"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

smelting technique; (2) the test methodology, which comprises an investigation of the growth tendency of the grain, the hardenability of the steel, the mechanical properties, the "toughness margin" or sensitivity to stress concentration, and the temper-brittleness tendency; (3) the oxidation method employed for the determination of the austenite-grain size (test results shown in full-page table); (4) the determination of the hardenability by means of the facial-hardening method; (5) tests for mechanical properties comprising tensile and impact tests and H_{R_C} tests;

(6) tests for the "toughness margin," which were achieved by impact tests at various temperatures between +20 and −100°C, in which the impact work and the appearance of the fracture were used as criteria (results shown in full-page tables); (7) tests for the temper-brittleness sensitivity, in which a comparison of the impact toughness and the appearance of the fracture was made between nonembrittled specimens, which had been quenched in oil and tempered for 2.5 hrs at 650°C and then oil-cooled, and embrittled specimens, quenched in oil, tempered for 2.5 hrs at 650°, and further tempered in the embrittlement zone at 530° for 16 hrs; these tests ranged from +20 to −100°C (test results summarized in 2 full pages of figures). Conclusions: (1) Addition of B increases the hardenability of all of the alloyed steels tested appreciably; an addition of 0.002% B in the presence of 1% Cr increases the hardenability of the steel more intensely than the addition of 1% Ni. (2) All steels tested were naturally fine-grain upon deoxidation by the given method.

Card 2/3

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

Grain growth started in the 950-1,000°C range, in which the effect of the B consisted in a reduction of the grain-growth temperature by 50°. (3) When tempered to an identical hardness, all steels (at 20°C) exhibited approximately identical mechanical properties, regardless of their alloying-element contents. Steels with a smaller C content had greater plasticity and toughness following treatment for identical strength. (4) B increases the embrittlement-transition temperature of a steel; this effect is more pronounced when the composition of a steel is more complex. The greatest toughness margin is exhibited by the XH (KhN), B-free, steel and the low-alloyed XP (KhR). (5) All steels exhibit a tendency toward temper-brittleness, including those containing W. There are 12 figures, 6 tables, and 3 references (1 Russian-language Soviet and 2 English-language U.S.: Brown, Iron Age, VII, v.168, 1951, and Irwine, I. J., et al., Iron and Steel, no.7, 1957, 30).

Card 3/3

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

PATRINA, N.A., kand. tekhn. nauk; MESHCHERINOVA, O.N., kand. tekhn. nauk

Using boron steels in manufacturing automobile starters.
Avt. prom. 29 no.8:27-29 Ag '63. (MIRA 16:11)

1. Nauchno-issledovatel'skiy i eksperimental'nyy institut avtomobil'nogo elektrooborudovaniya i priborov (for Patrina).

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

L 592[illegible]9-65 EWP(e)/EWT(m)/EWP(w)/EWP(i)/EWA(d)/T/EWP(t)/EWP(z)/EWP(b)/EWA(c) Pad
IJP(c) JD/HW
ACCESSION NR: AT5016056 UR/2776/65/000/039/0024/0030

38
34
B+1

AUTHOR: Meshcherinova, O. N.

TITLE: Effect of manganese on the properties of structural steels 16

SOURCE: Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii. Sbornik trudov, no. 39, 1965. Spetsial'nyye stali i splavy (Special steels and alloys), 24-30

TOPIC TAGS: alloy steel, heat treatment, temper brittleness, martensitic transformation, impact strength, hardenability, isothermal transformation, metal mechanical property 16

ABSTRACT: Attempts were made to reduce the Ni 21 contents of certain alloy steels by substituting Mn 25 and B 27 in its place, and still retain comparable properties. Seven different steels were used containing 0.20-0.22% C, 0.17-0.26% Si, 0.58-1.05% Mn, 0.93-1.03% Cr, 0.9-1.04% Ni, and 0-0.0031% B. Three of the steels were commercial, while the rest were melted in the laboratory. The effect of Mn and B on hardenability and grain size was found to be appreciable. An increase in the Mn content from 0.6 to 1% doubles the hardenability as determined by end quench techniques, while additions of 0.0025% B are equivalent to 0.02% Mn in increasing hardenability. Iso-

Card 1/3

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

L 59279-65

ACCESSION NR: AT5016056

4

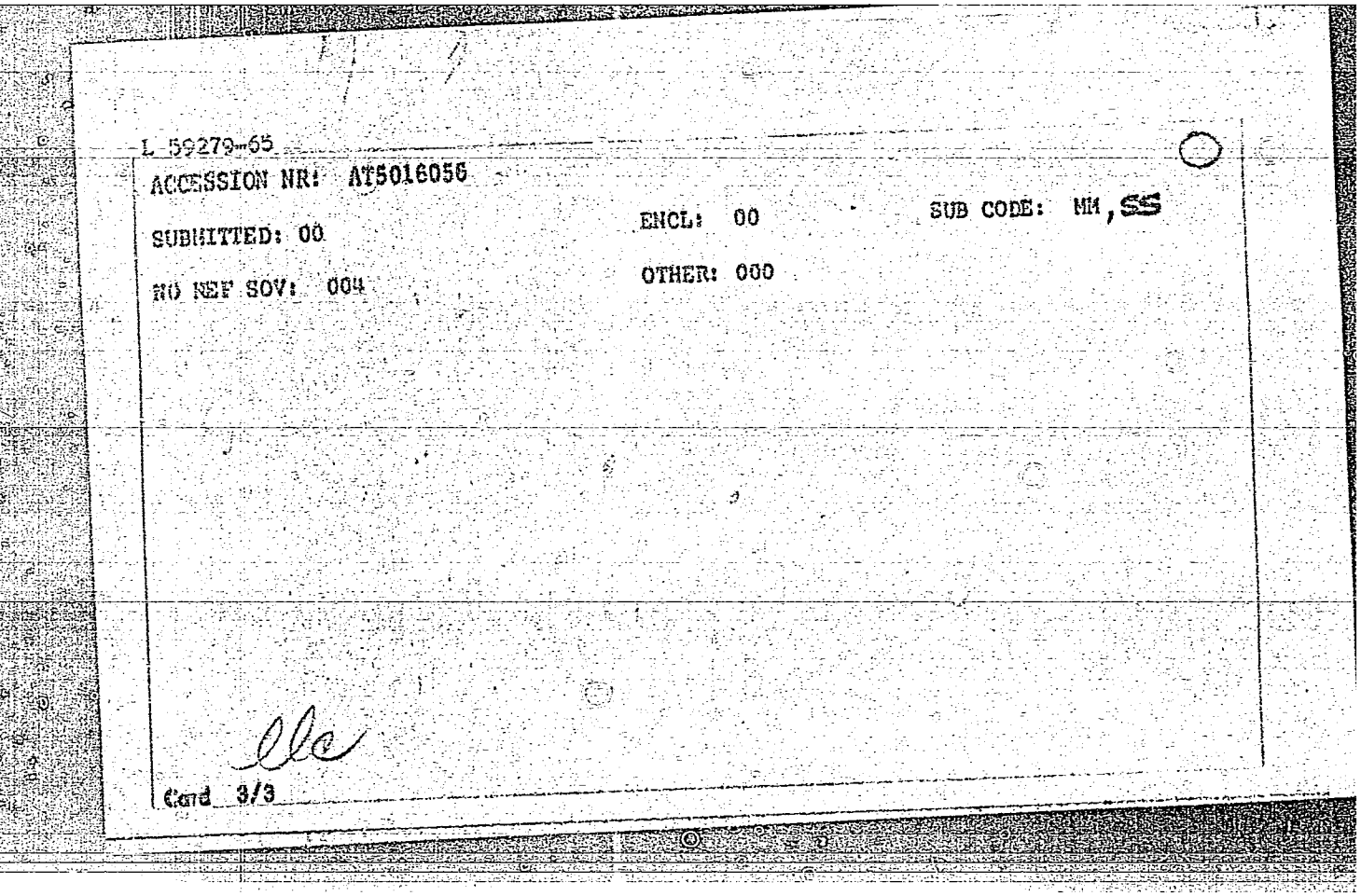
thermal TTT diagrams are given for the four laboratory steels, and the effect of Mn and B is discussed. Austenitic grain size was determined by standard means (GOST 5639-51), and the results are given in tabular form as a function of heating temperature (850-1200°C). All of the steels are fine-grained up to a heating temperature of 1050°C. Above 1050°C, the grains begin to grow rapidly, the most intense growth taking place in steels with about 1% Mn and B additions. Mechanical properties are given graphically for the quenched and tempered condition (strength, hardness, ductility, and impact of strength). These variables were plotted as functions of tempering temperature (200-700°C). Also impact energy vs. temperature (-100 to +20°C) curves were shown and the resulting fractures examined for brittleness. Impact samples for one case were tested in the temper embrittled condition. Based on an analysis of the transition temperature, it was concluded that both B and Mn increase the sensitivity of the steels to temper embrittlement. Orig. art. has: 6 figures, 2 tables.

ASSOCIATION: none

Card 2/3

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103



L 59279-65

ACCESSION NR: AT5016056

SUBMITTED: 00 ENCL: 00 SUB CODE: MM, SS

NO REF SOV: 004 OTHER: 000

Card 3/3

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

L 09953-67 EWT(m)/EWP(w)/EWP(t)/ETI IJP(c) JD
ACC NR: AT6026597 SOURCE CODE: UR/2776/66/000/046/0170/0175

AUTHORS: Gulyayev, A. P.; Nikeyev, V. N.; Moshcherinova, O. N.

