


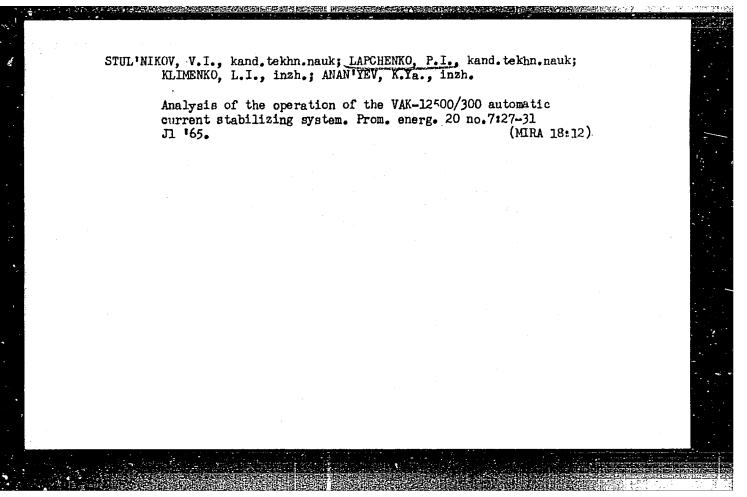
KLIMENKO, L.I., inzh.; ANAN'YEV, K.Ya., inzh.; LAPCHENKO, P.I., kand.
tekhn. nauk

New source of power supply for electrolyzers. Vest. elektroprom
34 no.6:78-80 Je '63.

(MIRA 16:7)

(Electric power supply to apparatus)
(Electrometallurgy)
(Electric current rectifiers)





### LAPCHENKO, S.N.

Three cases of chondroma of the larynx. Zhur. ush., nos. i gorl. bol. 23 no.1:72-74 Ja-F '63. (MIRA 17:2)

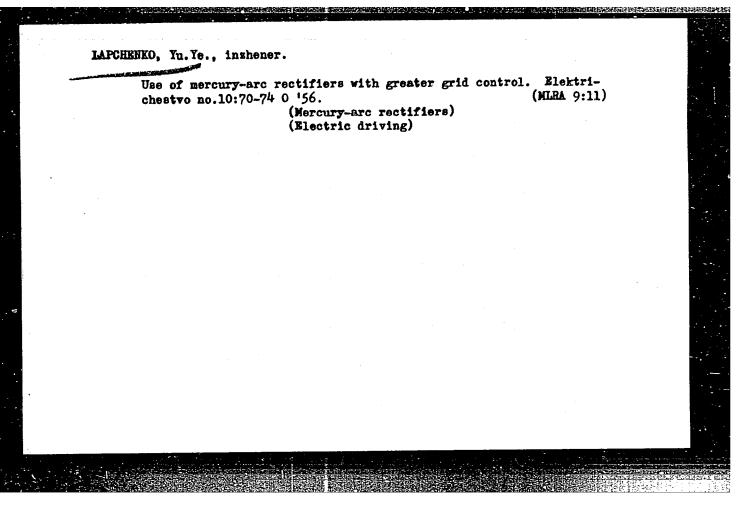
1. Iz klinicheskogo otdeleniya Gosudarstvennogo nauchnoissledovatel'skogo instituta bolezney ukha, gorla i nosa Ministerstva zdravookhraneniya RSFSR (dir. - prof. N.A. Bobrovskiy).

### LAPCHENKO, S.N.

Osteoblastoclastoma of the temporal bone. Vest.otorin. no.5: 78-80 '62. (KIRA 15:9)

1. Iz klinicheskogo otdeleniya Nauchno-issledovatel'skogo instituta bolezney ukha, nosa i gorla (dir. - prof. N.A. Bobrovskiy) Ministerstva zdravookhraneniya RSFSR, Moskva. (TEMPORAL BONE-TUMCRS)

# LAPCHENKO, S.a. Ctatue of the and as contract of the largest addected by cancer following redirected therepy; clinical, completed and histocherical andly. Mod. red. 9 no.2:22-29 f '64. (BIRA 17:9) 1. Mauchno-desicdevatel'skiy institut white, gorle i nosa (direprof. N.A. Gobrovakiy) i l-ya beindre rentgenologii i rediologii Tientral'nogo instituta usoveranesstvovaniya vraeney (sav.-prof. S.A. Henborg).



