ANTONOVA, G.P.

Individual characteristics in the thinking activity of primary school students. Vop. psikhol. 11 no.6:52-64 N-D '65.
(MIRA 19:1)

1. Institut psikhologii Akademii pedagogicheskikh nauk RSFSR, Moskva.

ANTONOVA, G. S. Cand Tech Sci -- (diss) "Study of turbulent nonisometric free jets." Mos, 1958. 16 pp (Min of Higher Education USSR. Mos Order of Lenin Power Engineering Inst), 150 copies (KL, 36-58, 117)

Antonov, S.S.

10(2) PHASE I BOOK EXPLOITATION SOV/2271

Soveshchaniye po prikladnoy gazovoy dinamike. Alma-Ata, 1956

Trudy (Transactions of the Conference on Applied Gas Dynamics) Alma - Ata, Izd-vo AN Kazakhskoy SSR, 1959. 235 p. Errata slip inserted.

Sponsoring Agency: Kazakhskiy gosudarstvennyy universitet imeni S.M. Kirova.

Ed.: V.V. Aleksandriyskiy; Tech. Ed.: Z.P. Rorokina; Editorial Board: L.A. Vulis (Resp. Ed.), V.P. Kashkarov, T.P. Leont'yeva, and B.P. Ustimenko.

PURPOSE: This book should be of interest to scientists and engineers working on problems of applied gas dynamics and may be of use to students.

COVERAGE: This book presents reports and brief summaries of the discussions which took place at the Conference on Applied Gas Dynamics in Alma-Ata in October 1956. The conference was subdivided into three areas of applied gas dynamics: jet flows of fluids and gases, the

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aerodynamics of heating processes, and the discharge of a fluid. The practical value of the "Transactions of the Conference" consists in the development of theory, methods of technical calculation and methods for systematic measurement applied to heating, furnace, and other industrial processes for which, in most cases, aerodynamic phenomena are decisive factors.

TABLE OF CONTENTS:

Session of October 24, 1956 (morning)

22224

S/124/61/000/003/015/028
A005/A105

11.7300

AUTHOR: Antonova, G. S.

TITLE: Investigation of the characteristics of turbulence of a free non-isothermal jet and an open flame tongue

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 3, 1961, 73, abstract 3B497 (Tr. Soveshchaniya po prikl. gaz. dinamike, 1956, Alma-Ata, AN KazSSR, 1959, 45-55, Diskus., 75-76)

TEXT: The fundamental regularities are explained, which characterize the pattern of the turbulent pulsations in a free jet of heated air and in an open diffusion flame tongue. The measurements were carried out by means of a thermo-anemometer; in case of the flame tongue, a nozzle was used, which could be carried through the flame with constant speed. The assumption suggested by the author "on the sonic character of the turbulence" is somewhat apart of these data; according to this suggestion, the turbulent motion occurs as a result of the application of a sound oscillation system to a laminar stream. There are 16 references.

O. Yakovlevskiy

[Abstractor's note: Complete translation]

Card 1/1

DEREVYAGIN, N.P., inzh.; GONCHARUK, K.F., inzh.; ANTONOVA, G.T.; SHCHIPINA, N.Ye., kand. tekhn. nauk; KLUBNICHKIN, K.F., kand. tekhn. nauk, otv. red.; DOLGIKH, N.S., red.; DONSKAYA, G.D., tekhn. red.

[Uses of rare elements and titanium in chemical industries and analytical chemistry] Primenenie redkikh elementov i titana v khimicheskikh proizvodstvakh i analiticheskoi khimii; obzor literatury. Moskva, Otdel nauchno-tekhn. informatsii, 1962. 64 p. (Informatsiia, no.27(38)) (MIRA 16:8)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redkometallicheskoy promyshlennosti "Giredmet."
(Metals, Rare and minor) (Titanium)

ANTONOVA, G.V.

AUTHORS: Pleshkov, B. P., Ivanko, Sh., and Antonova, G.V., 20-6-42/47

TITLE: The Influence Exerted by Conditions of Nutrition Upon the Content of Free Amino Acids in Phaseolus Leaves (Vliyaniye usloviy pitaniya na soderzhaniye svobodnykh aminokislot v list'yakh fasoli)

PERIODICAL: Doklady AN SSSR, 1957, Vol. 117, Nr 6, pp. 1070-1073 (USSR)

ABSTRACT: The conditions of the mineral nutrition may by modification of the intensity and the direction of metabolism of plants essentially influence the content of free amino acids in the individual organs. A lack of individual elements reduces the intensity of the protein synthesis and leads to the accumulation of free amino acids in the plant. This was noticed in the case of lack of sulphur, calcium, magnesium, boron, potassium, zinc, copper, manganese and iron although the nitrogen nutrition was the best and chlorine was abundantly present. A deficiency of molybdenum reduces the content of free amino acids in the plant (reference 1-11). The authors studied this problem in the cultivation of beans on different levels of nitrogen, phosphorus and potassium. First the method is described. The third, forth and fifth leaf of the beans of the sort "Triumf lushchil'nyy" were analyzed and the quantitative determination of the amino acids chromatogrpphically performed on paper. Methionine + valine were calculated according to valine, leucine+

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argine, aspartic acid, serine, and glycine especially strongly increased. In the case of nitrogen deficiency (variant PK), when all nitrogen reserves in the plant are put into the protein synthese, the content of free amino acids almost sank by the 1,5 fold. Arginine, aspartic acid, serine, glycine, glutamic acid, α- and β-alanine, valine and phenylalanine especially strongly decreased. These amino acids apparently are capable of giving off their nitrogen by deamination and reamination above all to the synthesis of other amino acids which are necessary for the formation of protein molecules. Tyrosine and treonine increase in the case of nitrogen deficiency, which fact could not yet be explained. The content of arginine in the leaves is most affected by the variation of the conditions of nutrition. In nitrogen deficiencies it decreases 6-fold, but in potassium deficiencies it increases 2,5 fold. The major part of arginine decomposes in the case of nitrogen starvation and its nitrogen is, as above-indicated, used in the protein synthesis. The decomposition of arginine may also prodeed over the ornithine-cycle under formation of urea. Under the action of urease, urea forms ammonia which is used for the synthesis of new acids. There are 1 figure, 1 table, and 12 references, 6 of which are Slavic.

The Influence Exerted by Conditions of Nutrition Upon the Content of Free Amino Acids in Phaseolus Leaves. 20-6-42/47

ASSOCIATION:
Moscow Agricultural Academy imeni K.A. Timiryazev (Moskovskaya sel'skokhozyaystvennaya akademiya im. K.A. Timiryazev)

PRESENTED: July 17, 1957, by A.I. Oparin, Academician

SUBMITTED: July 15, 1957

AVAILABLE: Library of Congress

Card 4/4

ANTONOVA, I. A.

USSR/ Nuclear Physics

Card 1/1 Pub. 43 - 5/11

Authors : Antonova, I. A., and Estulin, I. V.

Title : Isomeric conversions of In^{115*}, In^{113*} and Sr^{87*}

Periodical : Izv. AN SSSR. ser. fiz. 18/1, 79-87, Jan-Feb 1954

Abstract : The isomeric conversions of In^{115*}, In^{113*} and Sr^{87*} were investigated by the ionization method and the relative conversion energies and semi-decomposition period of these isotopes were established. A comparison of experimental and theoretical data made it possible to determine the multi-polarity of these isomeric conversions. It was established that all such radiation (gamma-radiation) conversions are electrical 2^5-polar conversions. The coefficients of internal conversion of gamma rays in In^{113*}, In^{115*} and Sr^{87*} were determined with an accuracy of 10-15%. Data regarding the odd numbers of neutrons or protons in the nuclei of Sr^{87}, In^{113} and In^{115} are included. Twenty-four references: 15-USA; 8-USSR and 1-English (1949-1953). Tables; graphs; drawing; diagram.

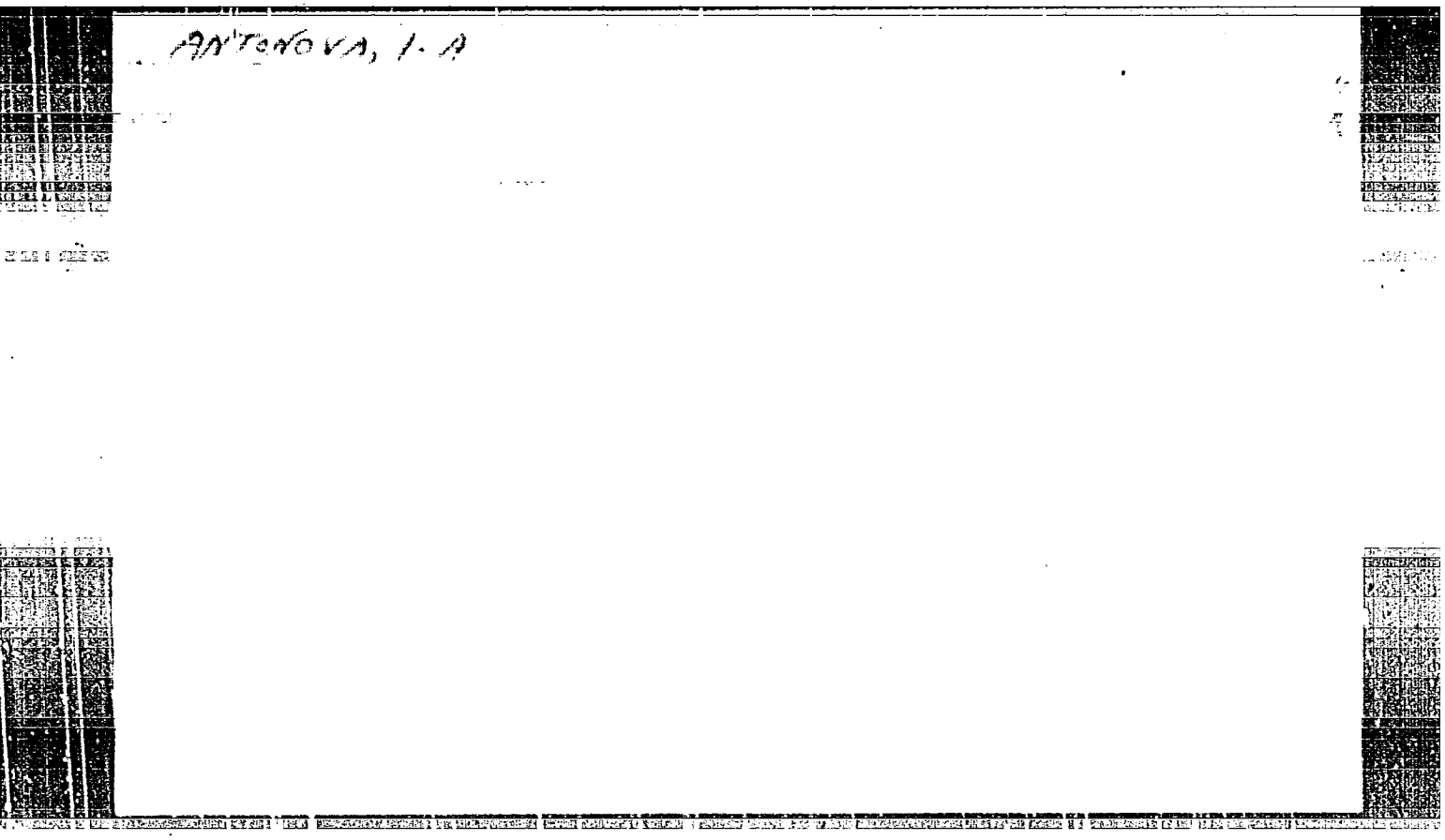
Institution : The M. V. Lomonosov State University, Moscow

Submitted : November 30, 1953

Antonova, I. A.