ORG: none

TITLE: Influence of carbon content on the cold-shortness threshold of structural steel

SOURCE: Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii. Sbornik trudov, no. 46, 1966. Spetsial'nyye stali i splavy (Special steels and alloys), 170-175

TOPIC TAGS: alloy, steel, chromium steel, nickel steel, molybdenum steel, metallurgic research

ABSTRACT: The effect of the carbon content on the cold-shortness threshold of chromium-nickel-molybdenum steel was investigated. The specimens were quenched and subsequently annealed in two stages to hardness HRC = 20--25 and HRC = 30--35 respectively. The cold-shortness threshold was determined in terms of the fraction of the brittle component in the fracture of the specimen. The cold-shortness threshold temperature was taken as the temperature at which the fracture contained 10 and 50% of the brittle component respectively. The experimental results are presented in graphs and tables (see Fig. 1). It was found that an increase in the carbon content in Cr-Ni-Mo steel leads to an increase of the cold-shortness threshold. The

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

L 09953-67
ACC NR: AT6026557

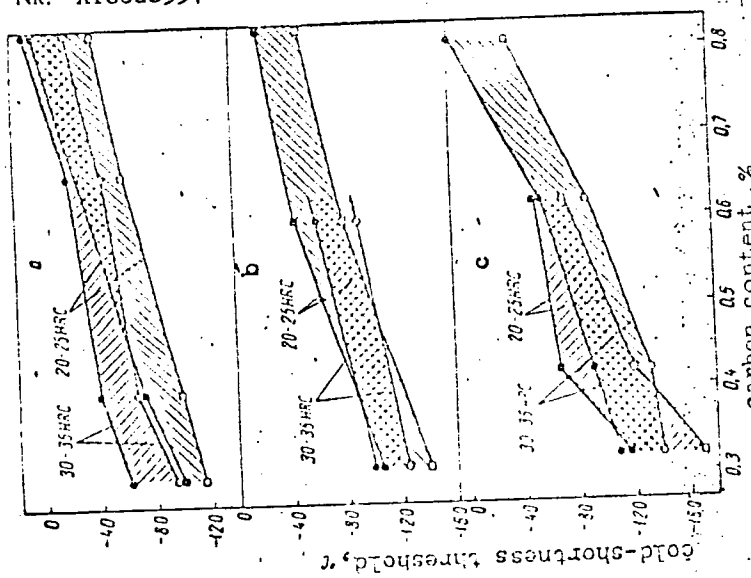


Fig. 1. Influence of carbon on the cold-shortness threshold of steels: a - 30-80kh13; b - 30-80KhNM; c - 30-80KhN2M; solid squares and circles - 10% of brittle component; open squares and circles - 50% of brittle component.

most effective decrease in the cold shortness threshold of improved structural steels is achieved by addition of 1% Ni. Orig. art. has: [illegible] graphs.

SUB CODE: 00/ SUBM DATE: 00/ ORIG REF: 002

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

MESHCHERKIN, V.

Some organizational problems of emergency medical care for the rural population. Zdravookhranenie 5 no.5:45-47 S-O'62 (MIRA 16:7)

1. Glavnyy vrach Karpinenskogo rayona, Moldavskaya SSR.
(PUBLIC HEALTH, RURAL)
(FIRST AID IN ILLNESS AND INJURY)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

USSR/Cultivated Plants - Potatoes. Vegetables. Melons. M

Abs Jour : Ref Zhur Biol., No 12, 1958, 53642

Author : Meshcherov, E.T.
Inst :
Title : An Experiment in Obtaining Hybrid Cucumber Seeds.

Orig Pub : Vestn. s.-kh. nauki, 1957, No 6, 43-47

Abstract : Among the seed samples received from Sakhalin island, the author selected plants of the female type which he used in crossing with different varieties. The results produced varieties with a high percentage of female plants which after having been crossed with other varieties produced high-yielding seeds. The author considers that by means of crossing the quick ripening hybrids of the first generation of the female type with quick maturing varieties, it is feasible to obtain high-yielding hybrid cucumber seeds for the most northerly regions. -- S.Ya. Krayevoy

Card 1/1

Inst : Maykop Testing Station VIR, All-Union Institute of Plant' Husbandry.

Title : Growing High-Yield Hybrid Cucumber Seed

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

Orig Pub : Tr. po prikl. botan., genet. i selektsii, 1957, 31, No 2, 223-225

Abstract : The experiment was done at the Maykop Testing Station of the All-Union Institute of Plant Husbandry. In order to develop hybrid seeds by natural repollination, the parental varieties (10 combinations) were planted in adjacent rows on isolated plots. Hybrids derived from varieties differing sharply in their morphological characteristics (Omskiy x Astrakhanskiy, Rzhavskiy x

Card 1/2

Card 2/2

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

TKACHENKO, N.N.; CHIZHOV, S.T.; MESHCHEROV, E.T.; TKACHEV, R.Ya.; DANILOV, V.P.; KURZINA, I.A., red.; PROKOF'YEVA, L.N., tekhn. red.

[Cucumbers] Ogurtsy. [B]N.N.Tkachenko i dr. Moskva, Sel'khozizdat, 1963. 205 p. (MIRA 16:5)
(Cucumbers)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

MESHCHEROV, Kh.Kh., prof. (Kazan')

Radiotherapy of uterine cancer from the hematological point of view. Report No.2: Morphological changes in the blood of patients treated with radium. Kaz. med. zhur. no.6:48-51 N-D '60. (MIRA 13:12)
(UTERUS—CANCER) (RADIUM—THERAPEUTIC USE)
(BLOOD)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

MESHCHEROV, Kh.Kh, prof. (Kazan')

Hematological characteristics of radiation effects under experimental conditions. Kaz.med.zhur.no.1:45-47 Ja-F '63. (MIRA 16:8)

(RADIATION--PHYSIOLOGICAL EFFECTS)
(BLOOD--ANALYSIS AND CHEMISTRY)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

MESHCHEROV, Kh.Kh.; SOTNIKOVA, L.G.

Electrophoretic study of the blood serum in normal pregnancy and late toxicosis. Nauch. trudy Kaz. gos. med. inst. 14:485-486 '64. (MIRA 18:9)

1. II kafedra akusherstva i ginekologii (zav. - prof. Kh.Kh. Meshcherov) Kazanskogo meditsinskogo instituta.

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

MESHCHEROV, R. A.

120-5-3/35

AUTHORS: Mironov, Ye.S., Nemenov, L.M., Zvyagin, S.B., and Meshcherov,R.A.

TITLE: An Application of a Ribbon Lens to the Focussing of the External Beam of a Cyclotron (Primeneniye lentochnoy linzy dlya fokusirovki vypushchennogo puchka tsiklotrona)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1957, No.5, pp. 18 - 21 (USSR)

ABSTRACT: An electrostatic focussing device for the external beam of the 1.5 m cyclotron (Ref.1) is described. The system is shown in Fig.1 and consists of a system of molybdenum ribbons. The system focusses the beam in the vertical direction focussing in the perpendicular direction being carried out by a magnet (not described in this paper). Fig. 7 indicates the performance of the focussing device. The measurements obtained using 12 Mev protons. The ribbons lens increases the current density by a factor of 10. Particle losses did not exceed 10%. The current density at the target was 15 $\mu A/cm^2$. V.I. Bernashevskiy, Ye.A. Minin and Yu.M. Pustovoyt assisted in this work. There are 7 diagrams and 1 Slavic reference.

SUBMITTED: December 21, 1956.

AVAILABLE: Library of Congress

Card1/1

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

21.2100

78318
SOV/89-8-3-3/32

AUTHORS: Meshcherov, R. A., Mironov, Ye. S., Nemenov, L. M., Rybin, S. N., Kholmovskiy, Yu. A.

TITLE: Ion Acceleration in a Cyclotron With Azimuthal Variation of the Magnetic Field

PERIODICAL: Atomnaya energiya, 1960, Vol 8, Nr 3, pp 201-208 (USSR)

ABSTRACT: Thomas showed already in 1938 (see ref at end of abstract) that charged particle motion in cyclotrons can be made stable in case of radially increasing fields if one introduces azimuthal variations in field intensities. Technical difficulties and the discovery of the self-phasing principle delayed, however, the use of azimuthally varying magnetic fields. The authors tested this kind of field in 1957 on a model of the 1.5-m cyclotron (1/2 natural size). They showed that a combination of iron and current corrective elements can produce a wide

Card 1/11

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

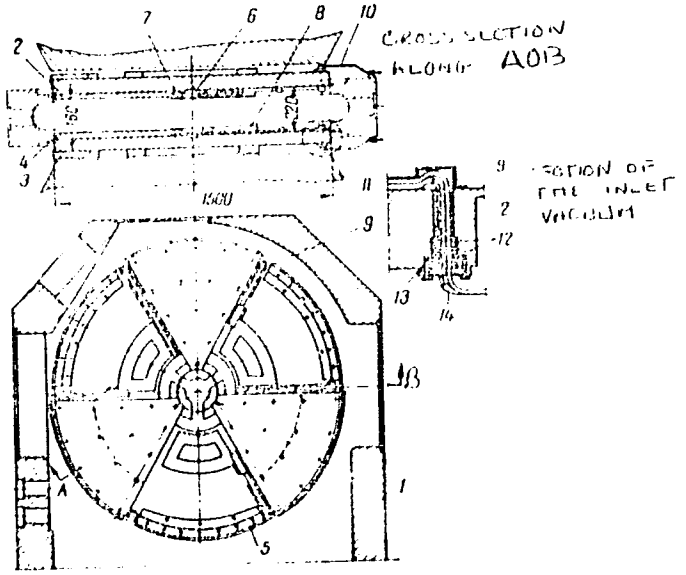
range of desired field shapes. In 1958 the authors constructed new full-scale parts for the large cyclotron whose shortest 26.7-m high-frequency wavelength determined the upper limits of the attainable particle energies. The azimuthal variation of the magnetic field with a $\pm 15\%$ depth was achieved by means of three segments. The covers of the accelerator chamber with the corrective elements are shown on Fig. 1. To minimize the h-f losses, all iron surfaces were electrolytically covered by a $\sim 70\,\mu$ layer of copper. As seen, elements 5 were placed in the depressions between the segments and served to increase field intensity towards the periphery. Elements for fine correction were located on radii between 190 and 260 mm. Figures 2 and 3 show the central and off-center corrective windings. Characteristics of the beam were measured by means of two screened probes. An aluminum filter served to eliminate charged particles of low energy. The ions originated

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

Ion Acceleration in a Cyclotron With Azimuthal Variation of the Magnetic Field

78316
SOV/89-8-3-3/32



Card 3/11 See card 4/11 for caption.

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

Fig. 1. Covers of accelerator chamber with corrective iron elements and current corrective windings: (1) accelerator chamber; (2) covers of accelerator chamber; (3) outer corrective element; (4) sectors; (5) inner corrective elements; (6) central discs; (7) central corrective windings; (8) corrective windings in the troughs; (9) copper screens; (10) vacuum inlet for feeding windings; (11) poles of electromagnet; (12) insulators; (13) rubber seal; (14) chlor-vinile tube.

from a standard open-type source, and they were extracted into both dees. Two coils connected to a ballistic galvanometer measured the magnetic field with an accuracy of 0.05%. Figure 6 shows the azimuthal variations of the field for various values of radius R.