International Institute of Welding

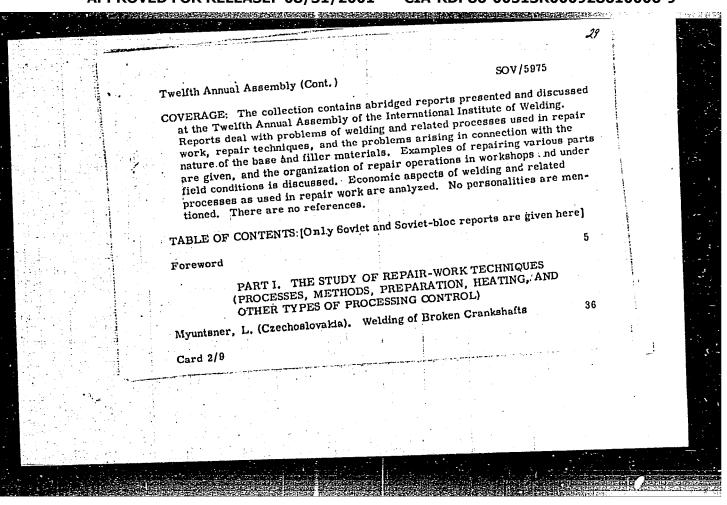
XII kongress Mezhdunarodnogo Instituta svarkd, 29 iyunya - 5 iyulya 1959 v g.
Opatii (Twelfth Annual Assembly of the International Institute of Welding,
Opatii, June 29 - July 5, 1950) Moscow, Mashgiz, 1961, 350 p. 3000
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Sponsoring Agency: Natsional'nyy komitet SSSR po svarke.

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and Serbo-Croatian by N. S. Aborenkova, K. N. Belyayev, E. P. Bogacheva,
L. A. Borisova, K. V. Zveginineva, V. S. Minavichev, and M. M. Shelechnik;
Managing Ed. for Literature on the Hot-Working of Metals: S. Ya. Golovin,
Engineer.

PUIPOSE: This collection of articles is intanded for welding specialists and
the technical personnel of various production and repair shops.

Card 1/4



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	Submerged-Arc Surfacing  Snegon, K. (Poland). Restoration of Rolling-Mil Rollers, Forging Dies, and Shears by Arc Weldin	1 Rolls, Crane 72	
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DZHALAGONIYA, K., kand. biolog. nauk; LAPCHENKOV, G., starshiy prepodavatel; MANUCHARYAN, M., aspirant; MARKELOVA, Ye., dotsent

From practices in the use of poisonous chemicals. Zashch. rast. ot vred. i bol. 10 no.6:22-23 '65. (MIRA 18:7)

1. Vsesoyuznyy institut chaya i subtropicheskikh kul'tur (for Dzhalagoniya).
2. Kafedra zemledeliya i melioratsii Donskogo sel'skokhozyaystvennogo instituta (for Lapchenkov). 3. Armyanskaya opytnaya stantsiya po tabaku Vsesoyuznogo nauchno-issledovatel'skogo instituta tabaka i makhorki imeni A.I.Mikoyana (for Manucharyan). 4. Kafedra fiziologii i zashchity rasteniy Plodoovoshchnogo instituta imeni I.V.Michurina (for Markelova).

KHRAMTSOV, L.I., kand. sel'skokhoz. nauk; IAPCHENKOV, G. Ya., stariniy prepodavatel.

Chem' :al weeding in corn and millet fields. Zashch. rast. ot vred. i bol. 9 no.6217 64 (MIRA 1727)

1. Donskoy sel'skokhozyaystvennyy institut, st. Persianovka, Rostovskoy oblasti.

LAPCHENKOV, I.F., inzh.; FAMASENKO, V.I., inzh.

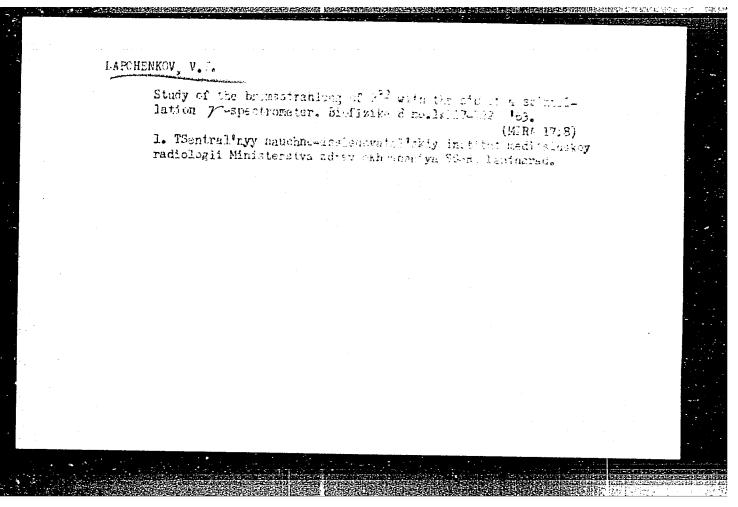
Transportation by rail of reinforced concrete trusses with a span of 24 m.. Prom. stroi. 41 no.2:61-62 F '63. (MIRA 16:3) (Trusses—Transportation)