Internal conversion coefficients for isomeric transitions of some stable nuclei. I. A. Antonova and V. Ratulin (Univ. Moscow). *J. phys. radium* 16, 684-7(1955).—The coeffs. of Sr^{87}, In^{115}, and In^{49} were measured with an ionization chamber and abs. intensity-counting techniques. The results were in agreement with published data but disagreed with theoretical values. N. B. Pickering

(1)



Category : USSR/Nuclear Physics - Instruments and Installations. Methods of Measurement and Investigation C-2

Abs Jour : Ref Zhur - Fizika, No 2, 1957 No 3110

Author : Antonova, I.A.
Inst : Moscow State University
Title : Study of Spectra of Conversion Electrons with Beta Spectrometers Using Thick-Layer Photographic Plates.

Orig Pub : Zh. eksperim. i teor. fiziki, 1956, 30, No 3, 571-572

Abstract : A new method is proposed for recording electrons in beta spectrometers with the aid of thick-layer photographic plates by counting the number of tracks of electrons in a photographic emulsion. The Danish-type beta spectrometer was used, a compound of Cs^{137} served as the source of conversion electrons, and the plates used were NIKFI type R with a density of 30 -- 40 grains per 100 microns and with emulsions 200, 100, and 50 microns thick. The tracks were counted with an MBI-2 microscope. The best results were obtained with R-50 plates. At a magnification of 300 -- 450 times, the best exposures are those in which the number of electron tracks in the field of view of the microscope did not exceed 300.

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ANTONOVA, I. A. Cand Phys-Math Sci -- (diss) "The study of isomeric conditions of certain nuclei". Mos,1957. 12 pp 21 cm. (Mos Order of Lenin and Order of Labor Red Banner State Univ im M.V. Lomonosov). 110 copies. Bibliography at the end of the book (23 names) . (KL,22-57,104).

Call Nr: None given

AUTHOR: See Table of Contents

TITLE: Investigations in the Field of Ionizing Radiation Dosimetry. Collected Articles. (Issledovaniya v oblasti dozimetrii ioniziruyushchikh izlucheniy. Sbornik statey.)

PUB. DATA: Izdatel'stvo Akademii nauk SSSR, Moscow, 1957, 191 pp., 6000 copies.

ORIG.AGENCY: Akademiya nauk SSSR. Otdeleniye fizika-matematicheskikh nauk.

EDITOR: Aglintsev, K. K., Doctor of Technical Sciences; Ed. of the Publishing House: Kuznetsova, Ye.B., Tech.Ed.: Kiseleva, A. B.

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Investigation in the Field of Ionizing Radiation Dosimetry (Cont.)

PURPOSE: To present in a collected form research studies carried out in 1950-1954, part of which were submitted at the conference on dosimetry called in 1954 by the Academy of Sciences, USSR.

COVERAGE: The articles are devoted to investigation of beta-active substance absolute measurements, scintillation methods, individual control devices, dosimetry measurement techniques, and calculations relating to admissible level limits of exterior radiation fluxes. The articles deal with Russian contributions. For references see Table of Contents.

TABLE OF CONTENTS

There are 51 references, 11 of which are USSR, 34 English, and 4 French.

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Investigation in the Field of Ionizing Radiation Dosimetry (Cont.)

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Investigation in the Field of Ionizing Radiation Dosimetry (Cont.)

AVAILABLE: Library of Congress.

7/7

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SOV/112-59-4-7412

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 4, p 138 (USSR)

AUTHOR: Estulin, I. V., and Antonova, I. A.

TITLE: Gamma-Spectrum Indicator

PERIODICAL: V sb.: Issled. v obl. dozimetrii ioniziruyushchikh izlucheniy. M., AS USSR, 1957, pp 166-175

ABSTRACT: The quality of a gamma spectrum is usually evaluated in a differential ionization chamber which consists of 2 coaxial cylinders. The chamber walls are made from aluminum and lead layers in such a way that the inside wall of one of the cylinders is coated with lead and that of the other cylinder with aluminum. Secondary electrons are set up in aluminum under the effect of gamma rays, chiefly by the Compton effect; in the lead, in addition, a photo-electric effect is very pronounced. Therefore, the interactions between the gamma rays and the walls of both cylinders are different, and the currents of both halves of the chamber are varied in different ways with variation of

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Gamma-Spectrum Indicator

radiation energy. The source being investigated is placed in the chamber center in a cavity insulated from both cylinders. A ratio between the difference and the sum of the half-chamber currents is measured with different radiation energies. The instrument calibration curve is obtained from a number of known monochromatic sources; the energies of unknown gamma-radiation sources are determined by these curves; at an energy over 1.2 Mev, the indicator is not more sensitive to the energy variation. At lower energies, the instrument error does not exceed $\pm$20 kev. The activity of samples should be about 10 microcuries.

L.V.M.

9(6) SOV/112-59-3-5268

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 3, p 137 (USSR)

AUTHOR: Antonova, I. A., and Senchuro, I. N.

TITLE: Automatic Circuit for Measuring Weak Currents (Avtomaticheskaya skhema dlya izmereniya slabykh tokov)

PERIODICAL: V sb.: Issled. v obl. dozimetrii ioniziruyushchikh izlucheniy. M., AN SSSR, 1957, pp 176-179

ABSTRACT: An automatic single-stage circuit for measuring a weak current of an ionization chamber is described; the circuit is designed with an EM-3 electrometer tube. The weak current is measured by the discharge time of the input capacitance of the circuit. To ensure stability, the circuit is balanced with respect to both heating-current and tube-emission fluctuations. The best balancing of the EM-3 tube was achieved by supplying the filament and the anode separately. The lower limit of the measured current is determined by the tube grid current 6×10^{-15} amp. The upper limit is set by the "dead time"

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SOV/112-59-3-5268

Automatic Circuit for Measuring Weak Currents

of the circuit which is equal to $(7.6 \pm 0.5) \times 10^{-2}$ sec. With an input-circuit capacitance of 11 μμf and with a voltage scale span of 0.9 v, the upper limit of the measured currents is 3×10^{-11} amp.

N.G.Z.

Card 2/2

AUTHOR: Antonova, I. A.; Pisarenko, N. F.; Savenko, I. A.; Shumshurov

TITLE: High-sensitivity electrostatic relay 25

SOURCE: Geomagnetizm i aeronomiya, v. 4, no. 4, 1964, 781-784

TOPIC TAGS: weak current measurement, ionization chamber measurement,

ABSTRACT: A miniature high-sensitivity electrostatic relay designed for recording weak currents up to 10 amp in automatic ionization chambers is described. It represents a system of normally

electrode of an ionization chamber. The spot on the collector surface where the contact with the fiber takes place is coated with graphite. The distance between the fiber and collector can be adjusted by a

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ACCESSION NR: AP4043257

special regulator. Various materials for contacts were tried, but the most long-lived and stable in operation is the gold-graphite contact (10^6 operations). Experiments show that the relay can be utilized for

measurements in the form of standard pulses can be obtained by using a

ASSOCIATION: Institut

Card 2/2

ANTONOVA, Iya Aleksandrovna; GONCHAROVA, Nataliya Georgiyevna; TULINOVA, Nataliya Ivanovna; TROSHKIN, Yu.S., red.

[Laboratory manual on nuclear physics] Praktikum po iadernoi fizike. Moskva, Mosk. univ., 1965. 134 p. (MIRA 18:12)

AVTOKOVA, I. F.

"Power Engineering and Metallurgy in Canada." Cand Geog Sci, Moscow Order of Lenin State U imeni M. V. Lomonosov, 19 Nov 54. (VM, 9 Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No. 521, 2 Jun 55

ANTONOVA, I. F.

USSR/Miscellaneous FD-2180

~~Card 1/2~~ Pub. 129-20/20

Author : -

Title : Life in Moscow University

Periodical : Vest. Mosk. un., Ser. fizikomat. i yest. nauk, 10, No 2, 171-178, Mar 1955

Abstract : Six brief notices: I. A. Voronkov, "Scientific relations of Moscow Univ. with peoples' democratic countries." N. Filin, "Exhibition on the history of Moscow University." Anonymous "Scientific council Moscow State U. on the natural sciences." G. I. Rozhkova (head of the chairs) and Ye. I. Motina, "Work of the Chairs of the Russian Language for students and foreign aspirants." Anonymous, "In honor of Prof. N. A. Kachinskiy." O. Kibal'chich, "Defense of dissertations" (The candidate dissertations of the following four were defended at the end of 1954 in the Geographical Faculty: I. F. Antonova, "Power engineering and metallurgy of Canada;" K. P. Kosmachev, "Economic geographical characteristics of agriculture in the region between the rivers Lena and Amga, Yakutsk ASSR;" I. N. Guseva, "Wall maps for the course 'Physical Geography of the USSR' in higher school; I. M. Klebanova, "Landscape characteristics of the sandy massif of the Northeastern Prikaspiy (Caspian Region).").