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

Ion Acceleration in a Cyclotron With Azimuthal Variation of the Magnetic Field

7-8318
SOV/89-8-3-3/32

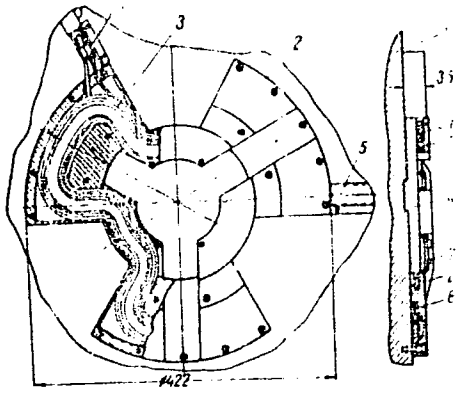


Fig. 2. Central corrective winding: (1) cover of accelerator chamber; (2) frame; (3) copper tube winding; (4) central disk; (5) copper screen; (6) detachable vacuum joint; (7) tubes for water-cooling of frame; (8) tightening plate.

Card 5/11

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

Ion Acceleration in a Cyclotron With Azimuthal Variation of the Magnetic Field

78318
SOV/89-8-3-3/32

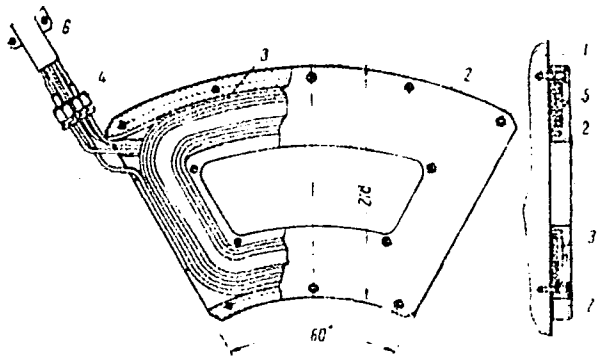


Fig. 3. Corrective windings in the troughs: (1) cover of accelerator chamber; (2) frame; (3) winding; (4) detachable vacuum joint; (5) tubes for water-cooling of frame; (6) cooper screen; (7) frame cover.

Card 6/11

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

Ion Acceleration in a Cyclotron With Azimuthal Variation of the Magnetic Field

78318
SOV/89-8-3-3/32

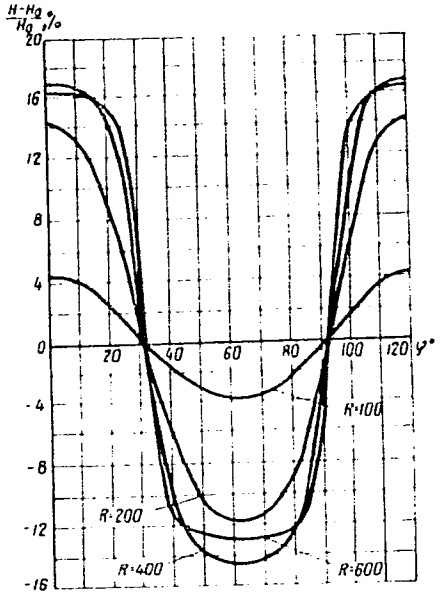


Fig. 6. Magnetic field intensity versus angle ϕ.

Card 7/ 11

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

Figure 8 shows the relationship between the beam current and the radius R. The relatively small decrease of current with radius in the cyclotron with azimuthal variations can be explained by smaller phase losses and strong vertical focusing. The authors note that the central corrective windings showed no favorable effects and produced (with both polarities of the added field) only a decrease of the probe currents. Using an absorber of 190 mg/cm^2 the authors measured an energy of 21.5 mev at a radius of approximately 650 mm, and this agreed with the calculated value within a 3% error. Energy spread of the ions was approximately $\pm$1.5%, while in the conventional cyclotron this spread was approx. $\pm$3%. The authors found also that at the 700 mm radius the beam acquired a much larger width (more than 15 mm) which enabled use of much smaller deflecting electrostatic potentials than those

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

Ion Acceleration in a Cyclotron With Azimuthal Variation of the Magnetic Field

78318
SOV/89-8-3-3/32

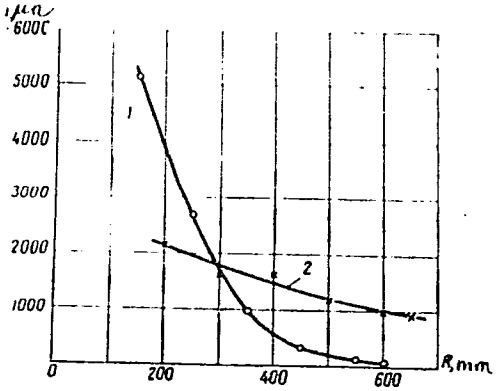


Fig. 8. Current versus radius of probe setting: (1) when device worked as conventional cyclotron; (2) for cyclotron with azimuthal variation of the magnetic field.

Card 9/11

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

Ion Acceleration in a Cyclotron With Azimuthal Variation of the Magnetic Field

78318
SOV/89-8-3-3/32

needed in conventional cyclotrons, and to obtain outside ion beams of energies up to 22-24 mev. The authors stated that they were able to obtain (using 80-kv potentials across the dees) molecular hydrogen and deuterium beams of energies up to 21 mev and approx. 1,000 μ a. At the maximum energy of 23.7 mev the beam current was of the order of 200 μ a. The shape of the magnetic field of the 1.5 m cyclotron coincided completely with that of the scaled-down model. N. D. Fedorov, A. P. Babichev, A. S. Knyazyatov, and V. K. Anokhin took part in the magnetic field measurements; S. I. Prokof'yev helped with the covers; N. N. Khaldin gave advice and took part in constructive designs; N. I. Venikov serviced the cyclotron; I. M. Shnaptsev and A. G. Yadykin tested the vacuum; and M. A. Yegorov, V. M. Komarov, V. I. Andreyev, and V. S. Kalyayev performed the mounting of the devices. There are 14 figures; and 6 references, 2 Soviet, 4 U.S. The U.S. references are: E. Kelly, R. Pyle, L. Thornton, Rev.

Card 10/11

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

Ion Acceleration in a Cyclotron With Azimuthal Variation of the Magnetic Field

78318
SOV/89-8-3-3/32

Scient. Instrum., 27, 493 (1958); F. Heyn, Khoe Kong Tat, Rev. Scient. Instrum., 29, 662 (1958); H. Blosser, R. Worsham, C. Goodman, R. Livingston, J. Mann, H. Moseley, G. Trammel, T. Welton, Rev. Scient. Instrum., 29, 819 (1958); L. Thomas, Phys. Rev., 54, 580 (1938).

SUBMITTED: August 6, 1959

Card 11/11

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

89352

S/089/61/010/002/002/018
B102/B209

26.2320

AUTHORS: Meshcherov, R. A., Mironov, Ye. S.

TITLE: The problem of generating an azimuthally variable magnetic field

PERIODICAL: Atomnaya energiya, v. 10, no. 2, 1961, 127-130

TEXT: This paper presents a method of calculating the shape of the pole-piece surfaces, which makes it possible to generate an azimuthally variable magnetic field of a given depth and with given radial distribution of the field strength. The authors proceed from the assumption that the pole-piece surfaces be equipotential surfaces. In such a case, the magnetic potential may, in cylindrical coordinates, be represented in the form of

$P(r,\varphi,z) = \sum_{k=1}^{\infty} V_{2k-1}(r,\varphi)z^{2k-1}$; the coefficients can be determined through the recurrence formula $V_{2k+1} = -\frac{1}{2k(2k+1)}\left(\frac{\partial^2 V_{2k-1}}{\partial r^2} + \frac{1}{r}\frac{\partial V_{2k-1}}{\partial r} + \frac{1}{r^2}\frac{\partial^2 V_{2k-1}}{\partial \varphi^2}\right)$.

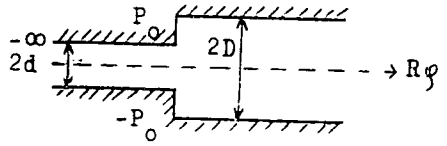
Card 1/6

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

The problem of generating ...

It is evident that $v_1 = (\partial\varphi/\partial z)_{z=0} = -H_z(r,\varphi)$; the shape of the pole-piece surfaces for arbitrary $H_z(r,\varphi)$ distributions, which may be given analytically as well as graphically, can be calculated by these formulas. This problem has been solved e. g. by Thomas for $H_z = H_o\ (1+Ar^2+Br\cos n\varphi)$, but the complex shape of the obtained pole-piece profile involves considerable technical difficulties of production. However, a variation of the magnetic field may be brought about much easier by employing plane sectorial plates; the field of such pole-pieces cannot exactly be computed. Therefore, the field strength between the middle of a sector and the middle of a gap is, for simplicity, assumed to depend on φ in the same way as it does in the case of plane parallel poles of the following shape:



Card 2/6

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

This assumption is justified if $R\alpha \gg d$ and $R(2\pi/n - \alpha) \gg d$, where R denotes the radius, α the angle, and n the number of the sectors. Fig. 2 illustrates the regions on the complex planes w and z which by means of (4)

$$w = \frac{d}{\pi} \ln \frac{\sqrt{e^{\pi\frac{z}{d}}+\varkappa^2}-\varkappa\sqrt{e^{\pi\frac{z}{d}}+1}}{\sqrt{e^{\pi\frac{z}{d}}+\varkappa^2}+\varkappa\sqrt{e^{\pi\frac{z}{d}}+1}} - \frac{D}{\pi} \ln \frac{\sqrt{e^{\pi\frac{z}{d}}+1}-\sqrt{e^{\pi\frac{z}{d}}+\varkappa^2}}{\sqrt{e^{\pi\frac{z}{d}}+1}+\sqrt{e^{\pi\frac{z}{d}}+\varkappa^2}}, \quad (4)$$

may be transformed into one another; ($\varkappa = d/D$). The field between the stepped pole-pieces is given by $H(w) = H_u + iH_v = -iH_{max}\varkappa\frac{\sqrt{\exp(\pi z/d)+1}}{\sqrt{\exp(\pi z/d)+\varkappa^2}}$ (5). (4) and (5) were employed in calculating the distribution $H_v = f(u)$ in the middle of the plane between infinitely large stepped pole-pieces; Fig. 3 shows the result. In many cases, $H_v = f(u)$ may favourably be represented in the

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

The problem of generating ...