KANTIN, A.V.; KACHUR, L.A.; LAPCHENKOV, V.I.; CHOCHIA, K.N.

Preoperative irradiation in cancer of the breast by intratissular administration of colloidal radioactive gold. Med.rad. no.1:24-32'63. (MIRA 16:10)

1. Iz radioonkologicheskogo i radiologicheskogo ¢tdelov TSentral'nogo nauchno-issledovatel'skogo instituta meditsinskoy radiologii Ministerstva zdravookhraneniya SSSR. (GOLD ISOTOPES—THERAPEUTIC USE )

(EREAST—CANCER)



LAPCHENKOV, V.I.; BEIUGINA, Z.T.

Methodology for the determination of F<sup>32</sup> in the marrow of the long tubular bones of polycythemia patients according to the inhibiting irradiation in the extremities. Med. rad. 8 no.11:13-20 N '63.

(MIRA 17:12)

1. Iz laboratorii izotopnykh metodov issledovaniya (rukovoditel' - I.S. Osipov) i radioterapevtichegkogo otdeleniya kliniki (zav. - Ye.N. Mozharova) TSentral'nogo nauchno-issledovatel'skogo instituta meditsinskoy radiologii (direktor Ye.I. Vorob'yev) Ministerstva zdravookhraneniya SSSR.

L 4206-66 EWT(m)

ACCESSION NR: AP5014067

UR/0241/65/000/005/0051/0055 616.155.191-085.849.7-015.35-031.1

616.36

AUTHOR: Lapchenkov, V, I.

TITLE: Determination of the radiation dose in the liver of polycythemia patients from bremsstrahlung during treatment with radiophosphorus

SOURCE: Meditsinskaya radiologiya, no. 5, 1965, 51-55

TOPIC TAGS: radiotherapy, bremsstrahlung, liver, isotope, radiation dosimetry, radiophosphorus

ABSTRACT: The kinetics of change in intensity of bremsstrahlung over the liver area was studied in 20 polycythemia patients. P<sup>32</sup> was administered orally in fractional doses of 1.5-3 mc at a time with 5-7 days invervals between doses; a total of 8-9 mc was required for the course of treatment. The author noted a definite relationship (P > 99.9%) between the radiation dose in the liver and amount of P<sup>32</sup> administered. But he could not detect any relationship between pathological enlargement of the liver, increase in basal metabolism, or values of the indices of

Card 1/2

L 4206-66 ACCESSION NR: AP5014067			
the peripheral blood. During	p <sup>32</sup> treatment of polycythemic n100-200 rads. Therefore, t ust be carefully monitored for	a the liver receives a the nature of the accumu- r each patients. Orig.	
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niya SSSR, Leningrad (Laborato Research Institute of Radiolog SUBMITTED: 19Jan64	ory of Isotopic Methods of Invgy, Ministry of Health, SSSR)  ENCL: 00	nisteratva zdravookhrane- vestigation, Central	

BURNAN, E.A.; LAPCHEVA, V.F.

Meteorological characteristics of foebns in the Azau Valley, Trudy OGMI no.17:103-113 '58. (MIRA 12:7)

1. Odesskiy gidrometeorologicheskiy institut i El'brusskaya ekspeditsiya Instituta prikladnoy geofiziki AN SSSR.
(Azan Valley--Foehn)

3(7)

507/20-128-3-24/58

AUTHORS:

Bibilashvili, N. Sh., Zaytseva, A. M., Lapcheva, V. F.,

Ordzhonikidze, A.A., Sulakvelidze, G. K.