ANTONOVA, Inina Fedorovna; LAVRENT'YEVA, Ye.V., redaktor; NOGINA, N.I., tekhnicheskiy redaktor; GALITSYN, A., redaktor kart.

[Canada] Kanada. Moskva, Gos.izd-vo geogr.lit-ry, 1957. 80 p. (MIRA 10:11)
(Canada--Geography, Economic)

ANTONOVA, I.F.; SMIRNYAGIN, L.V.

Some factors in the location of the mining industry in Canada. Vest. Mosk. un. Ser. 5: Geog. 16 no. 3:14-21 My-Je '61. (MIRA 14:5)

1. Kafedra ekonomicheskoy i politicheskoy geografii kapitalisticheskikh stran, Moskovskiy Gosudarstvennyy universitet i Vsesoyuznyy institut nauchnoy i tekhnicheskoy informatsii AN SSSR.
(Canada—Mineral industries)

ANIONOVA, I.F.

Methodological conference on teaching practice. Vest. Mosk. un. Ser. 5: Geog. 16 no. 3:58-59 My-Je '61. (MIRA 14:5)
(Geography--Study and teaching) (Student teaching)

ANTONOVA, I.F.

Results of a methodological conference on the condition of correspondence school education in geography in the light of the law on strengthening the ties between the school and life. Vest. Mosk. un. Ser. 5: geog. 16 no.6:62-65 N-D '61. (MIRA 14:11)
(Geography--Study and teaching)
(Correspondence schools and courses)

ANTONOVA, I. F.

Practical training is an integral prt of higher geographical education. Vest. Mosk. un. Ser. 5: 52-56 S-O '62.
(MIRA 15:10)

(Geography--Study and teaching)
(Education, Conference)

ANTONOVA, I.F.

Characteristics of the economic geography of Canada. Geog. i khoz. no.12:63-66 '63. (MIRA 16:12)

ANTONOVA, I.F.

Results of vocational distribution of the Geographical Faculty graduates of the Moscow University. Vest. Mosk. un. Ser 5:Geog. 18 no.6:93 N-D '63. (MIRA 16:11)

ANTONOVA, I. G.

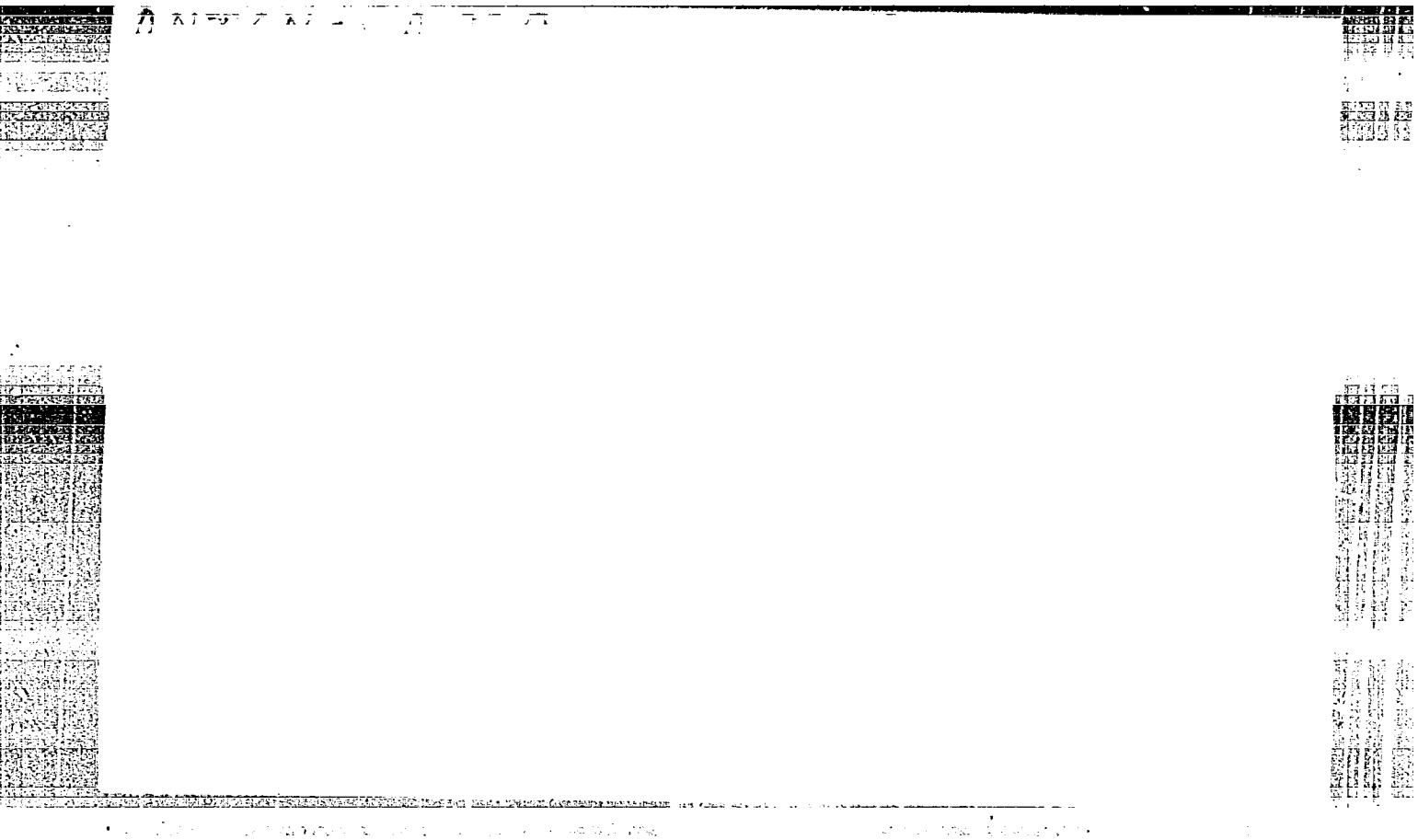
"The Importance of Afferent Impulses in the Periodic Activity of the Respiratory Center." Cand Med Sci, Inst of Experimental Medicine, Acad Sci USSR, Leningrad, 1953. (RZhBiol, No 1, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

ANTONOVA, I.G.; DANILOV, I.V.; KUPALOV, P.S.

Data on characteristics of electrical activity of the brain in dog; preliminary communication. Biul. eksp. biol. i med. 37 no. 5:3-6 My '54. (MLRA 7:7)

1. Iz fiziologicheskogo otdela (zav. deystvitel'nyy chlen AMN SSSR prof. P.S.Kupalov) Instituta eksperimental'noy meditsiny (dir. chlen-korrespondent AMN SSSR D.A.BIRYUKOV) AMN SSSR, Leningrad.
(BRAIN, physiology,
*electrophysiol. in dog)



ANTONOVA, I.G.

Electrical activity of the brain and of the respiratory muscles in frogs in complex periodic respiration, Fiziol. zhur. 41 no.4: 493-500 Jl-Ag '55. (MLRA 8:10)

1. Institut eksperimental'noy meditsiny AMN SSSR, Leningrad.
(CHEYNE-STOKES RESPIRATION)
(RESPIRATION, physiology,
complex periodic resp. in frogs, electrical brain & resp. musc.changes in)
(BRAIN, physiology,
electric changes in comples periodic resp. in frogs)
(MUSCLES,
resp.musc.electric changes in complex periodic resp. in frogs)

U.S.S.R. / Human and Animal Physiology. Respiration. T

Abs Jour: Ref Zhur-Biol., No 5, 1958, 22239.

Abstract: afferent impulses from the respiratory muscles, is intensified by the action of associated irritants (vocal or tactile) and is inhibited by application of water on the skin surrounding the nares. Sighing, following wide exposure of the oral cavity, without afferent denervation, appears in frogs, maintained for a period of 24 hours in temperatures of 5°-6° (control frogs under these circumstances show complex periodic respiration). Sighing respiration represents the periodic spasmodic activity of the functionally stable respiratory center.

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ANTONOVA, I.G.; KOROVINA, M.V.

Tone and proprioceptive reflexes of cervical muscles. Fiziol. zhur. 46 no.11:1401-1408 N '60. (MIRA 13:11)

1. From the Chair of Normal Physiology, Paediatric Medical Institute, Leningrad.
(NECK) (REFLEXES)

KOROVINA, M.V.; ANTONOVA, I.G.

Reflex activity of the sternocleodomastoid muscles in ontogenesis.
Biul. eksp. biol. i med. 53 no.4:30-34 Ap '62. (MIRA 15:4)

1. Iz kafedry normal'noy fiziologii (zav. - prof. D.G.Kvasov) Leningradskogo pediatricheskogo meditsinskogo instituta. Predstavlena deystvitel'nym chlenom AMN SSSR A.F.Turom.
(MUSCLES—INNERVATION) (REFLEXES)

ANTONOVA, I.G.

Influence of sympathetic nerves on the tarsal ocular muscle of animals. Fiziol. zhur. 49 no.12:1418-1424 D '63.
(MIRA 17:12)

1. Kafedra normal'noy fiziologii Pediatricheskogo meditsinskogo instituta, Leningrad.

USSR/Chemical Technology - Chemical Products and Their Application. Fermentation Industry, I-27

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 63562

Author: Bulgakov, N. I., Zubenko, A. P., Antonova, I. I.

Institution: None

Title: Supression of Beer Microflora with Chemical Agents

Original Periodical: Tr. Vses. n.-i. in-ta pivovarennoy prom-sti, 1954, No 4, 40-47

Abstract: Indexes are given of the treatment of beer with salicylic acid, urotropin and H_2O_2. It was found that addition to beer, prior to bottling, of 0.01-0.015% H_2O_2 prolongs the stability of beer up to one month without affecting its orgaroleptic characteristics.

Card 1/1

ANTONOVA, I. I.

Preobrazhenskiy, A. A. and Antonova, I. I. "Study and selection of types of mold fungi for preparation of amylolytic preparatives," Vkusovaya prom-st' SSSR, No. 1, 1948, P. 15-19

SO: U-3264, 10 April 1953, (Letopis 'Zhurnal 'nykh Statey, No. 3, 1949)

USSR/General and Special Zoology. Insects. Insect . P
and Mite Pests. Ornamental and Flowering Plant
Pests.

Abs Jour : Ref Zhur-Biol., No 20, 1958, 92270

Author : Aftonova, I. I.
Inst : AS USSR.
Title : Data on the Ecology of Mites in the Greenhouses of the Main Botanical Garden.