form of the equivalent step field (Fig. 2); in particular, this is the case with the study of ions moving in an idealized field. (6)

$$\Delta = \frac{1}{H_{\text{макс}}(1-\varkappa)}\left\{\int_{-\infty}^{\infty} H_0(u)\,du - \int_{-\infty}^{0} H_{\text{макс}}\,du - \int_{0}^{\infty} \varkappa H_{\text{макс}}\,du\right\} = \frac{d}{\pi(1-\varkappa)}\left[\frac{1+\varkappa^2}{\varkappa}\ln\frac{1+\varkappa}{1-\varkappa} - \ln\frac{16\varkappa^2}{(1-\varkappa^2)^2}\right]. \quad (6)$$

is the characteristic parameter of such a field. For comparison with theory, measurements were made at an electromagnet with 370 mm pole-piece diameter and 90 mm gap width. Two steel disks (16 mm thick, 370 mm in dfameter) with sectors (α=52.5°, 5 mm thick) attached to them were inserted between the cylindric poles. The gap between the sectors was 40 mm wide. Thus, d was 20 mm, D = 25 mm, $\varkappa$ = 0.8; the central field strength amounted to H_0 = 6000oe. Agreement between experimental and theoretical results was

Card 4/6

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

The problem of generating ...

the better the longer the distances from the center were. In the case of 50<R<150 mm one may assume that $\varkappa = d/D \approx H_{z\ gap}/H_{z\ sect}$. The shape of the sector plates within the range of 50<R<145 mm and for any $\bar{H}_z(R)$ may be calculated after formula (6). The results of such a calculation for $\bar{H}_z(R) = \text{const}$ and $\bar{H}_z(R)$ being a monotonically rising function are discussed in brief. Finally, a model-magnetic field of a 1.5-m cyclotron represented by an electromagnet (as described) is discussed. The 6-cm thick sectorial plates ($\alpha = 60^\circ$, d = 16 mm, D = 22 cm) became thinner towards the edge (4.4 mm); a little disk (3.5 mm thick, 42 mm in diameter) was placed in the center of the plate. The measurements were conducted at 14.500 oe. There are 9 figures and 4 references: 2 Soviet-bloc and 2 non-Soviet-bloc.

SUBMITTED: June 22, 1960

Legend to Fig. 3: Comparison of theoretical and experimental data; the measured values were taken at various R (in mm): o - 50, x - 70, □ - 90, △ - 110, ○ - 130, and ◇ -145 mm.

Card 5/6

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

S/089/61/010/002/002/018
B102/B209

The problem of generating ...

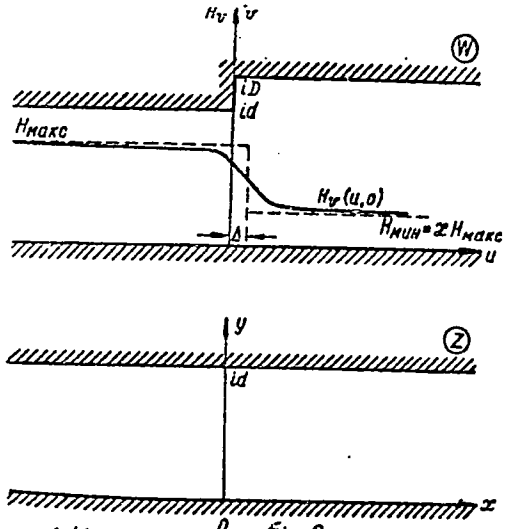


Fig. 2

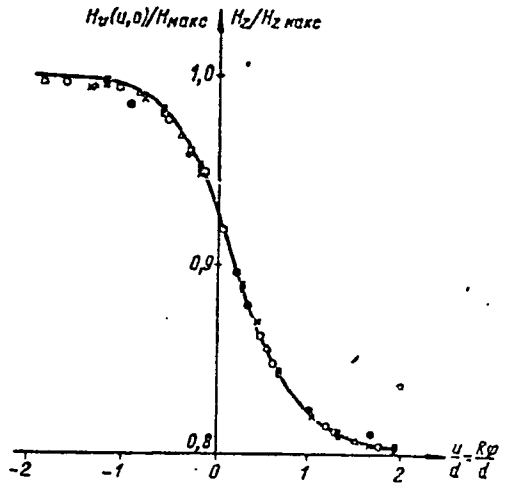


Рис. 3. Сравнение расчетных и опытных данных. Сплошная кривая соответствует расчетным данным; точками обозначены результаты измерений на разных радиу-

Card 6/6

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

ARZUMANOV, A.A.; MESHCHEROV, R.A.; MIRONOV, Ye.S.; NEMENOV, L.M.; RYBIN, S.N. KHOLMOVSKIY, Yu.A.

Beam exit and energy regulation in a cyclotron with azimuthal magnetic field variation. Atom.energ. 10 no.5:501-502 My '61. (MIRA 14:5)

(Cyclotron)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

ZAVENYAGIN, Yu.A.; MESHCHEROV, R.A.; MIRONOV, Ye.S.

Some aspects of the theory of a cyclotron with an azimuthally varying magnetic field. Atom. energ. 11 no.1:26-33 Jl '61. (MIRA 14:7)

(Cyclotron) (Magnetic fields)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

31999
S/089/62/012/001/002/013
B102/B138

24.6730

AUTHORS: Arzumanov, A. A., Meshcherov, R. A., Mironov, Ye. S., Nemenov, L. M., Rybin, S. N., Kholmovskiy, Yu. A.

TITLE: Experiments on acceleration in, and emission of ions from, a cyclotron with azimuthally varying magnetic field and energy regulation

PERIODICAL: Atomnaya energiya, v. 12, no. 1, 1962, 12 - 21

TEXT: Problems of formation and correction of magnetic fields used for ion acceleration are considered. The studies and experiments described were carried out at the 1.5-m cyclotron of the Ordena Lenina Instituta atomnoy energii im. I. V. Kurchatova AN SSSR (Lenin Order Institute of Atomic Energy imeni I. V. Kurchatov AS USSR). Azimuthal variation of the magnetic field is achieved by three iron sectors. Various types of probes were used to determine the trajectories, current and intensity distributions of accelerated ions. Their arrangement in the accelerator chamber is shown in Fig. 3. Magnetic field distribution in the central plane is described by $H_z(R,\varphi) = H_o\left[1 + f(R) + \sum_k F_k(R)\cos 3k\varphi\right]$. H_o - magnetic field

Card 1/4

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

31999
S/089/62/012/001/008/019
B102/B138

Experiments on acceleration...

strength in the center, $f(R) = (H_z - H_o)/H_o$ characterizes the radial field distribution averaged over φ and $F_k(R)$ is the radial distribution function of the amplitude of the k-th harmonic in a Fourier expansion of $H_z(R, \varphi)$; $H_z = H_o[1 + f(R) + F(R)\cos 3\varphi]$, $F(R)$ - amplitude of first harmonic. The ion acceleration experiments were carried out at H_o = [illegible], 10, 13.6, and [illegible] koe, deuterons and H_2^+-ions were accelerated at H_o = 10, 13.6, and 17 koe, the results are shown graphically. The deflection system is described in detail. It is designed in such a way that the effects of scattering fields are completely compensated. The main parameters of the accelerated and emitted ion beams given in Table 4, were also determined by the probe method. Results: Deuteron acceleration up to 31.5 Mev can be achieved with the current of the emitted beam ~70 μa. Energy was regulated in the range of 5 - 17 kev. The deflection system allows beam divergence to be reduced without additional losses of the current of accelerated ions. Small aperture magnetic quadrupole lenses can therefore be used. As the beam is small at the output and the input slit of the magnetic analyzer can be put at this point. The energy of the accelerated ions will spread over the whole range. The authors thank [illegible] Kondrashev,

Card 2/4

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

N. Z. Kubyshkin and S. I. Prokof'yev for assistance. There are 14 figures, 4 tables, and 15 references: 6 Soviet and 9 non-Soviet. The four most recent references to English-language publications read as follows: F. Heyn, Khoe Kong Tat. Rev. Scient. Instrum., 29, 662 (1958); J. Zavenyagin, R. Metshcherov, E. Mironov, L. Nemenov, J. Kholmovsky. Proceedings of the Intern. Conf. on High Energy Accelerators and Instrumentation - CERN, 1959, p. 225; R. Livingston, F. Howard. Nucl. Instr. and Meth., 6, 1 (1959); 6, 105 (1960); 6, 221 (1960); 6, 134 (1960) J. Allen, S. Chatterjee, L. Ernest, A. Jarvin. Rev. Scient. Instrum., 31. 813 (1960).

SUBMITTED: May 27, 1961

Fig. 3. Position of probes in the accelerator chamber.

Legend: (1) accelerator chamber, (2) dees, (3) ion source, (4) multi-segment probe, (5) shielded probes, (6) probes for measuring the current in the emitted beam, (7) probes arranged in the dee.

Table 4. Parameters of the emitted beam.

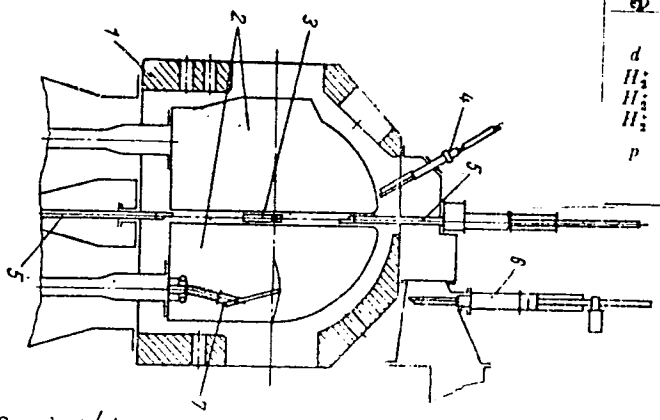
APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

Experiments on acceleration...

Legend: (1) - Ion; H_c, koe; E, Mev; I, μa; $k_{выд}$ = output coefficient, %, determined by current measurement with probe 7 (Fig. 3); $2U_д$ = potential difference between the dees, kv; $U_{откл}$ = deflecting voltage, kv.

Fig. 3



Ион (1)	H_0, кэ	E, Мэв	$\Delta E/E$, %	I, мка	$k_{выд}$, %	$2U_д$, кв	
d	17,1	31,5	±0,9	70	38	136	61
H_2^+				50	45	144	60
H_2^+	13,6	20,4	±1,0	115	37	128	34,5
H_2^+	10,3	—	—	50	40	48	22
p	5,15	—		470	21,5	57	13
				50	70	17	13

Table 4

Card 4/4

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

40048

24.6730

S/089/62/013/002/001/011
B102/B104

AUTHORS: Babichev, A. P., Venikov, N. I., Knyazyatov, A. S., Meshcherov, B. A., Mironov, Ye. S., Nemenov, L. M., Fedorov, N. D., Kholmovskiy, Yu. A.