TITLE:

On the Influence Exerted by a Variation of the Vertical Wind Component on the Formation of Shower Precipitations and

Hail

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 3, pp 521-524

(USSR)

ABSTRACT:

Observations made in Transcaucasia and the Caucasus in 19561958 on stratocumuli, cumuli, and massy cumuli showed the
following: 1) The vertical component of the velocity of currents, determined by radar methods, amounts to 0.1 - 0.3 m/sec
for stratocumuli, 5 m/sec for cumuli, and 10-15 m/sec for

massy cumuli. Several wind gusts attain velocities of 25 m/sec. The velocity W of vertical currents within the cloud increases with rising altitude up to a maximum,  $W_{\rm m}$ , in the upper part

of the cloud, and then decreases rapidly. 2) The temperature of the cumulus during its formation is higher by 0.5-1.0° than the temperature of the surrounding medium at the same altitude. During stabilization and decomposition of the cumulus in the

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SOV/20-128-3-24/58 On the Influence Exerted by a Variation of the Vertical Wind Component on the Formation of Shower Precipitations and Hail

> upper part, the cloud temperature is lower by 0.5-1.00 than it is in the surrounding medium. 3) In the part before the peak, the cumulus becomes rapidly aqueous. Yet in the lower and medium part, the water content and the spectrum of the water of the water drops vary but little. The size of the drops is given. On the basis of these data, the increasing size of the drops contained in cumuli and massy cumuli, which is due to gravitational coagulation was calculated by a method devised by E. Bowen (Ref 4) and B. V. Kiryukhin. At high velocities of the vertical currents, the drops almost do not increase on the ascending branch of the trajectory. Formulas for the dependence of radius R of the drop on altitude z are written down. The drops are retained in the upper part of the cloud, where velocities are low. The principal increase in the drop or the hailstone occurs in the cloud range near the peak. If the upper part of the cumulus has a temperature higher than that of natural crystallization, then the cloud remains droplike liquid. However, hail occurs, if the temperature of the cloud peak is below that of natural crystallization. The increasing size of the hailstones up to R  $\sim$  2-4 cm

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807/20-128-3-24/58

On the Influence Exerted by a Variation of the Vertical Wind Component on the Formation of Shower Precipitations and Hail

> at Wm from 10 to 20 m/sec, primarily occurs in the cloud part near the peak, i.e. at the origin of the descending branch of the hailstone trajectory. The authors write down a corresponding formula for the size of the hailstone. The time required for an increase in the hailstone largely depends on Wm, and varies between 20 and 70 min. The definite size of the hailstones depends but little on the vertical thickness of the cloud. Completely new results are obtained if the variations in the vertical component of the velocity of air currents with the altitude are taken into account. This permits, among other things, the following conclusions: 1) A large amount of droplike water and hail is piled up in the cloud part near the peak. 2) The influence exerted by surface-active and hygroscopic substances on the upper part of the forming massy cumulus does not offer any positive effect at  $W_m > V_k$ .  $V_k$  denotes the critical velocity. 3) By complete crystalliza-

Card 3/4

tion of the droplike liquid, undercooled fraction which enters

On the Influence Exerted by a Variation of the Vertical Wind Component on the Formation of Shower Precipitations and Hail

the cloud, hail may be prevented or at least reduced (thus preventing a gravitation-dependent increase in the hailstones). If place and time of the center formation were known, hall could be prevented with 4 to 10 kg of silver iodide. Since these quantities are unknown, an amount of silver iodide larger by two or three orders is required for hail prevention. There are 3 figures, 1 table, and 4 references, 3 of which are Soviet.

ASSOCIATION: El'brusskaya ekspeditsiya Instituta prikladnoy geofiziki

Akademii nauk SSSR

(Elbrus Expedition of the Institute of Applied Geophysics of

the Academy of Sciences, USSR)

PRESENTED: May 25, 1959, by I. N. Vekua, Academician

SUBMITTED: April 26, 1959

Card 4/4

82704

5/049/60/000/004/009/018 E032/E514

3.5000

AUTHORS: Bibilashvili, N.Sh., Lapcheva, V.F., Ordzhonikidze, A.A.

and Sulakvelidze, G.K.