Orig Pub : Byul. Gl. botan. sada. AN SSSR, 1957, vyp. 28, 85-91

Abstract : Five varieties of mites were found in considerable numbers: Tydeus sp., Totranuchus urticae, and Paratetranychus ununguis are encountered in the open ground and may drift into the greenhouses. T. salviae (found in

Card : 1/3

USSR/General and Special Zoology. Insects. Insect and Mite Pests. Ornamental and Flowering Plant Pests. P

Abs Jour : Ref Zhur-Biol., No 20, 1958, 92270

the USSR for the first time), Brevipalpus obovatus and Metatetranuchus citri are purely greenhouse varieties and can be carried only from other greenhouses. T. urticae populates more than 350 varieties of plants in the open grounds and more than 100 varieties of greenhouse plants. Up to 200 varieties are badly damaged. B. obovatus inhabits up to 100 plant varieties, particularly damaging Phytolacca dioica, Jasminum sambac, Trachycarpus fortunei, Cornus capitata, Costus speciosus, Prunus laurocerasus, Isolona hirsutum, Cobaea scandens, and varieties of the

Card : 2/3

MALININ, V.M.; DZHOLOVA, N.G., kand. sel'skokhoz. nauk; ANTONOVA, I.I., mladshiy nauchnyy sotrudnik; NALIVAYKO, A.G., entomolog

Means of controlling the spider mite. Zashch. rast. ot vred. i bol. 4 no.2:34-37 Mr-Ap '59. (MIRA 16:5)

1. Zaveduyushchiy otdelom zashchity rasteniy Fergansкoy stantsii Nauchno-issledovatel'skogo khlopkovogo instituta (for Malinin).
2. Vostochno-Sibirskiy filial AN SSSR (for Dzholova).
3. Krymskaya opytno-selektsionnaya stantsiya efiromaslichnykh kul'tur, Simferopol' (for Nalivayko).
(Red spider--Extermination)

ANTONOVA, I.I.

Fauna and ecology of spider mites. Biul.Glav.bot.sada no.36: 87-94 '60. (MIRA 13:7)

1. Glavnyy botanicheskiy sad Akademii nauk SSSR.
(Moscow--Red spider)

TSITSIN, N.V., akademik; CHERKASSKIY, Ye.S.; BUSHCHIK, T.N.; SHMAL'KO, V.F.; LYUDOVA, G.L.; KILIMNIK, Ye.Ye.; BELYAYEVA, A.S.; Prinimali uchastiye: AZIYASHVILI, L.N.; ANTONOVA, I.I.; VOLKOVA, A.A.; DOBROCHINSKAYA, I.B.; MIROSHNICHENKO, O.N.; YUZHAKOVA, N.P.

New data on the control of cabbage flies (Chortophila brassicae Bouché and Chortophila floralis Fall.). Dokl.AN SSSR 144 no.2:457-460 My '62. (MIRA 15:5)

1. Glavnyy botanicheskiy sad AN SSSR, Opytno-pokazatel'nyy sovkhoz im. Mossoveta i Sovkhoz im. A.M.Gor'kogo.
(Cabbage—Diseases and pests)

VLASENKO, V.I., kand.tekhn.nauk; ZHDANOV, G.S., prof.; DEMENT'YEV, A.M., inzh.; ANTONOVA, I.N., inzh.

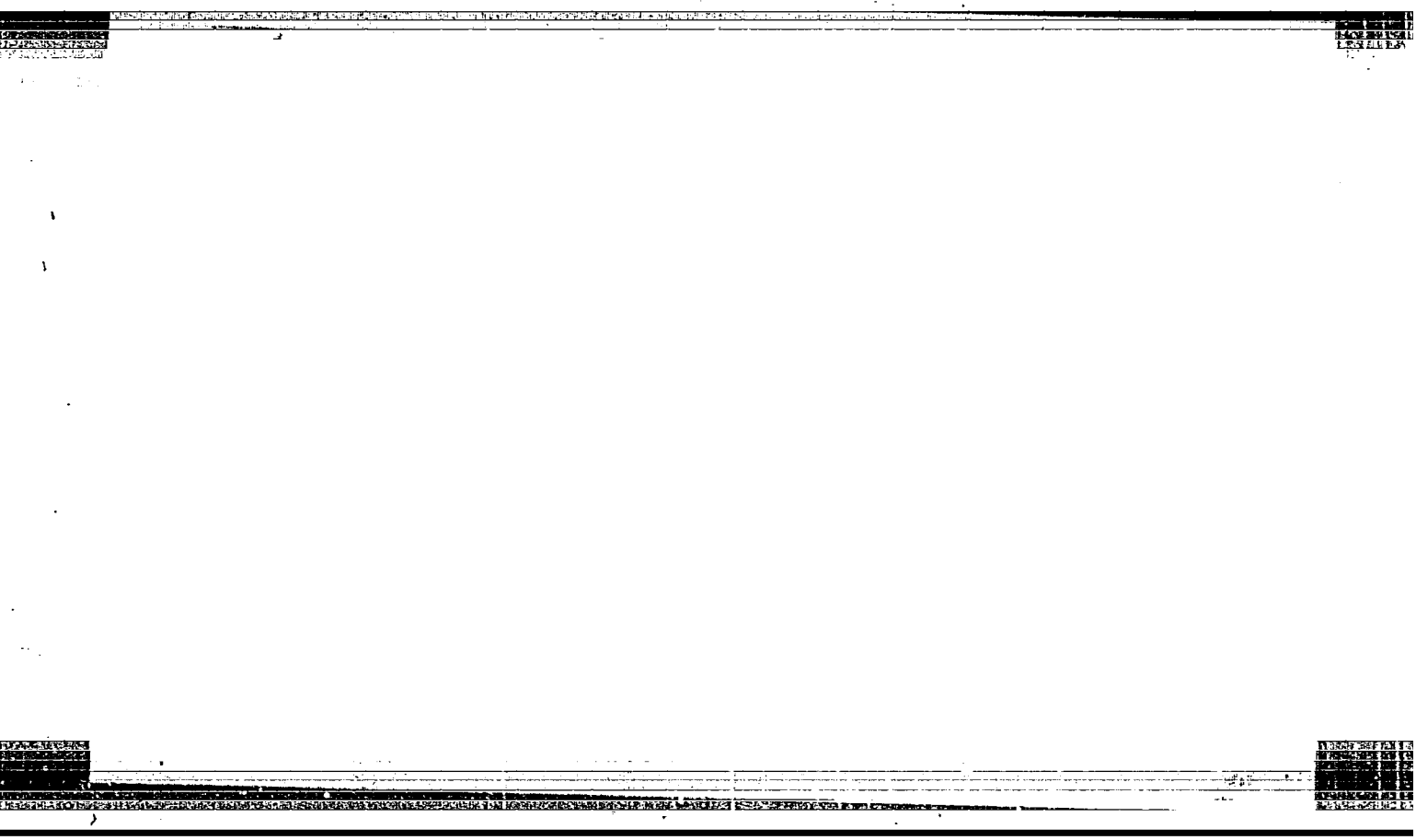
Use of a ferrite matrix in a method for forming numbers. [Trudy] MVTU no.2:64-69 '59. (MIRA 13:5)
(Electronic calculating machines)

ANTONOVA, I.M.; BRATTSEV, V.F.

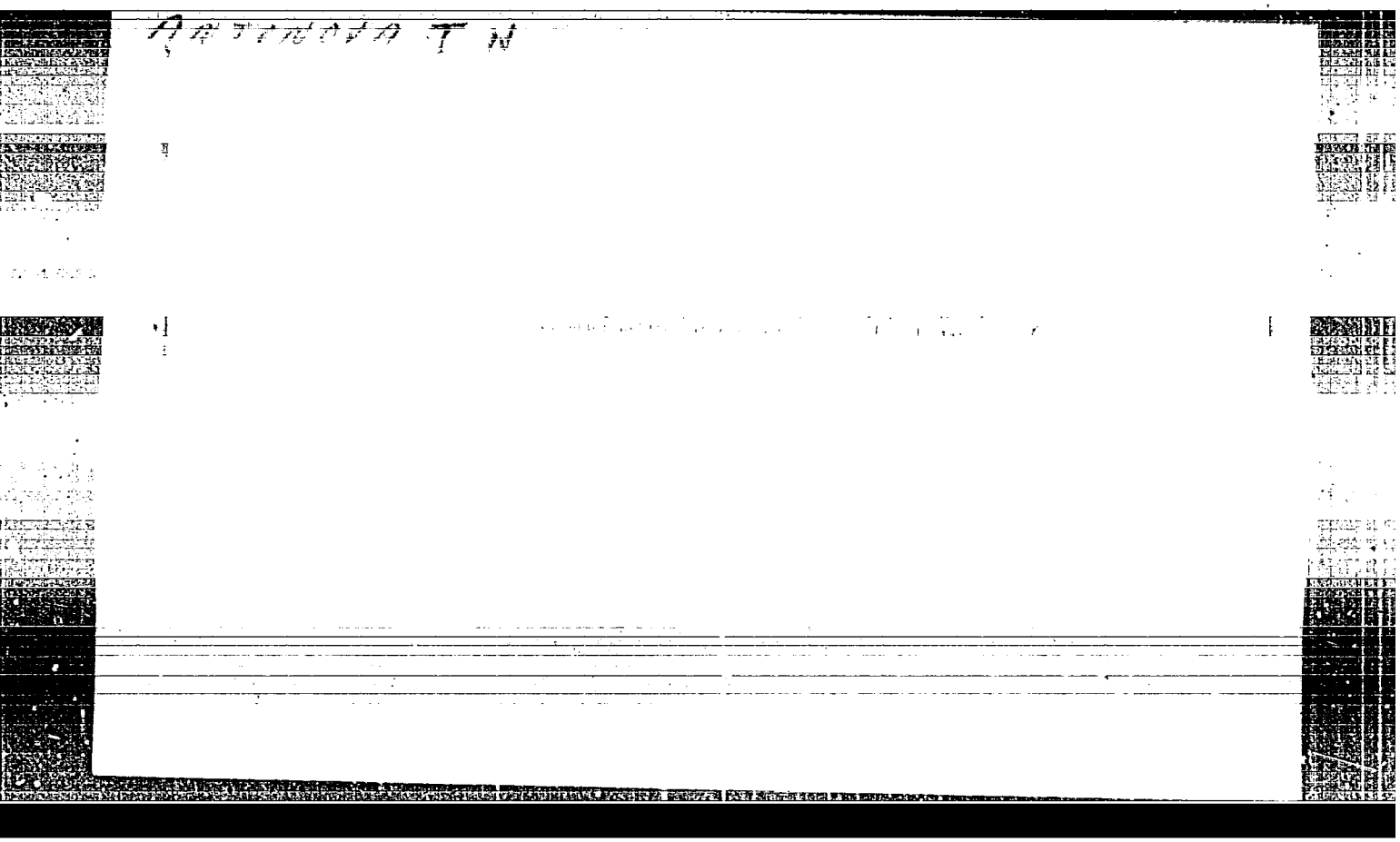
Hydrogenlike wave functions of atoms and ions. Vest.LGU 16 no.10: 5-7 '61. (MIRA 14:5)
(Coulomb functions) (Atoms) (Ions)

VESELOV, M.G.; ANTONOVA, I.M.; BRATTSEV, V.F.; KIRILLOVA, I.V.