TITLE: Control of the magnetic field configuration in a cyclotron

PERIODICAL: Atomnaya energiya, v. 13, no. 2, 1962, 125-134

TEXT: Between 1956 and 1959, experiments were made with a model magnet of one-fifth the full size, made of Ст.-3 (St.-3) steel, in connection with the redesign of the 1.5-m cyclotron belonging to the Ordena Lenina Institut atomnoy energii im. I. V. Kurchatova AN SSSR (Lenin Order Institute of Atomic Energy imeni I. V. Kurchatov, AS USSR). The pole pieces were either cylindrical (370 mm diameter) or conical (300 mm diameter) and the magnet gap was 90 mm wide. The current in the windings could be kept constant to within ±0.1%, and the field strengths were measured with an error of ±0.03-0.1%. The following were investigated: (1) the optimum geometry of the magnet to ensure a field of constant configuration ($\Delta H/H_0(R)$ minimum when H_0 changes), the magnet having

Card 1/3

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

Control of the magnetic field ...

cylindrical poles and three pairs of caps 14.5 mm thick of different diameters. The best results were obtained using caps with a diameter smaller than that of the poles. Measurements were made not only for $\Delta H/H_o = f(R)$ with and without shims, but also for $\Delta H/H_o = f(r)$, where r is the radius of curvature of the caps. The constancy of the field configuration can be improved by replacing the caps by internal shims. (2) Correction of the magnetic field by inserting circular coils in the magnet gap between the caps. Experiments were made with six such coils, of different diameters, mounted on a brass frame. Each winding consisted of five turns of a 4 by 0.5 mm copper tube enclosing a flow of water. The field created by the coils $H_w(R)$ with current (150 a) and without current was measured by a differential method and their effect on the field configuration was studied under various conditions. Shimming seems to be the most convenient way of correcting the field. (3) Sector-type windings. These were used for generating a first harmonic and also for regulating the field. In the case of magnets with dead turns, the field of the first harmonic was measured in dependence on the radius. (4) Correction of the field by annular windings in the shimming gap. These are less effective in the shimming gap than in the magnet gap. (5) Correction of the field

Card 2/3

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

Control of the magnetic field ...

for azimuthal variation. For this purpose, only one turn (Cu tube 3 by 0.5 mm; maximum current strength 600 a), was used which had the same effect as in an axisymmetric field. There are 15 figures.

SUBMITTED: August 23, 1961

Card 3/3

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

L 06139-67 EWT(m) IJP(c)

ACC NR: AP6031170 SOURCE CODE: UR/0361/66/000/002/0003/0015

AUTHOR: Nemenov, L. M.; Anisimov, O. K.; Arzumanov, A. A.; Golovanov, U. N.; Yezerskiy, V. F.; Kravchenko, Ye. T.; Kruglov, V. G.; Laktionov, I. A.; Meshcherov, R. A.; Meshcherova, I. V.; Popov, Yu. S.; Prokof'yev, S. I.; Rybin, S. N.; Fedorov, N. D.

ORG: Institute of Nuclear Physics, AN KazSSR (Institut yadernoy fiziki AN KazSSR)

TITLE: Putting the Kazakhstan cyclotron into operation

SOURCE: AN KazSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 2, 1966, 3-15

TOPIC TAGS: cyclotron, proton accelerator, Mev accelerator, alpha particle / U1502 cyclotron

ABSTRACT: The U-150-2 cyclotron of the Institute of Nuclear Physics of the Academy of Sciences of the Kazak SSR is described. This cyclotron is designed to accelerate protons, deuterons, alpha particles, and multiply charged ions. Energies of 24 Mev are obtained with deuterons. Alpha particles and protons can be accelerated to 48 Mev and 20 Mev, respectively. Sixfold ionized carbon can be accelerated to 140 Mev. The magnetic field in the cyclotron necessary for 20 Mev deuteron production is 14000 oersteds; this is produced by a current of 800 amp. The necessary variation of the magnetic field with radius is obtained by the use of annular shims. The high frequency generator and its alignment is described. The dependence of beam current at various

Card 1/2

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

L 06139-67
ACC NR: AP6031170

final radii is plotted as a function of the potential between the "dees". The authors thank engineers V. A. Borisov, B. L. Vaysman, N. G. Gladenko, senior electronic engineer D. D. Gromov, chiefs of work shifts G. A. Obraztsov and V. E. Oshkin, and chief of service A. I. Tkachev for participation in the work of setting aright the various difficulties involved in setting up the cyclotron. Orig. art. has: 11 figures.

SUB CODE: 18/ 20/ SUBM DATE: none

Card 2/2 mfe

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

22457
S/186/60/002/001/020/022
A057/A129

21,3200

AUTHORS: Levin, V.I.; Serebryakov, N.G.; Meshcherova, I.V.

TITLE: Preparation of silver-111 from neutron-irradiated palladium

PERIODICAL: Radiokhimiya, v. 2, no. 1, 1960, 120 - 126

TEXT: A method was developed for the separation of Ag^{111} from neutron-irradiated palladium by isotopic exchange with AgCl precipitate. The irradiated Pd can be used after separation from silver as Pd^{103} or irradiated for a second time to obtain Ag^{111}. With its shorter half-life and low yield in gamma-radiation (~9%) of relatively low energy (0.24 and 0.34 Mev) Ag^{111} is more convenient for medical purposes than P^{32} or Au^{198}. In the present study two methods, which have been described in literature, were employed: the method of precipitating an AgCl carrier from solutions of irradiated palladium [Ref. 2: F. Silicio et al., Anal. Chem., 28, 3, 365 (1956)], and the extraction of Ag^{111} from solutions of irradiated palladium by isotope exchange with already precipitated inactive AgCl [Ref. 3: W.W. Meinke and D.N. Sunderman, Science, 121, 777 (1955), Nucleonics, 13, 12, 58 (1955)]. Optimum conditions for the separation of Ag^{111} by co-precipitation with AgCl were determined, the degree of extraction and the radiochemical

Card 1/4

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

Preparation of silver-111 from neutron-irradiated....

purity of the product were estimated. Optimum concentration of HCl is 1 N and at least 0.1 mg of carrier must be used. Heating the solution to 95 - 100°C effects formation of macrocrystalline precipitates. The AgCl precipitate containing Ag^{111} was re-precipitated 3 - 4 times. Extraction degrees were tabulated. The effect of HNO_3 concentration on the extraction degree of Ag^{111} was investigated in experiments with isotopic exchange and it was observed that concentrations of HNO_3 used in aqua regia do not interfere with the extraction, and results obtained by the isotopic exchange method are tabulated. The gamma-spectrum of the products obtained by the two methods was investigated with a scintillation counter containing a ФЭУ-29 (FEU-29) photomultiplier and a NaJ(Tl) crystal. The impurity present in the Ag^{111} sample obtained by co-precipitation can be seen from the maxima (450, 660 - 890 and 1,340 kev) in the gamma-spectrum (Fig. 3). The same impurity, i.e., a long lived isotope with a half-life of more than 200 days was determined in the Ag^{111} product prepared by isotopic exchange and was identified as Ag^{110}. In both products Ag^{110} is present in an amount of about 0.05%. It is supposed that Ag^{110} is formed from silver impurities present in the original palladium, or as product of secondary nuclear reactions. Since the isotopic exchange method is simpler, more efficient than co-precipitation, and since the same purity of the product is observed in both methods, the following preparation

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

technique is suggested: About 5 g of palladium was bombarded for 23 - 25 days in a $\sim 10^{13}$ neutrons/cm^2 · sec beam. The sample is then dissolved by boiling in 30 - 50 ml of aqua regia at 95 - 100°C. The resulting solution is diluted with H_2O to a concentration of 3 N HCl, 30 mg silver in the form of macrocrystalline AgCl precipitate is added and mixed for 15 min at 95 - 100°C. Then the precipitate is filtered off, washed with 1% HNO_3 solution, and dissolved in 20 ml of concentrated ammonium hydroxide solution, re-precipitated twice, and the final ammoniacal solution is heated by adding hydrazine solution. The precipitated Ag metal is filtered off, washed, and dissolved in 5 - 10 ml HNO_3, the solution is evaporated until dry and the residual is dissolved in distilled water. From 5 g of palladium at least 300 mc of Ag^{111} were obtained. After separation from Ag, the residual palladium (with 150 - 200 mc activity) can be used as Pd^{103} for medical purposes or irradiated again to manufacture Ag^{111}. There are 3 figures, 2 tables and 6 references: 1 Soviet-bloc and 5 non-Soviet-bloc.

SUBMITTED: May 23, 1959

Card 3/4

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

[illegible], V.I.; [illegible] I.V.; [illegible], V.K.

Extraction separation of a carrier-free manganese [illegible] of mass 54 from iron [illegible] neutrons. Radiokhimia 3 no.4:417-421 '61. (TIA 14:7)
(Manganese--Isotopes)
(Iron--Isotopes)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

LEVIN, V.I.; MESHCHEROVA, I.V.; MARYGINA, A.B.; SARVETNIKOV, O.Ye.

Extraction method of isolation of carrier-free calcium-45 from fast neutron-irradiated scandium. Radiokhimiia 5 no.1:37-41 '63. (MIRA 16:2)

(Calcium isotopes)
(Scandium) (Neutrons)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

MESHCHEROVA, N. Kh.

"Etiological and Diagnostic Significance of Intracellular Inclusions During Trachoma." Cand Med Sci, Kazan' State Medical Inst, Kazan', 1953. (RZhBiol, No 7, Apr 55)

S : Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

MESHCHEROVA, N.Kh., nauchnyy sotrudnik.

Studies on the etiology of trachoma. Vest. oft. 33 no.4:3-7 Jl-Ag '54. (MLRA 7:8)

1. Iz Bashkirskogo nauchno-issledovatel'skogo trakhomatoznogo instituta (dir. dotsent G.Kh.Kudoyarov; nauchnyy rukovoditel' prof. V.I.Spasskiy)
(TRACHOMA, etiology and pathogenesis,)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

KUDOYAROV, G.Kh., dotsent; MESHCHEROVA, N.Kh., kand.med.nauk

Cytological picture in the acute primary stage of trachoma.
Oft. zhur. 16 no.1:7-11 '61. (MIRA 14:3)

1. Iz Bashkirskogo nauchno-issledovatel'skogo trakhomatoznogo instituta.

(CONJUNCTIVITIS, GRANULAR)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

Meshcherskaya A.V.

PHASE I BOOK EXPLOITATION SOV/3789
SOV/2-M-93

Leningrad. Glavnaya geofizicheskaya observatoriya imeni A.I. Voyeykova

Voprosy fiziki atmosfery (Problems in Physics of the Atmosphere) Leningrad, Gidrometeoizdat, 1959. 113 p. (Series: Its: Trudy, vyp. 93) 1,200 copies printed.

Sponsoring Agency: USSR. Sovet Ministrov. Glavnoye upravleniye gidrometeorologicheskoy sluzhby.