Characteristics of Coagulational Growth of Hailstones, Associated with Changes in the Velocity of Vertical TITLE: Streams with Altitude

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1960, No.4, pp.585-593

Existing theories of precipitation from thick cumulus clouds lead to certain results which are not confirmed by observa-Thus, for example, in order to obtain hailstones having a radius of 2 to 3 cm, cloud thicknesses of 10 to 15 km are required (Ref.1) with constant upward current velocities of the order of 20 to 25 m/sec. The amount of precipitation from hail and shower clouds exceeds the store of moisture in these clouds by a factor of These and other results are not confirmed in practice. Studies of cumulus and thick cumulus clouds carried out by the present authors have led to the following results: a) in cumulus and thick cumulus clouds one observes an increase in the velocity of the upward currents with altitude until a certain maximum value Card 1/4

82704 \$/049/60/000/004/009/018 E032/E514

Characteristics of Coagulational Growth of Hailstones Associated with Changes in the Velocity of Vertical Streams with Altitude

is reached. Thereafter the velocity begins to decrease. The maximum value of the upward current velocity in developing thick cumulus and storm clouds does not exceed 27 m/sec according to the data obtained in eighteen experiments. The mean maximum velocity is of the order of 7-8 m/sec (Fig.1). A similar distribution of upward current velocities with altitude is also observed in cumulus clouds. The magnitude of the average maximum velocity in cumulus clouds was found to be 3-4 m/sec (average of 40 experiments). Measurements showed that the mean level of maximum velocities for the above types of clouds over the Alazanskaya plane and in the region of El'brus is at 2500-3500 m above the Earth's surface, i.e. in the middle or upper parts of the cloud. b) Microphysical studies showed that in the lower part of a cloud, most of the droplets have radii of 6-10  $\mu$ , and the number of particles per cubic centimeter lies between 200 and 1500. The mean liquid water content does not Large droplets having a radius of  $40-60~\mu$  are exceed  $10^{-6}$  g/cm<sup>3</sup>. also found in the lower part of a cloud. In the middle and the upper parts of a thick cumulus cloud located above the zone of Card 2/4

82704

S/049/60/000/004/009/018 E032/E514

Characteristics of Coagulational Growth of Hailstones Associated with Changes in the Velocity of Vertical Streams with Altitude

maximum vertical velocities, the dimensions of isolated droplets reach 400 - 600 μ and the liquid water content about 2 x 10<sup>-5</sup> g/cm<sup>3</sup> (data from ten experiments). The accuracy of these measurements was estimated to be about 20 - 30%. c) Radar studies of hail and shower precipitation showed that the precipitation can continue to appear from a single focus for 10 to 20 minutes. Thus, the formation and precipitation of showers and hail is not a prolonged and continuous process. These results are used in the present paper to set up a theory of coagulational growth of cloud droplets forming showers and It is shown that the accumulation of large amounts of hailstones. water in a cloud takes place as a result of a reduction in the velocity of upward currents towards the upper part of a cloud. Thus, favourable conditions are produced for the droplets to come to rest and increase their size. These droplets then grow by coagulation with the smaller drops coming up with the upward stream and thus increase the liquid water content of the upper part of the cloud. Using this scheme it is possible to predict the appearance of hail, the finite dimensions of hailstones and the amount of precipitation.

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82704

5/049/60/000/004/009/018 E032/E514

Characteristics of Coagulational Growth of Hailstones Associated with Changes in the Velocity of Vertical Streams with Altitude

The most effective weapon in the fight against hail at the present time is the continuous crystallization of the supercooled part of the cloud. It is, therefore, important to develop studies of microscopic parameters of thick cumulus clouds so that hail centres can be discovered and neutralized. There are 5 figures, 3 tables and 3 references: 1 Soviet, 1 a Russian translation from English and 1 English.

ASSOCIATION: Akademiya nauk SSSR El'brusskaya ekspeditsiya IPG
(Academy of Sciences USSR, El'brus Expedition of the
Institute of Applied Geophysics)

SUBMITTED: February 25, 1959

Card 4/4

S/030/61/000/001/015/017 B105/B206

AUTHORS:

Sulakvelidze, G. K., Professor, Lapcheva, V. F.

TITLE:

Research in the field of the physics of the atmosphere

PERIODICAL:

Vestnik Akademii nauk SSSR, no. 1, 1961, 115-116

TEXT: In connection with the 25th anniversary of the Kabardino-Balkarskoye otdeleniye (Kabardino-Balkarskaya Branch) of the Institut prikladnoy geofiziki Akademii nauk SSSR (Institute of Applied Geophysics of the Academy of Sciences USSR), the former El'brusskaya ekspeditsiya (El'brus Expedition), a Scientific Meeting was held at Nal'chik from September 26 to 30, 1960. The region of the El'brus is described as being the best place in the Soviet Union for scientific high-mountain research. Studies started here by S. I. Vavilov were interrupted by the war and developed in a big way under the direction of Ye. K. Fedorov in the period 1948 to 1954. G. K. Sulakvelidze, Chief of the Branch, characterized the scientific achievements of the last ten years. It was possible to find an explanation for the intensity variations of the green line of luminescence of the night sky by studying the optical