Tables of the parameters of analytic wave functions of atoms and ions. Part 1. Opt. i spektr. 10 no.6:693-696 Je '61. (MIRA 14:8)
(Functions, Analytic) (Wave mechanics)



APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000101810007-3"



[redacted]

"Tracer Study of the Mechanism of the Reaction of Methane Oxidation,"

Problemy Kinetiki and Catalysis, v. 9, Isotopes in Catalysis, Moscow, Izd-vo AN SSSR, 1957, 442p.

Most of the papers in this collection were presented at the Conf. on Isotopes in Catalysis which took place in Moscow, Mar 31- Apr 5, 1956

USSR/ Physical Chemistry - Kinetics. Combustion. Explosives. Topochemistry. Catalysis B-9

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11220

Author : Kleymenov N.A., Antopova I.N., Markevich A.N., Nalbandyan A.B.
Title : Oxidation of Methane by Oxygen Atoms Formed on Thermal Decomposition of Ozone

Orig Pub : Zh. fiz. khimii, 1956, 30, No 4, 794-797

Abstract : Formation of peroxide on oxidation of CH_4 under conditions of flow (mixture CH_4 : O_2 = 1:1, rate of flow 400 cc/minute) in the presence of 1.45% O_3 becomes apparent at the same temperature (100-110°) that decomposition of O_3 begins. On this basis the authors consider that initiator action is associated not with the O_3 molecule but with O atoms which are decomposition products of O_3.

1/1

ANTONOVA, I.N.; MOSHKINA, R.I.; NALBANDYAN, A.B.; NEYMAN, M.B.; PEKLISOV, O.I.

Study of the mechanism of oxidation of methane using tagged atoms.
Probl. kin. i kat. 9:97-103 '57. (MIRA 11:3)
(Methane) (Oxidation) (Carbon--Isotopes)

ANTONOVA, I.T., inzhener (Moskva); BARIT, S.Yu., inzhener (Moskva); VEPRIK, I.B., inzhener (Moskva).

Heat-resistant concrete for lining furnaces. Strei.pred.neft.prom. 1 no.6:16-18 Ag '56. (MLRA 9:9)
(Refractory materials) (Concrete)

PHASE I BOOK EXPLOITATION SOV/5068

Kuz'min, Konstantin Gavrilovich, and Irina Tikhonovna Antonova

Formy dlya izgotovleniya sbornykh betonnykh i zhelezobetonnykh konstruktsiy (Forms for the Production of Sectional-Concrete and Reinforced-Concrete Structures) Moscow, Gosstroyizdat, 1960. 231 p. Errata slip inserted.

Scientific Ed.: K./. Mikhaylov, Candidate of Technical Sciences; Ed. of Publishing House: N.O. Yegorova; Tech. Ed.: L.M. Osenko.

PURPOSE: This book is intended for engineers, technicians, and foremen engaged in the design and production of sectional-concrete and reinforced-concrete structures.

COVERAGE: The authors examine the forms used in manufacturing various sectional-concrete, prestressed-concrete, and reinforced-concrete structures. The method for estimating cost per 1 cubic meter of finished structures is discussed, and recommendations for the design, construction, lubrication, and application of complete formworks are given. The book includes examples of designs and

Card 1/5

87435
S/191/60/000/010/009/017
B004/B060

153200

AUTHORS: Leyrikh, V. E., Antonova, I. T., Savvina, Ya. A., Fiskina, R. Ya., Brodskiy, G. S.

TITLE: Properties of Concrete With Furyl Aniline Resin Addition

PERIODICAL: Plasticheskiye massy, 1960, No. 10, pp. 38-42

TEXT: This is a report on the improvement of concrete properties by the polymerization of furyl alcohol with aniline. Aniline is added as a hydrochloride. Furyl alcohol added to the cement suspension (20%), slows down the concrete structure formation; 5% $CaCl_2$ are therefore added for an accelerator. The addition of hydrochloride of aniline is varied, depending on the desired concrete properties, between 5 and 100%, referred to furyl alcohol. The resin is formed under liberation of heat. The liquid addition is calculated by the equations generally in use for ordinary concrete. The concrete prepared from different kinds of cement and aggregates with a furyl aniline resin content was tested for its technological properties. An V -116 (I-116) vibrator served for its

Card 1/2

The tensile strength, tenacity, coefficient of tenacity, frost-resistant properties, thermophysical indexes (heat capacity, coefficient of thermal

L 45197-65

ACCESSION NR: AP5014971

ASSOCIATION: none

SUBMITTED: [illegible] ENCL: [illegible] SUB CODE: MT

NO REF SOV: [illegible] OTHER: [illegible] ATD PRS:

1303

Card 2/2

ANTONOVA, I.V.

Brief news. Vop. virus. 10 no.5:637-638 S-O '65.
(MIRA 18:11)

ANTONOVA, I.V.

Chronic bacterial carriage state in typhoid and paratyphoid fever. Zhur.mikrobiol., epid. i immun. 42 no.10:139-140 O '65. (MIRA 18:11)

1. 2-y Moskovskiy meditsinskiy institut imeni N.I.Pirogova. Submitted July 20, 1964.

DRIBINSKIY, M.B.; KLIMANSKIY, V.A.; ANTONOVA, I.V.

Catheterization of the bronchi in the induction of intubation anesthesia. Khirurgiia 35 no.6:59-63 Je '59. (MIRA 12:8)

1. Iz otdeleniya grudnoy khirurgii (zav. M.B.Dribinskiy) Kaliningradskoy oblastnoy bol'nitsy (glavnyy vrach - kand. med.nauk zasluzhennyy vrach RSFSR V.V.Filippov).
(ANESTHESIA, ENDOTRACHEAL
errors & hazards in intubation of bronchi, prev. (Rus))

ANTONOVA, Krustina

More about certain problems in the development of cocoon production. Tekstilna prom 12 no.3:7-9 '63.

1. Tekstilna laboratoriia pri "Bulgarkontrola."

ANTONOVA, K. A. Ed.

Novaya istoriya indii. Moskva, Izd-vo Vostochinoy Lit'ry, 1961.

833 p. Illus., Maps, Ports.

Half-title Akademiya Nauk SSSR. Institut Narodov Azii.

Bibliography: p. 771-809.

[redacted], K.G.

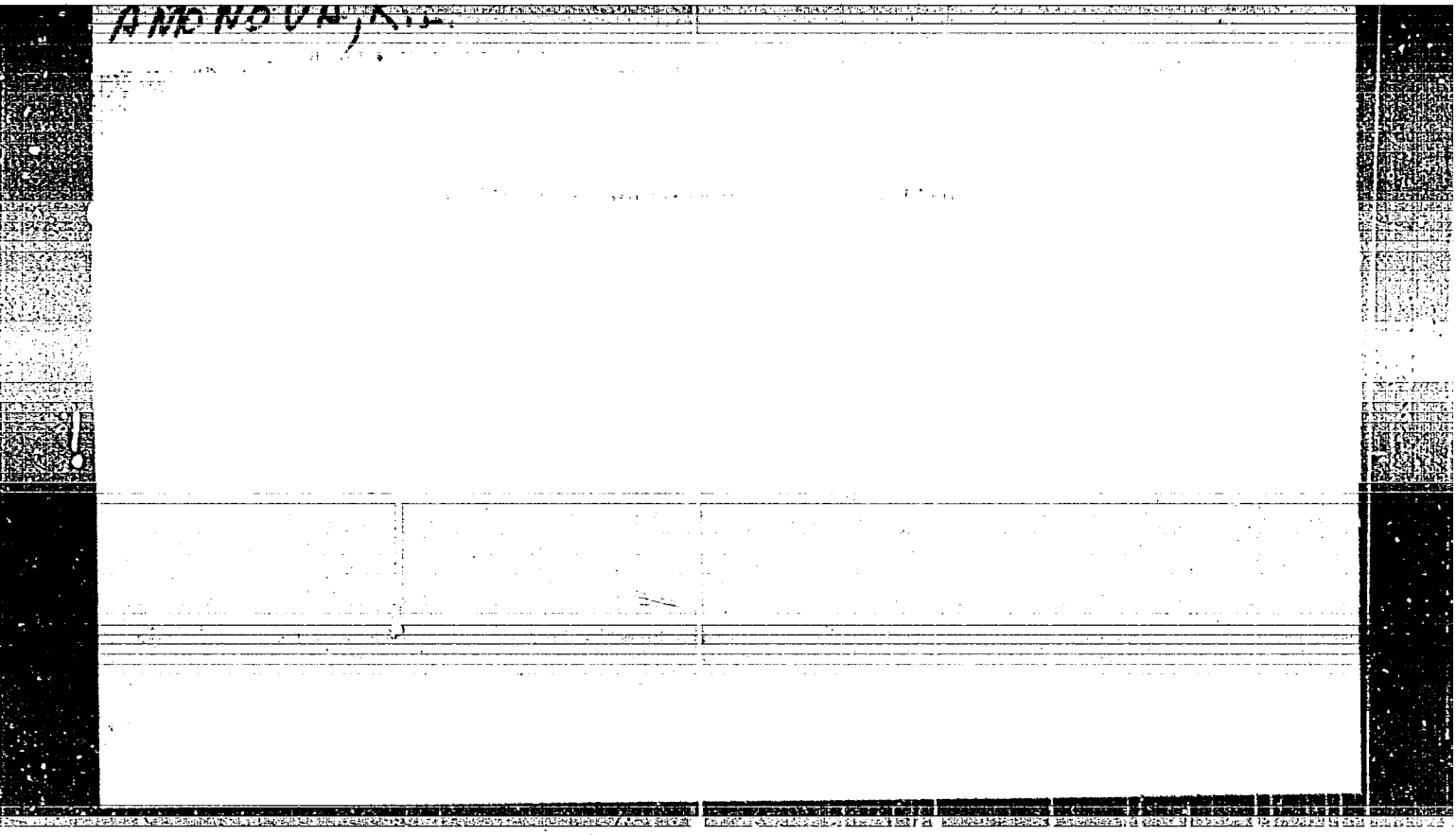
Development of the vegetation of the southern Karaku region as related to meteorological conditions. Izv. AN Turk. SSR. Ser. biol. nauk no.2, 73-78 '64. (MIRA 17:6)

1. Institut [redacted] AN Turkmenskoy SSR.

ANTONOVA, K.I.; PUSTYNOVA, P.I.