Ed. (Title page): Ye.G. Seleznova, Candidate of Physics and Mathematics; Ed. (Inside book): M.M. Yasnogorodskaya; Tech. Ed.: A.N. Sergeyev.

PURPOSE: This publication is intended for specialists in meteorology, aerology, and meteorological instrumentation.

COVERAGE: This collection of twelve articles contains the results of studies done under the auspices of the Glavnaya geofizicheskaya observatoriya imeni A.I. Voyeykova (Main Geophysical Observatory imeni A.I. Voyeykov). The first six articles give the results of aerological investigations of clouds, and the structure of anticyclones and local winds. The last six articles cover the methods of aerological investigation of atmospheric ozone, aerosols, condensation nuclei, and the chemical impurities in atmospheric precipitation. A description of new or improved instruments used in aerological investigations is also given. References are given at the end of some articles.

TABLE OF CONTENTS:

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

VORONTSOV, P.A.; MESHCHERSKAYA, A.V.; SELEZNEVA, Ye.S.; CHESTNAYA, I.I.; AYMBUND, M.M.; KIRILLOVA, T.V.; MESINA, L.V.; OGNEVA, T.A.; SEROVA, M.V.; TIMOFEYEV, M.P., kand.fiz.-mat.nauk; ZHDANOVA, L.P., red.; BRAYNINA, M.I., tekhn.red.

[Meteorological regime of Lake Sevan] Meteorologicheskii rezhim ozera Sevan. Pod red. M.P.Timofeeva. Leningrad, Gidrometeor. izd-vo, 1960. 310 p. (MIRA 14:3)

1. Leningrad. Glavnaya geofizicheskaya observatoriya.
(Sevan Lake region--Meteorology)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

MESHCHERSKAYA, A.V.

Diurnal variation of atmospheric pressure and local air currents. (MIRA 15:8)
Trudy GGO no.135:60-80 '62.
(Atmospheric pressure) (Winds)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

GANDIN, L.S.; MELESHKO, V.P.; MESHCHERSKAYA, A.V.

Use of universal digital computers in studying the statistical structure of meteorological fields. Trudy GGO no.143:113-129 '63. (MIRA 17:2)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

GAN[illegible]N, [illegible] S.; B[illegible]GR[illegible]VA, Ye.I.; [illegible]KH[illegible]KOV, [illegible].N.; [illegible]SKAY[illegible], [illegible].V.

Stati[illegible] contr[illegible] of aerological telegrams. Trudy GGO no.[illegible]3-1[illegible] (MIRA 17:7)
'64

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

YAKOVLEVA, N.T.; [illegible]

Study of pressure (geopotential) fields by the method of expansion in natural components. Trudy GAO no. [illegible]

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

YAKOVLEVA, N.I.; MESHCHERSKAYA, A.V.

Using the parameters of expansion in natural functions for the solution of some meteorological problems. Trudy GGO no.168:27-35 '65. (MIRA 18:8)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

YAKOVLEVA, N.I.; MELNICHERSKAYA, A.V.

Analysis of the b[illegible] field over the northern hemisphere by expansion in natural orthogonal functions. Trudy GGO no.168:49-59 '65.

Making the natural functions of the geopotential (pressure) fields of the Atlantic-European sector more precise. Ibid.:60-74
(MIRA 18:8)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

L 13500-65 EWT(1)/FCC ASD(d)/ESD(dp) GW
ACCESSION NR: AT4047193 S/2531/64/000/165/0078/0104

AUTHOR: Yakovleva, N. I., Meshcherskaya, A.V., Kudashkin, G. D.

TITLE: Investigation of pressure (geopotential) fields by expansion of natural components

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy*, no. 165, 1964, Primeneniye statisticheskikh metodov v meteorologii (Use of statistical methods in meteorology), 78-104

TOPIC TAGS: atmospheric geopotential field, atmospheric pressure field, natural synoptic region, long-range weather forecasting

ABSTRACT: This paper presents the results of expansion of pressure (geopotential) fields on the basis of their natural orthogonal components, taking into account varieties of synoptic processes for the earth's surface and the 500-mb level in the area of a natural synoptic region (as defined by B. P. Mul'tanovskiy). It is shown that natural functions of time can be used in a classification of synoptic processes. Section 1 describes the method used in this investigation. It is noted that the method has been used in many previous studies (such as those of Bagrov, N. A., Tr. TsIP, No. 74, 1959). It is the Bagrov approach, in parti-

Card 1/3

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

L 13500-65
ACCESSION NR: AT4047193

cular, which is used by the authors of this paper. The authors confine the investigation to the winter season only (January, February, December). The G. Ya. Vengengeym classification of synoptic processes is used as a point of departure. The objective was to initiate an investigation of the characteristics of states of atmospheric movements with the more homogeneous groups of processes and at the same time be able in the future to compare the synoptic classification with objective parameters obtained by the method of expansion on the basis of natural components. Three very well-defined varieties of Vangengeym circulation forms were used in the study; winter data for 1951-1961 were considered. Pressure data were taken from surface and AT500 charts for 0300 on 111 days when these varieties of circulation prevailed; these data were used in computing the natural components. Section 3 describes in great detail the expansions of the fields and analysis of the natural functions E_j. It is shown that pressure fields can be represented almost completely by only 10 of 26 terms of the expansion and only the four first terms of such an expansion give 2/3 of the dispersion of the fields. Accuracy of representation of the fields at the surface and at the AT500 level is almost identical. It is shown that separation of data into groups on the basis of some

Card 2/3

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

L 13500-65
ACCESSION NR: AT4047193

quantitative criterion characterizing more homogeneous states of atmospheric movements makes it possible to obtain better description of fields. It is then possible to decrease the number of functions of time for a description of the principal features of the fields. Section 4 discusses the possibility of using functions of time for solution of the problem of creating an objective classification of synoptic processes; an affirmative conclusion is drawn. "In formulating this investigation and generalizing the computed data, the authors consistently received advice from M. I. Yudin; M. A. Krasnosel'skaya performed much of the computation work on an electronic computer". Orig. art. has: 7 formulas, 10 figures and 5 tables.

ASSOCIATION: Glavnaya geofizicheskaya observatoriya, Leningrad (Main Geophysical Observatory)

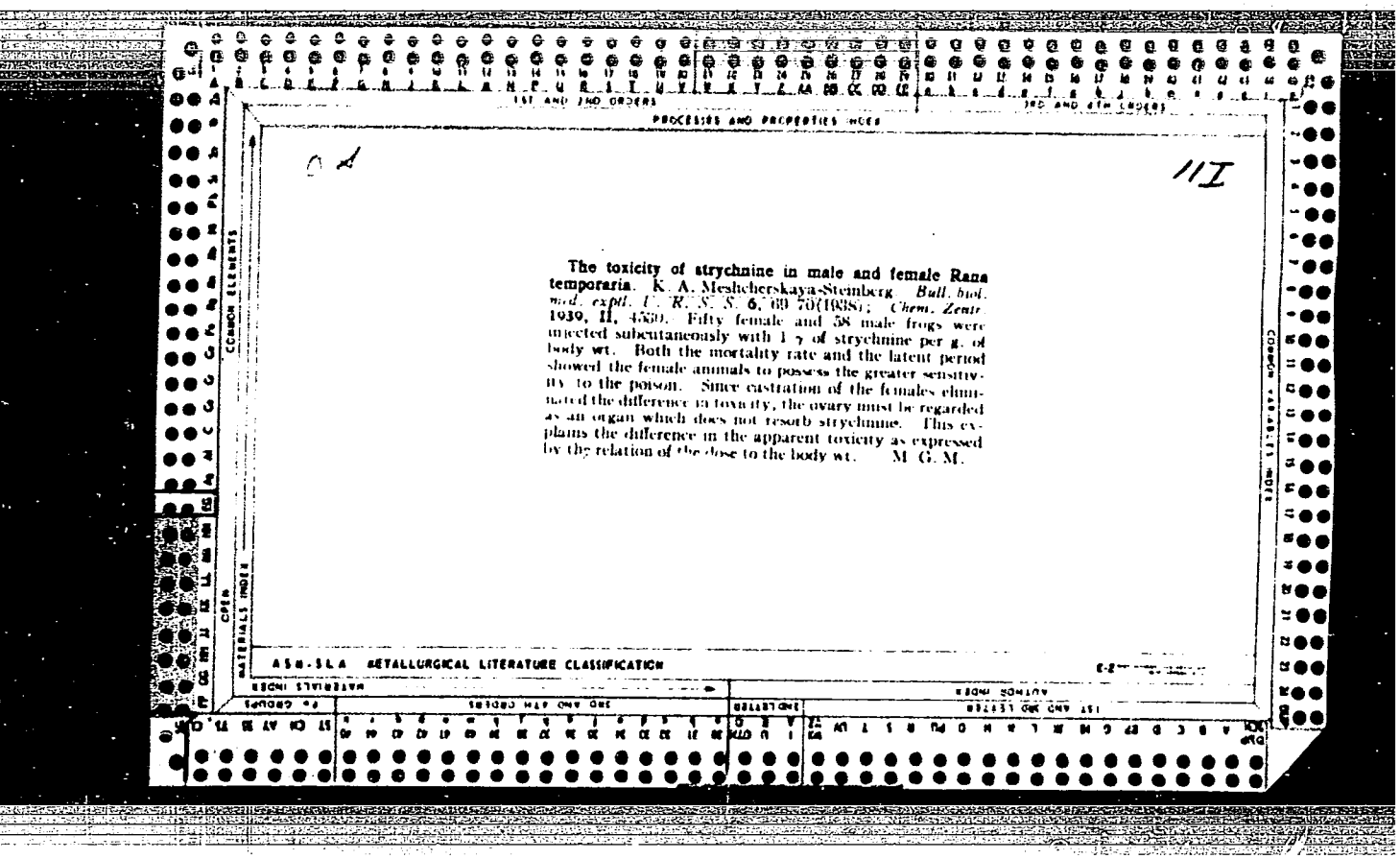
SUBMITTED: 00 ENCL: 00 SUB CODE: ES

NO REF SOV: 006 OTHER: 003

Card 3/3

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103



The toxicity of strychnine in male and female Rana temporaria. K. A. Meshcherskaya-Steinberg. *Bull. biol. med. exptl. U. R. S. S.* 6, 69–70 (1938); *Chem. Zentr.* 1939, II, 4530. Fifty female and 58 male frogs were injected subcutaneously with 1 γ of strychnine per g. of body wt. Both the mortality rate and the latent period showed the female animals to possess the greater sensitivity to the poison. Since castration of the females eliminated the difference in toxicity, the ovary must be regarded as an organ which does not resorb strychnine. This explains the difference in the apparent toxicity as expressed by the relation of the dose to the body wt. M. G. M.