Card 1/3

S/030/61/000/001/015/017 B105/B206

Research in the field of the ...

properties of the atmosphere on the slopes of the El'brus. Some conclusions on the structure of the upper atmospheric layers were confirmed through research by means of artificial satellites and cosmic rockets (report by I. A. Khvostikov). S. F. Rodionov reported that the effect of the anomalous transparency of the atmosphere in the ultraviolet range of the spectrum was discovered and explained in 1936-1937 by studies made under his supervision. The transparency of clouds and fog was also studied. S. F. Rodionov is of the opinion that a new branch of science, Soviet high-mountain optics, may be said to have been created. Further reports were delivered by: Ye. I. Bocharov on studies of the visible part of the spectrum which is weakened by clouds and fog; L. N. Gutman on problems of local meteorological processes. The new theory on the formation of hail, developed after the war, was also explained. N. Sh. Bibilashvili clarified the law of the distribution of the velocity of rising currents in a cloud. On the basis of experimental material, the theory of the forming of sudden downpours and hail was established permitting the proposal of new methods for affecting the processes which take place in the cloud. L. M. Levin established the value of the coefficient of the capture of drops as a

Card 2/3

Research in the field of the ...

S/030/61/000/001/015/017 B105/B206

function of their radius and the velocity of the accumulating flow, and elaborated the theory of the "traps" of cloud drops. The study of snow cover and the dynamics of avalanches made it possible for V. S. Chitadze to establish the standards for avalanche-protective constructions.

K. S. Shifrin reported on the use of calculations of artificial effects on supercooled clouds. N. V. Krasnogorskaya reported on the study of atmospheric electricity in the El'brus region. N. N. Sirotinin and A. Z. Kolchinskaya reported on the investigation of the mountain sickness, anoxia under high-mountain conditions as well as treatment methods by high-mountain climate. Symposia on atmospheric optics, crystallization processes, and physics of cloud and rain were held during the meeting. A comprehensive discussion under participation of scientists from Moscow, Leningrad, and Tbilisi permitted a critical consideration of the results obtained, the proposal of recommendations for further studies as well as their coordination.

Card 3/3

 5/169/62/000/008/052/090 E202/E192

WITH THE PROPERTY OF THE PROPE

AUTHORS: Bibilashvili, N.Sh., Zaytseva, A.M., Kuz'min, Ye.A.,

Lapcheva, V.F., Ordzhonikidze, A.M., and

Sulakvelidze, G.K.

TITLE: Theory of the formation of large drop fractions in the heavy radial cumulo-nimbus clouds, and factors

affecting these processes

PERIODICAL: Referativnyy zhurnal, Geofizika, no.8, 1962, 80,

abstract 8 B 550. (In the collection: "Issled. oblakov, osadkov i grozovogo elektrichestva" ('Studies

of clouds, precipitations and thunderstorm electricity')

M., AN SSSR, 1961, 3-6).

TEXT: Using observational data from the strato-cumulus, cumulus and heavy cumulus clouds in the years 1956-1958 in Trans-Caucasus and Caucasus, the growth of clouds' droplets was calculated according to the method of Bouen and Kiryukhin, in terms of the gravitational coagulation, assuming linear increase of the anabatic velocity w, with respect to the height z. Card 1/4

CIA-RDP86-00513R000928610006-9

S/169/62/000/008/052/090
Theory of the formation of large ... E202/E192

As a result of these calculations it was established that with the greater velocities of the vertical streams the drop does almost cease to grow during the anabatic branch of the trajectory. The droplets are retained in the upper part of the cloud, where the velocities are small and the principal growth of the droplets or hailstones occurs prior to reaching the upper portion of the cloud. With the aqueous exchange of  $10^{-6}$  g/cm<sup>3</sup>, and the coefficient of catchment of 0.85, the position of the apex of the trajectory depends principally on the height  $z_1$ , at which  $w = w_{max}$ the degree of decrease of w with height at which  $z>z_1$ . greater than the With the velocity of the anabatic stream wmax velocity attained by the falling droplet with a radius of 2.5 mm of the v<sub>cr</sub>, a chain reaction is started which leads to the accumulation of a large quantity of moisture in the upper part of the cloud and to the appearance of intensive showers. A cloud with w<sub>max</sub> v<sub>cr</sub> gives only a very short-duration and weak shower. Card 2/4