Late results of the treatment of gastric cancer. Khirurgiia 40 no.8:41-42 Ag '64. (MIRA 18:3)

1. Ul'yanovskiy oblastnoy onkologicheskiy dispanser (glavnyy vrach A.A. Bystritskiy).



ANTONOVA, K. I.

KULIYEV, A.M.; KULIYEV, R.Sh.; DREYZIN, M.M.; ANTONOVA, K.I.

Improvement of industrial naphthenic acids. Azerb.neft.khoz.36 no.2:31-34 F '57. (MLRA 10:4)

(Naphthenic acid)

SOV/81-59-8-28909

Translation from: Referativnyy zhurnal, Khimiya, 1959, Nr 8, p 497 (USSR)

AUTHORS: Masumyan, V.Ya., Daniyelyan, M.K., Artonova, K.I., Sultanova, Kh.M., Arustamov, A.S.

TITLE: The Preparation of Baku Petroleum for Processing

PERIODICAL: Sb. tr. Azerb. n.-i. in-t neftepererabat. prom-sti, 1958, Nr 2, pp 16 - 33 (Azerb. summary)

ABSTRACT: A comprehensive thermomechanical process has been developed for preparing Baku petroleum for processing. Demulsification is carried out at a temperature of 110 - 140° and a pressure of up to 6 atm, and the decomposition of emulsion is carried out in a mixer, where the preliminarily heated petroleum is subjected to intensive mixing. The separation of the principal mass of drill water is carried out in the first group of dehydrators. The second mixer is fed with petroleum, containing 2 - 3% of water, and washing water; as a result of vigorous mixing the salts pass into the washing water. The settling of the

Card 1/2

The Preparation of Baku Petroleum for Processing SOV/81-59-8-28908

washing water is carried out in the second sections of the dehydrators, after which the petroleum is cooled and passes into the storage tank for the prepared petroleum. The method developed makes it possible to reduce the consumption of demulsifier by 55 - 60%.

N. Kel'tsev

Card 2/2

SOV/81-59-10-36435

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 10, p 443 (USSR)

AUTHORS: Ashumov, G.G., Kuliyev, R.Sh., Antonova, K.I., Stepanyan, T.S., Kitushina, Ye.N., Veliyev, Sh.V.

TITLE: An Investigation of Kalino Petroleum of the Upper Formation With the Aim of Obtaining Aircraft Oil

PERIODICAL: Sb. tr. Azerb. n.-i. in-t neftepererabat. prom-sti, 1958, Nr 2, pp 99-105 (Azerbaydzhanian summary)

ABSTRACT: The results of experiments are cited on the elucidation of the possibility of using masut from Kalino petroleum of the upper formation with the aim of finding additional resources for the production of aircraft oil. The investigation was carried out with regard to obtaining MK-22 oil by industrial technology as well as with the application of the process of deasphaltization of the initial concentrate, and also with regard to obtaining MS-20 aircraft oil with the application of deasphaltization and selective purification by phenol. It has been shown that MK-22 oil can be obtained by both methods with all indices corresponding to the standard with exception of density; the oil yield in comparison with the yield from Surakhany choice

Card 1/2

KULIYEV, A.M.; KULIYEV, R.Sh.; DUNYZINA, M.M.; ANTONOVA, K.I.; KITUSHINA, Ye.N.; CHIKAREVA, N.I.; ALIYEV, M.I.

Investigating Neftyanyye Kamni crude with regard to its suitability for producing distillate lubricating oils. Sbor.trud.AzNII MP no.2:106-130 Ag '58. (MIRA 12:6)
(Neftyanyye Kamni region--Petroleum--Analysis)
(Lubrication and lubricants)

KULIYEV, A.M.; KULIYEV, R.Sh.; DREYZINA, M.M.; ANTONOVA, K.I.; KITUSHINA, Ye.N; CHIKAREVA, N.I.; ALIYEV, M.I.

Producing residual oils from Neftyanyye Kamni crude. Sbor.trud. AzNII NP no.2:131-144 Ag '58. (MIRA 12:6)
(Neftyanyye Kamni region--Petroleum)
(Petroleum--Refining)

KULIYEV, R.Sh.; ANTONOVA, K.I.

Developing methods for obtaining higher viscosity-temperature characteristics of oils from Baku petroleums used in diesel and carburetor engines. Sbor.trud.Az NII NP no.4:114-127 '59. (MIRA 15:5)

(Baku—Petroleum) (Lubrication and lubricants)

KULIYEV, R.Sh.; ANTONOVA, K.I.

Investigation of the viscosity-temperature properties of narrow fractions of finished oils separated from Baku crudes rich in oil. Sbor.trud.Az NII NP no.4:128-139 '59. (MIRA 15:5)
(Baku--Petroleum) (Lubrication and lubricants)

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25727
S/123/61/000/012/004/042
A004/A101

AUTHORS: Negreyev, V. F.; Kasumadze, N. G.; Mamedov, I. A.; Kuliyev, R.Sh.; Antonova, K. I.

TITLE: Corrosion of special steels in naphthenic acids

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 12, 1961, 16, abstract 12A117 ("Azerb. neft. kh-vo", 1960, no. 11, 43-45)

TEXT: The authors investigated the corrosion rate of various stainless steel grades in naphthenic acids at temperatures in the range of 200-275°C. The high corrosion of chromous stainless steels was found, which even exceeds the corrosion rate of the non-alloyed CT-3 (ST-3) grade. It was established that chrome-nickel stainless steels tend in a lesser way to corrosion, which attains high values at 275°C, while Cr-Ni-steels with an increased Si-content (3-6%) are highly corrosion-resistant. The corrosion resistance of these steel grades is explained by the properties of the protective films forming in the presence of Si.

[Abstracter's note: Complete translation]

Card 1/1

KULIYEV, R.Sh.; SAMEDOVA, F.I.; MUSAYEV, G.T.; ANTONOVA, K.I.; CHIKAREVA, N.I.

Obtaining transformer oil from distillates of Surakhani selected crude oil and Karachukhur and Siazan petroleums. Neftepererab. i neftekhim. no.4:8-11 '63 (MIRA 17:7)

1. Institut neftekhimicheskikh protsessov, Baku.

L 06465-67 EWT(m) DJ

ACC NR: AP6029339 (A) SOURCE CODE: UR/0316/66/000/002/0077/0080

AUTHOR: Kuliyev, R. Sh.; Musayev, O. T.; Ayrapetova, E. K.; Antonova, K. I.

ORG: INKhP AN AzerbSSR

TITLE: Effect of various hydrocarbon groups of D-8 diesel oil on its low-temperature properties

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 2, 1966, 77-80

TOPIC TAGS: lubricant viscosity, lubricating oil, AROMATIC HYDROCARBON

ABSTRACT: The effect of various groups of hydrocarbons on the viscosity of D-8 diesel oil (SU machine oil) was studied at low temperatures. The groups were separated from the SU distillate chromatographically on ASK silica gel. The viscosity and solidification points of the aromatic hydrocarbons increase with their cyclic character. It was found that the removal of all tars and approximately 30-40% of heavy aromatic hydrocarbons from the distillate of SU machine oil gives the required content of the various hydrocarbon groups in the oil, so that the desired viscosity is obtained at -20°C. In order to obtain this hydrocarbon composition in the oil, the distillate of SU machine oil must be subjected to a more thorough purification. The viscosity of D-8 diesel oil at low temperatures can also be improved by decreasing its viscosity at 100°C; when the viscosity is decreased from 8.4 to 7.5 cS at 100°C, the corresponding viscos-

Card 1/2

L 06465-67
ACC NR: AP6029339

ity at -21°C drops from 44.8 to 21 thousand cS. Orig. art. has: 4 tables.

SUB CODE: 11/ SUBM DATE: 30Jul65/ ORIG REF: 001

Card 2/2 mlc

BOGDANOV, K.A.; ANTONOVA, K.N.

Synthesis of α-amyl-m-methyl cinnamaldehyde. Trudy VNIISNDV no.5:16-17 '61. (MIRA 14:10)

(Cinnamaldehyde)

L 40162-66 EWT(d)/EWT(l)/EWP(k)/EWP(h)/EWP(l) IJP(c) DD

ACC NR: AP6024419 SOURCE CODE: UR/0240/66/000/007/0029/0032

AUTHOR: Antonova, K. P.