Theory of the formation of ... \$/169/62/000/008/052/090 E202/E192

In the case when the temperature of the cloud's top is lower than the temperature of natural crystallisation, hail is formed in the cloud and the size of the falling hail particles is determined by the relation:

the relation:  $R \geqslant 1/8w_{\max}^{2} \rho(z) \rho(0),$ where  $\rho(z)$  and  $\rho(0)$  are air densities a

where  $\varrho(z)$  and  $\varrho(0)$  are air densities at levels z and y of the Earth's surface. The growth of hail to the size  $R \sim 2.4$  cm at  $w_{\text{max}} \approx 10-20$  m/sec occurs substantially above the level at the beginning of the katabatic branch of hail trajectory. The time necessary for the growth of hailstones to the above dimensions depends chiefly on the value of  $w_{\text{max}}$  and varies within the interval of 20-70 min. The terminal dimensions of hailstones depend very little on the vertical thickness of the cloud, and are determined chiefly by the moisture content of the air masses entering the cloud, the height of the zero isotherm, the value and the stability of  $w_{\text{max}}$ , and also by the velocity gradient of the vertical streams along their height. Card 3/4

Theory of the formation of large ...  $\frac{S/169/62/000/008/052/090}{E202/E192}$ 

Taking into consideration in the calculations the last mentioned, leads to a conclusion that the accumulation of large amounts of droplet water and hail takes place in the zone before the top of the cloud, which explains the high intensity and short duration of the showery precipitates and hail. The pressure of the large droplet fraction in the upper part of the cloud lowers the value of the anabatic velocity of the stream down to  $v_{\rm CT}$ , and the corresponding quantity of water holding may be calculated from the formula:

 $q = \frac{m}{2gz} (w_{max}^2 - v_{cr}^2),$ 

where m - the mass of air in a unit volume. The action on the upper part of the growing heavy cumulus with wmax > vcr, with surface active or hygroscopic agents does not give a positive effect. Prevention or even weakening the effect of a hail is possible only by full crystallisation of the supercooled fraction of the liquid droplets entering the upper part of the cloud. 4-10 kg of reagent are required to destroy the hail centre. Card 4/4 Abstractor's note: Complete translation.

#### 3732

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AUTHORS:

Bartishvili, G. S., Biblashvili, N. Sh., Zaytseva, A. M., Lapcheva, V. F., Ordzhonikidze, A. A. and

Sulakvelidze, G. K.

TITLE:

The growth of drops and hailstones in thick cumulus qoild with allowance for the change in the velocity of vertical currents with height and the physical ba-

ses of the effect on hail processes

Referativnyy zhurnal, Geofizika, no. 4, 1962, 19, abstract 4B134 (V sb. Fiz. oblakov i osadkov, v. 2 (5), M., AN SSSR, 1961, 146-148) PERIODICAL:

TEXT: In the article a method is given for calculating the growth of cloud drops and hail particles at the expense of coagulation processes, and the influence of the character of the change in the velocity of ascending currents on the growth of cloud particles is investigated. The question of calculating the water content of \_thick cumulus cloud and the amount of precipitation is considered;

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The growth of drops ...

the physical bases of the effects on hail processes are also illuminated. The results, accumulated during the study of mass convective clouds on the El'brus and the Alazani expeditions of 1954-1959 are used as the original experimental material. In conclusion the following deductions are formulated: The accumulation of large water reserves in a cloud in liquid or solid phases occurs as a result of the decreasing velocity of ascending currents with altitude. This creates favorable conditions for the coagulation growth of the largest drops or of soft hail at the expense of the finedrop liquid fraction, entering from below. A "locking-layer" in which a chain reaction in the watery cloud, or a considerable which a chain reaction in the watery cloud, or a considerable growth of hail particles, occurs, is formed in the zone of the maximum vertical-current velocity. On the whole the hailstone dimensions mum vertical-current verocity. On the whole the half some transford depend on the presence in the cloud's middle part of stable and prolonged (not less than 30 - 90 min) vertical currents with speeds prolonged (not less than 30 - 90 min) vertical currents with speeds of 10 - 25 m/sec, as well as on the height of the zero isotherm, and the thickness and the water content on the cloud's lower and the thickness and the water content on the cloud's lower and not on the thickness and the water content on the cloud's lower part. If the zero isotherm is situated at the level of maximum vertical velocities, or below this level, the hailstone sizes are card 2/4

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largely governed by the vertical flow magnitude. If the zero isotherm is located well above the maximum velocity level, the hailstone dimensions are determined by the velocity magnitude at the zero isotherm level. The radius of a falling hailstone satisfies the following disparity, which is one of the criteria for the likelihood of hail fall:

$$\mathbb{R} < \frac{2\omega_0^2 \rho_z}{\rho_0}$$

where  $\omega_0$  is the asecending current velocity,  $\rho_0$  is the air density at a standard pressure, and  $\rho_z$  is the air density at a set height. The ascending current velocity also determines the water content of a cloud's upper part, which may reach 20 g/m³ at the beginning of precipitation. The amount of precipitation from intra-mass cumulus clouds depends, too, on the ascending current velocity. Hail processes cannot be averted by the episodic effect of hygroscopic Card 3/4

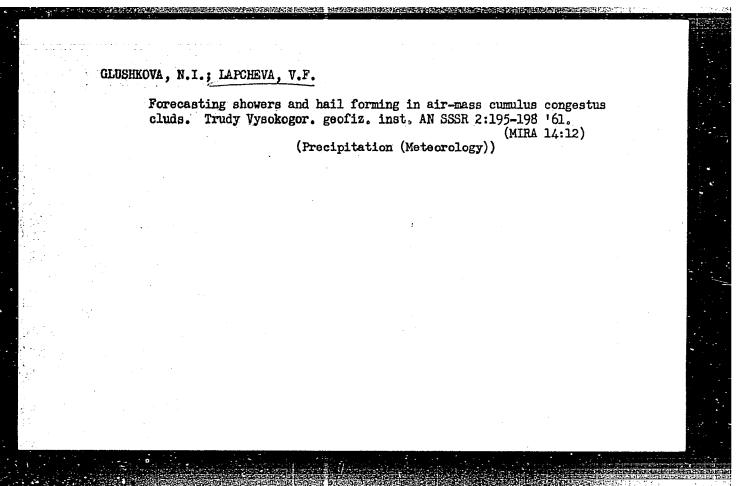
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or other substances, which accelerate the gravitational coagulation of drops, upon the upper part of a thick cumulus water-drop cloud. However, the continuous action on the cloud's lower part may be an effective means of combating hail in consequence of the "washing out" of the lower part and the coarsening of the nuclei at its summit. The episodic effect of crystallizing substances on the supercooled part of thick cumulus cloud can lead to the artificial development of hail. In the authors' opinion the most effective way of preventing hail is the full crystallization of the cloud's supercooled part. Questions of the study of the microstructural cloud parameters that are necessary for the advanced detection of hail foci are most pressing at the present time. Questions of the method of introducing active matter into a cloud and of the search for new reagents are also important. / Abstracter's note:

Card 4/4



YEFIMOV, V.Ye.; LAPCHEVA, V.F.; SULAKVELIDZE, G.K.

Radar method for determining the seats of origin of hails.

Meteor. i gidrol. no.10:10-14 0 '63. (MTRA 16:11)

1. Vysokogornyy geofizicheskiy institut.

L 12990-66 EWT(1)/FCC RB/GW

ACC NR: AR6000800 SOURCE CODE: UR/0169/65/000/009/B017/B018

SOURCE: Ref. zh. Geofizika, Abs. 9B163

AUTHOR: Lapcheva, V. F.; Sulakvelidze, G. K.

TITLE: Radar method for determining the size and concentration of hail particles in a cloud and the form of precipitation which will reach the earth when melting of the hail is taken into account

CITED SOURCE: Tr. Zakavkazsk. n.-i. gidrometeorol. in-ta. vyp. 16(22), 1964, 99-106

TOPIC TAGS: radio echo, meteorologic radar, atmospheric precipitation, hail

TRANSLATION: In experiments conducted in the mountainous regions of the Kabardino-Balkarskaya ASSR, the appearance of hail in a cloud was determined from the power of the reflected signal and the temperature at the level of the upper boundary of the radio echo. On days with hail, the altitude of the zero isotherm was 0.6-1.1 km above the surface of the earth. Therefore, melting of the hail was insignificant during the precipitation. The experimental data were used as a basis for selecting boundary values for the radar reflectivity  $n=P_{r}R^{2}C_{K}$  for various forms of precipitation. Weak and moderate precipitation are observed when  $n<1\cdot10^{-7}$  cm<sup>-1</sup>, reflection

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