ORG: Kiev Institute of Industrial Hygiene and Occupational Diseases (Kiyevskiy institut gigiyeny truda i profzabolevaniy)

TITLE: The effects of local constant or intermittent vibration on the human organism

SOURCE: Gigiyena i sanitariya, no. 7, 1966, 29-32

TOPIC TAGS: biologic vibration effect, human physiology

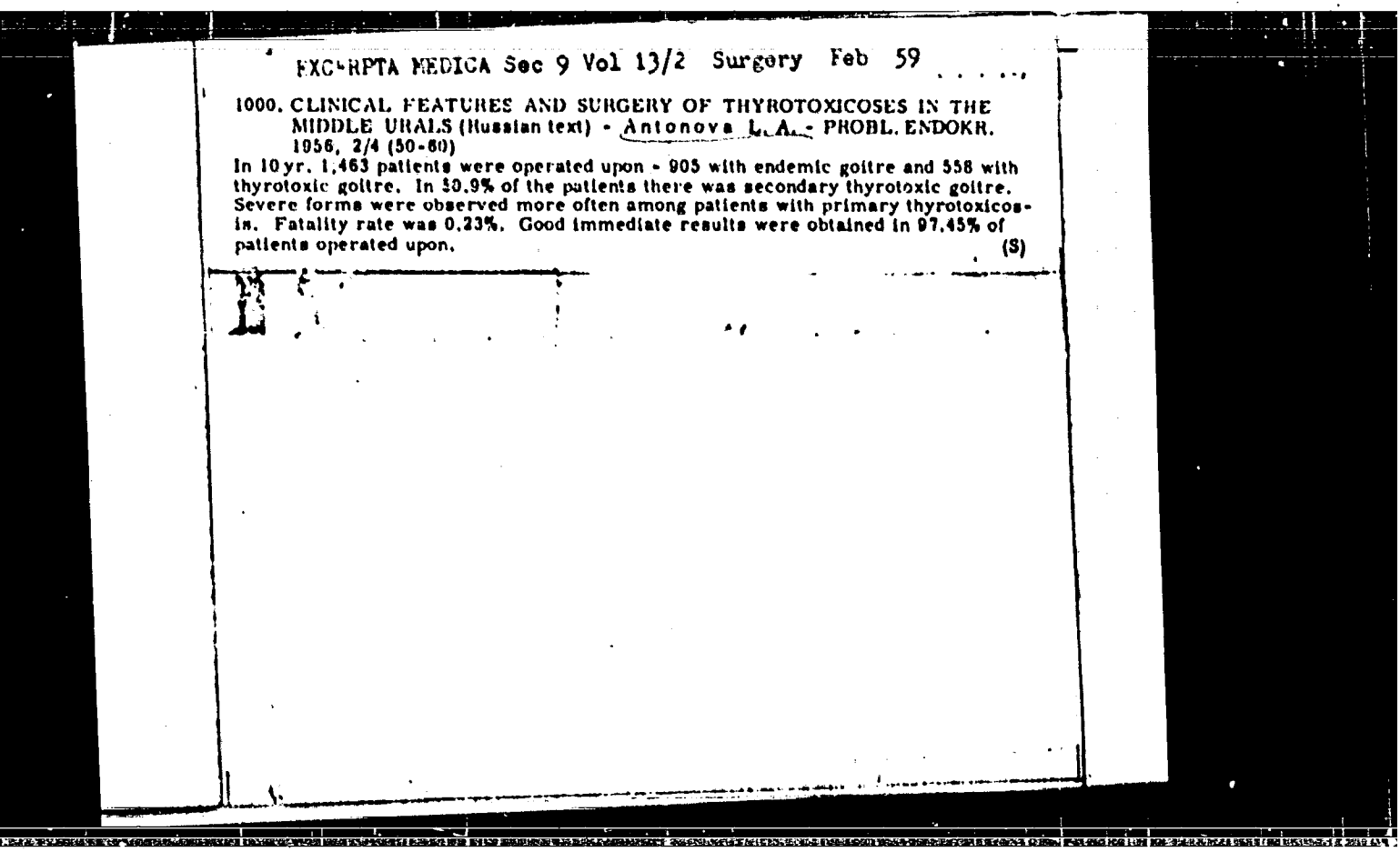
ABSTRACT: The effect of constant and intermittent vibration (225 cps; 0.02 mm) was studied under controlled conditions using 20 healthy male subjects aged 19—25. The experiment was divided into 4 series: in the first series, the effects of constant vibration were studied; in the second series, two-minute exposures to constant vibration were separated by two-minute intervals; in the third series, two-minute exposures to constant vibration were separated by four-minute intervals; and in the fourth series, the interval between two-minute exposures to vibration was decreased to 20 sec. The total exposure duration was 30 min for each series. It was found that the fourth series had a more deleterious physiological effect than the second and third series. Moreover, the deleterious effects of the first, second, and third series were essentially identical. Orig. art. has: 2 figures. [CD]

SUB CODE: 06/ SUBM DATE: 19Mar65/ORIG REF: 003/ ATD PRESS: 5049

Card 1/1 UDC: 612.014.45+613.644

ANTONOVA, Krustina St.

Results hitherto obtained in raising some coooon breeds in Bulgaria. Prir i znanie 16 no.6:9-11 Je'63



EXCERPTA MEDICA Sec 9 Vol 13/2 Surgery Feb 59

1000. CLINICAL FEATURES AND SURGERY OF THYROTOXICOSES IN THE MIDDLE URALS (Russian text) - Antonova L.A. - PROBL. ENDOKR. 1956, 2/4 (50-60)

In 10 yr, 1,463 patients were operated upon - 905 with endemic goitre and 558 with thyrotoxic goitre. In 30.9% of the patients there was secondary thyrotoxic goitre. Severe forms were observed more often among patients with primary thyrotoxicosis. Fatality rate was 0.23%. Good immediate results were obtained in 97.45% of patients operated upon. (S)

IVANOVA, L. A.

USSR/Human and Animal Physiology - Blood. Blood Transfusions and Blood Substitute. T-4

Abs Jour : Ref Zhur - Biol., No 10, 1958, 45947

Author : Ivanova-Voroshkina, A.V., Antonova, L.A., Mikhailova, G.N.

Inst : -

Title : Belen'kiy's Medicinal Serum (BMS) Applied in Treating Patients with Tuberculosis.

Orig Pub : Sov. meditsina, 1957, No 4, 83-87.

Abstract : Belen'kiy's medicinal serum (BMS) was administered to 27 patients with tubercular impairments of the lungs, of the lymphatic nodes (LN), and of the intestines. In 5 patients, a medium degree reaction was noted. Desintoxicative, stimulatory, and nutritive effects of BMS became apparent. Body temperature and blood formula became normalized, and the extent of impaired LN decreased. If BMS was administered repeatedly, no reaction to the serum occurred. -- K.N. Monakova

Card 1/1

ANTONOVA, Lyudmila Aleksandrovna, VOLKOV, Aleksandr Ivanovich, SINITSYN, N.A., red.; KOSAREVA, Ye.N., tekhn.red.

[Practices in introducing amendments to collective farm statutes] Praktika vneseniia izmenenii v ustavy kolkhozov. Moskva, Gos. izd-vo iurid. lit-ry, 1958. 56 p. (MIRA 11:9)
(Collective farms)

: USSR

: Forestry. Forest Biology and Typology

E

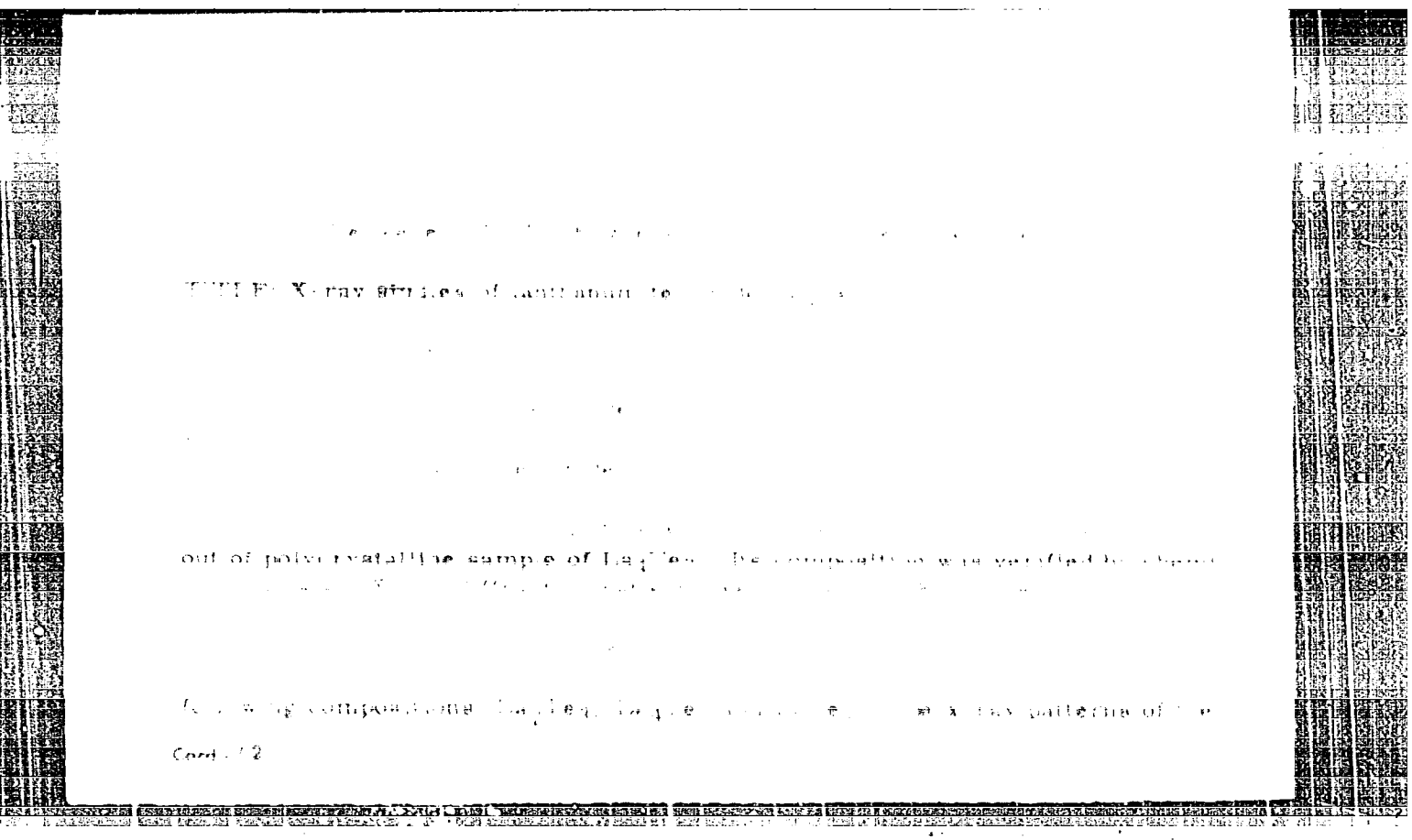
SOV. JOUR.: Bot Zhur -Biologiya, No. 5, 1959, No. 20130

Author : Antonova, L.A.
INST. : Saratov State Pedagogical Inst.
TITLE : Brief Description of the Forests in Khvalyn-skiy Leskhoz and the Basic Laws of Their Distribution.

ORIG. PUB.: Uch. zap. Saratovsk. gos. ped. in-t, 1957, vyp. 28, 225-247

ABSTRACT : Detailed description is given of the right bank watershed woodlands in Khvalynskiy and Sosnovo-Mazinskiy forest rangen of Khvalynskiy Leskhoz in Saratovskaya Oblast, which occupy the high-est part of the watershed. The soils of the district are characterized in detail. The principal forest forming species are oak, lin-den and pine. The oak and linden woods are made up of low quality scrub stands on gray forest soil. The pine woods are represented

CARD : 1/3



Cont. / 2

ACCESSION NR: AP4044279

[illegible] two compounds differ significantly from each other. X-ray patterns of [illegible]

[illegible] table and 1 figure

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova AN SSSR (Institute of General and Inorganic Chemistry, AN SSSR)

SUBMITTED: 10Jan64 ENCL: 00

SUB CODE: IC, GS NO REF SOV: 001 OTHER: 001

Card 2/2

ANTONOVA, L. A., and IVANOV-KHOLODNY, G. S.

"Ionization in the Night Ionosphere (Corpuscular Hypothesis)"

Report presented at the Commission on Space Research, 2nd Intl. Symposium and Plenary Meeting, 7-18 April 1961, Florence Italy.

S/049/61/000/009/004/004
D214/D304

AUTHOR: Antonova, L.A.

TITLE: Measurement of corpuscular radiation at heights up to 100 km

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya geofizicheskaya, no. 9, 1961, 1437 - 1438

TEXT: The author describes the results of corpuscular radiation measurement in a rocket experiment conducted on July 21, 1959, at a time when the sun was 1^0 above the horizon. A photomultiplier, sent up in a rocket, was shielded from lateral radiation and from direct sunlight. The photomultiplier entry slit was directed towards the sky zenith. Comparison of the results obtained with (1) an optical filter, and with (2) an aluminum screen (0.18 mg/cm^2 thick) and a phosphor ZnS:Ag indicated the presence of corpuscular (electron) radiation at heights of 75-105 km. The energy of electrons was deduced to be 10-40 keV, from the fact that an aluminum

Card 1/2

sheet of 2.0 mg/cm^2 thickness absorbed the corpuscular radiation completely. The electron flux density was estimated to be 0.01 erg. cm^{-2}.sec^{-1}.ster^{-1}. The results reported confirmed an earlier observation of corpuscular radiation below 100 km (by L.A. Antonova and G.S. Ivanov-Kholodnyy (Ref. 1: Izvestiya AN SSSR, Ser. geofiz., no. 5, 1960)). Acknowledgements are made to G.S. Ivanov-Kholodnyy, G.A. Bordovskiy, I.V. Petrusinskaya, A.V. Chudaykin and N.D. Masanova for their help. There are 2 figures and 2 references: 1 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: J.A. Van Allen, Proc. Nat. Acad. Sci., 43, no. 1, 1957.

ASSOCIATION: Akademiya nauk SSSR, Institut prikladnoy geofiziki (Academy of Sciences, USSR, Institute of Applied Geophysics)

SUBMITTED: September 29, 1960

29116
S/020/61/140/005/012/022
B104/B102

11.1530

AUTHORS: Ivanov-Kholodnyy, G. S., and Antonova, L. A

TITLE: Ionization of the nocturnal ionosphere (corpuscular hypothesis)

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 140, no. 5, 1961, 1062 - 1065

TEXT: In 1957, V. I. Krasovskiy (Priroda, no. 5, 55 (1957)) assumed charged particles as sources of ionization of the nocturnal ionosphere. R. L. Smith, R. A. Helliwell, I. W. Yabroff (J. Geophys Res., 65, 815 (1960)) and B. J. O'Brien, J.A.Van Allen et al. (J. Geophys. Res., 65, 2583 (1960)) obtained new proofs for the existence of electron beams in the upper atmosphere. Assuming that, during the night, ionization in the ionosphere is caused by an electron particle flux, the authors calculated the particle energy. Equilibrium between generation and recombination of ions was assumed. Using data of V. V. Mikhnevich B. S. Danilin et al. (Sborn. Iskusstvennyye sputniki Zemli, no. 3, 82 (1959)) about density of atmosphere, and of A. D. Danilov (Sborn. Iskusstvennyye

Card 1/4

Ionization of the nocturnal ...

sputniki Zemli, no. 7, 1960, p. 56) about the effective recombination coefficient, an electron energy flux of $I \approx 1 \cdot 10$ erg/cm^2·sec was obtained. The effective electron energy in the flux was estimated to be 200 ev. The total number of electrons in it was $5 \cdot 10^9 - 5 \cdot 10^{10}$ cm^{-2}·sec^{-1}. For an explanation of ionization of the nocturnal ionosphere by particles, it is therefore necessary to assume a powerful flux of soft electrons. The electron spectrum may be represented by a power function: $N(E)dE \sim E^{-\gamma}dE$, where $\gamma = 4.5$. The authors assume electron sources in the ionosphere and a certain acceleration mechanism for electrons. K. I. Gringauz (DAN, 131, 1301 (1960)) is mentioned. There are 1 table and 19 references: 7 Soviet and 12 non-Soviet. The three most recent references to English-language publications read as follows: R. E. Prenatt, Am. Rock. Soc. J., 30, 763 (1960); F. H. Holly, R. G. Johnson, J. Geophys. Res., 65, 771 (1960); K. A. Anderson, J. Geophys. Res., 65, 551 (1960).

ASSOCIATION: Institut prikladnoy geofiziki Akademii nauk SSSR (Institute of Applied Geophysics of the Academy of Sciences USSR)

29416
S/020/61/140/005/012/022
B104/B102

Ionization of the nocturnal...

PRESENTED: May 24, 1961, by Ye. K. Fedorov, Academician

SUBMITTED: March 14, 1961

Card 3/4

Ionization of the nocturnal...

h, km	n_e, cm^{-3}	α', $cm^3 \cdot sec^{-1}$	$\alpha' n_e^2$, $cm^{-3} \times sec^{-1}$	q, $cm^{-3} \cdot sec^{-1}$	$\frac{q}{\alpha' n_e^2}$, cm^{-3}	n_A, cm^{-3}	E', ev	$I(E')$, $ev^{-1} \cdot cm^{-2}$	$\frac{\partial E'}{\partial n_A}$, $ev \cdot cm^2$	$\pi_1(E')$, $(cm^3 \cdot sec \cdot ev)^{-1}$
290	$5 \cdot 10^2$	$7 \cdot 10^{-4}$	$1,7 \cdot 10^4$	$4 \cdot 10^{-11}$	$5 \cdot 10^{15}$	$1,3 \cdot 10^{17}$	90	$5,5 \cdot 10^6$	$1,7 \cdot 10^9$	$4,1 \cdot 10^2$
250	$4 \cdot 10^3$	$2 \cdot 10^{-7}$	$1,6 \cdot 10^4$	$9 \cdot 10^{-11}$	$1,7 \cdot 10^{15}$	$3,2 \cdot 10^{17}$	200	$5,0 \cdot 10^6$	$3,5 \cdot 10^9$	$8,5 \cdot 10^2$
200	$7 \cdot 10^3$	$6 \cdot 10^{-7}$	$3 \cdot 10^4$	$2,5 \cdot 10^{-10}$	$1,2 \cdot 10^{15}$	$1,1 \cdot 10^{18}$	440	$3,4 \cdot 10^6$	$2,4 \cdot 10^9$	$1,0 \cdot 10^2$
180	$2 \cdot 10^4$	$7 \cdot 10^{-7}$	$9,8 \cdot 10^4$	$4,5 \cdot 10^{-10}$	$7 \cdot 10^{14}$	$4,5 \cdot 10^{18}$	500	$3,2 \cdot 10^6$	$2,1 \cdot 10^9$	$9,5 \cdot 10^1$
160	$1 \cdot 10^5$	$8,5 \cdot 10^{-7}$	$1,3 \cdot 10^5$	$1 \cdot 10^{-10}$	$1,3 \cdot 10^{14}$	$2,0 \cdot 10^{19}$	800	$2,5 \cdot 10^6$	$1,7 \cdot 10^9$	$2,0 \cdot 10^2$
140	$8 \cdot 10^5$	$9,3 \cdot 10^{-7}$	80	$3 \cdot 10^{-11}$	$2 \cdot 10^{13}$	$6,5 \cdot 10^{19}$	$1,1 \cdot 10^3$	$2,2 \cdot 10^6$	$1,3 \cdot 10^9$	$1,9 \cdot 10^2$
130	$2 \cdot 10^6$	$1 \cdot 10^{-6}$	50	$2 \cdot 10^{-11}$	$2,5 \cdot 10^{13}$	$2,5 \cdot 10^{20}$	$3,2 \cdot 10^3$	$1,4 \cdot 10^6$	$8,3 \cdot 10^8$	$1,9 \cdot 10^2$
110	$5 \cdot 10^6$	$1 \cdot 10^{-6}$	25	$5 \cdot 10^{-11}$	$5 \cdot 10^{13}$	$7,0 \cdot 10^{20}$	$5,6 \cdot 10^3$	$1,0 \cdot 10^6$	$5,3 \cdot 10^8$	$5,7 \cdot 10^2$
100	$4 \cdot 10^7$	$1 \cdot 10^{-6}$	16	$2,5 \cdot 10^{-10}$	$6,5 \cdot 10^{13}$	$2,0 \cdot 10^{21}$	$8,0 \cdot 10^3$	$9,0 \cdot 10^5$	$3,2 \cdot 10^8$	5,7
90	$1 \cdot 10^8$	$1 \cdot 10^{-6}$	1	$5 \cdot 10^{-9}$	$2 \cdot 10^{15}$	$2,0 \cdot 10^{21}$	$1,5 \cdot 10^4$	$7,0 \cdot 10^5$	$4,0 \cdot 10^8$	$4,0 \cdot 10^{-1}$

Table 1

Table 1. The electron energy spectrum. Legend: 1) height in km; 2) electron concentration; 3) effective recombination coefficient; 4) number of recombinations; 5) density of the atmosphere; 6) $q_n = \int_0^\infty q dh$; 7) electron energy; 8) coefficient of ion generation.

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