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

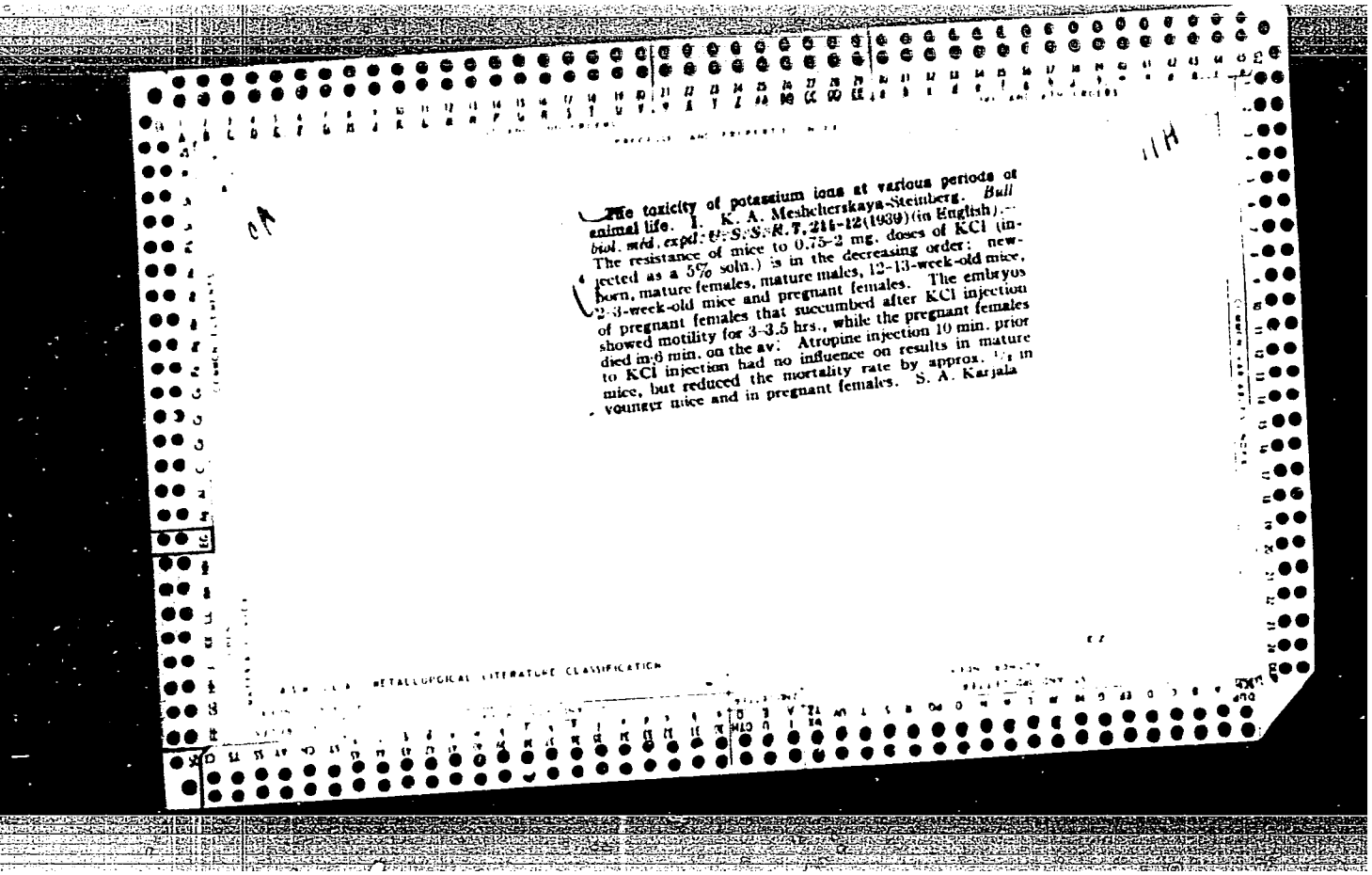
"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

MESHCHERSKAYA-SHTEYNBERG, K. A.

"A Study of Hemin System Poisons and Their Detoxication on Nucleated Erythrocytes," Farmokol. i Toksikol., 2, No. 3, 1939, Chair of Pharmacology (Head: Prof. V. M. Karassik) of the Leningrad Pediatric Inst., -1939-.

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

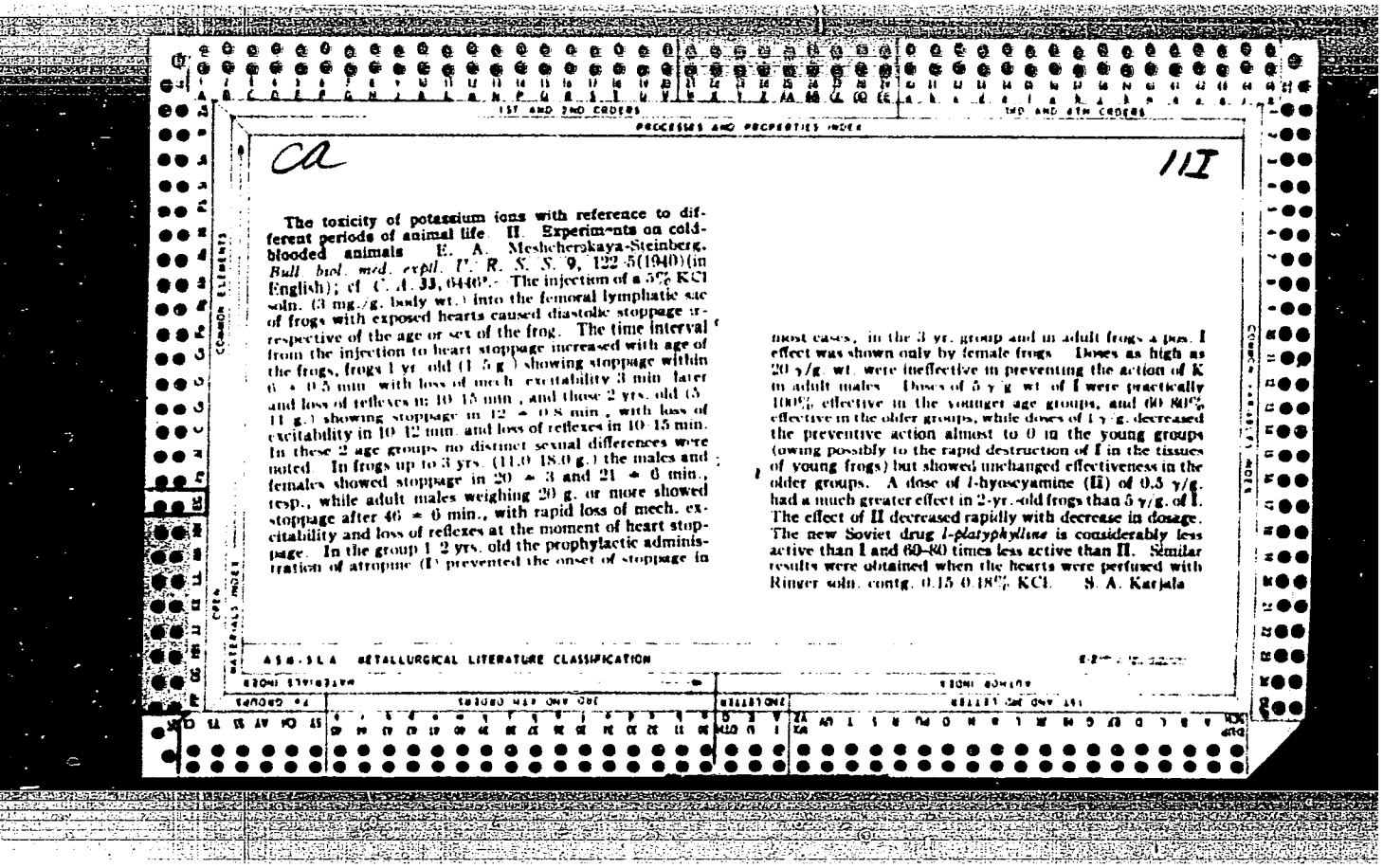


The toxicity of potassium ions at various periods of animal life. I. K. A. Meshcherskaya-Steinberg. *Bull. biol. méd. expl. U.S.S.R.* 7, 216-18 (1939) (in English).—The resistance of mice to 0.75–2 mg. doses of KCl (injected as a 5% soln.) is in the decreasing order: newborn, mature females, mature males, 12–13-week-old mice, 2–3-week-old mice and pregnant females. The embryos of pregnant females that succumbed after KCl injection showed motility for 3–3.5 hrs., while the pregnant females died in 6 min. on the av. Atropine injection 10 min. prior to KCl injection had no influence on results in mature mice, but reduced the mortality rate by approx. 1/3 in younger mice and in pregnant females. S. A. Karjala

METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103



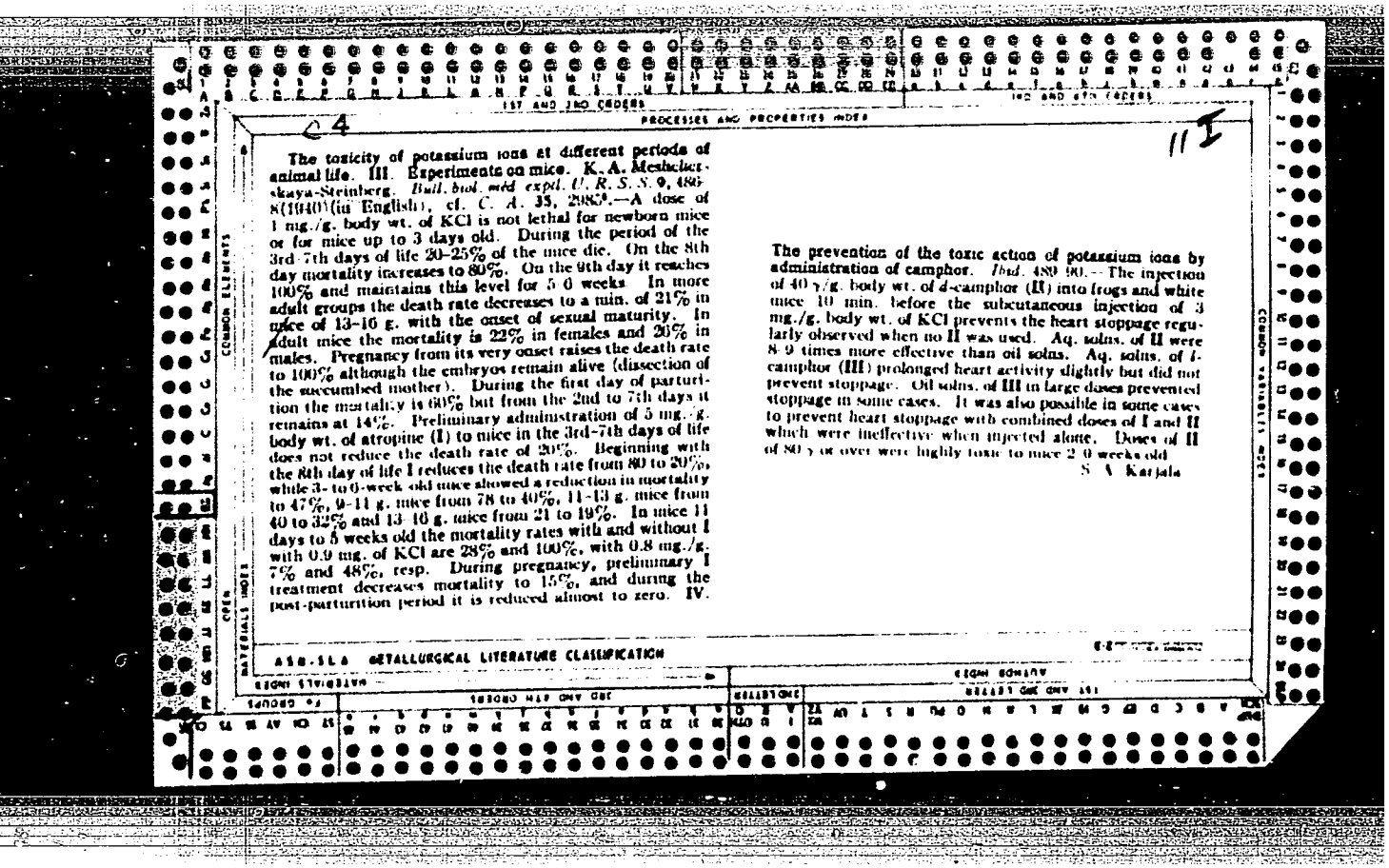
CA

III

The toxicity of potassium ions with reference to different periods of animal life. II. Experiments on cold-blooded animals. E. A. Meshcherskaya-Steinberg. *Bull. biol. med. exptl. U. R. S. S.* 9, 122-5(1940)(in English); cf. *C. A.* **33**, 6440⁹. The injection of a 5% KCl soln. (3 mg./g. body wt.) into the femoral lymphatic sac of frogs with exposed hearts caused diastolic stoppage irrespective of the age or sex of the frog. The time interval from the injection to heart stoppage increased with age of the frogs, frogs 1 yr. old (1.5 g.) showing stoppage within 6 ± 0.5 min. with loss of mech. excitability 3 min. later and loss of reflexes in 10–15 min., and those 2 yrs. old (5–11 g.) showing stoppage in 12 ± 0.8 min., with loss of excitability in 10–12 min. and loss of reflexes in 10–15 min. In these 2 age groups no distinct sexual differences were noted. In frogs up to 3 yrs. (11.0–18.0 g.) the males and females showed stoppage in 20 ± 3 and 21 ± 6 min., resp., while adult males weighing 20 g. or more showed stoppage after 46 ± 6 min., with rapid loss of mech. excitability and loss of reflexes at the moment of heart stoppage. In the group 1–2 yrs. old the prophylactic administration of atropine (I) prevented the onset of stoppage in most cases, in the 3 yr. group and in adult frogs a pos. I effect was shown only by female frogs. Doses as high as 20 γ/g. wt. were ineffective in preventing the action of K in adult males. Doses of 5 γ/g. wt. of I were practically 100% effective in the younger age groups, and 60–80% effective in the older groups, while doses of 1 γ/g. decreased the preventive action almost to 0 in the young groups (owing possibly to the rapid destruction of I in the tissues of young frogs) but showed unchanged effectiveness in the older groups. A dose of *l*-hyoscyamine (II) of 0.5 γ/g. had a much greater effect in 2-yr.-old frogs than 5 γ/g. of I. The effect of II decreased rapidly with decrease in dosage. The new Soviet drug *l-platyphylline* is considerably less active than I and 60–80 times less active than II. Similar results were obtained when the hearts were perfused with Ringer soln. contg. 0.15–0.18% KCl. S. A. Karjala

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103



C4

The toxicity of potassium ions at different periods of animal life. III. Experiments on mice. K. A. Mesheriakova-Steinberg. *Bull. biol. méd. expti. U. R. S. S.* 9, 480-8(1940)(in English); cf. *C. A.* 35, 2985⁹.—A dose of 1 mg./g. body wt. of KCl is not lethal for newborn mice or for mice up to 3 days old. During the period of the 3rd-7th days of life 20–25% of the mice die. On the 8th day mortality increases to 80%. On the 9th day it reaches 100% and maintains this level for 5.0 weeks. In more adult groups the death rate decreases to a min. of 21% in mice of 13–16 g. with the onset of sexual maturity. In adult mice the mortality is 22% in females and 20% in males. Pregnancy from its very onset raises the death rate to 100% although the embryos remain alive (dissection of the succumbed mother). During the first day of parturition the mortality is 60% but from the 2nd to 7th days it remains at 14%. Preliminary administration of 5 mg./g. body wt. of atropine (I) to mice in the 3rd-7th days of life does not reduce the death rate of 20%. Beginning with the 8th day of life I reduces the death rate from 80 to 20%, while 3- to 6-week old mice showed a reduction in mortality to 47%, 9–11 g. mice from 78 to 40%, 11–13 g. mice from 40 to 32% and 13–16 g. mice from 21 to 19%. In mice 11 days to 5 weeks old the mortality rates with and without I with 0.9 mg. of KCl are 28% and 100%, with 0.8 mg./g. 7% and 48%, resp. During pregnancy, preliminary I treatment decreases mortality to 15%, and during the post-parturition period it is reduced almost to zero. IV.

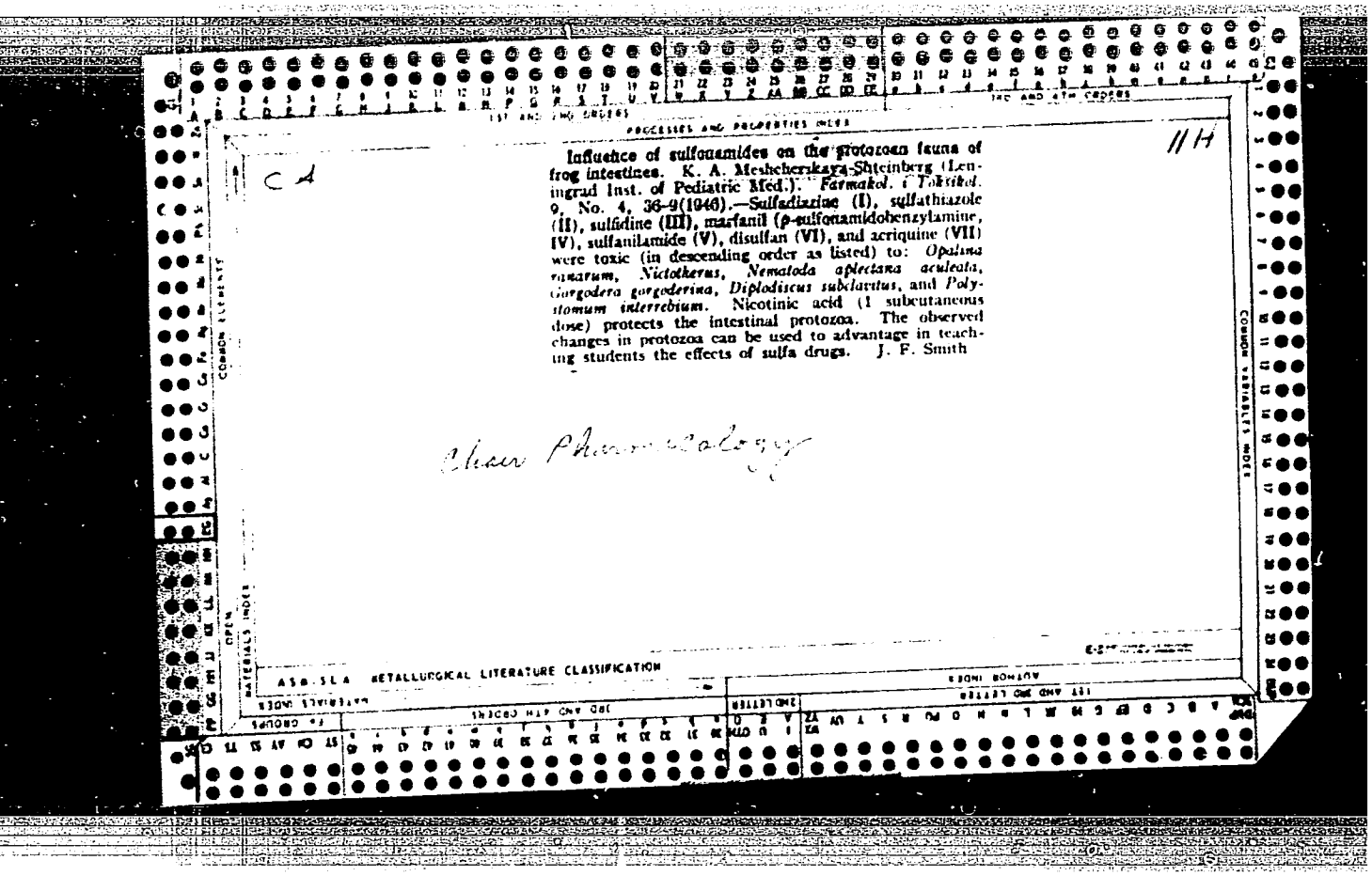
II I

The prevention of the toxic action of potassium ions by administration of camphor. *Ibid.* 489-90.—The injection of 40 γ/g. body wt. of *d*-camphor (II) into frogs and white mice 10 min. before the subcutaneous injection of 3 mg./g. body wt. of KCl prevents the heart stoppage regularly observed when no II was used. Aq. solns. of II were 8-9 times more effective than oil solns. Aq. solns. of *l*-camphor (III) prolonged heart activity slightly but did not prevent stoppage. Oil solns. of III in large doses prevented stoppage in some cases. It was also possible in some cases to prevent heart stoppage with combined doses of I and II which were ineffective when injected alone. Doses of II of 80 γ or over were highly toxic to mice 2–9 weeks old.

S. V. Karjala

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

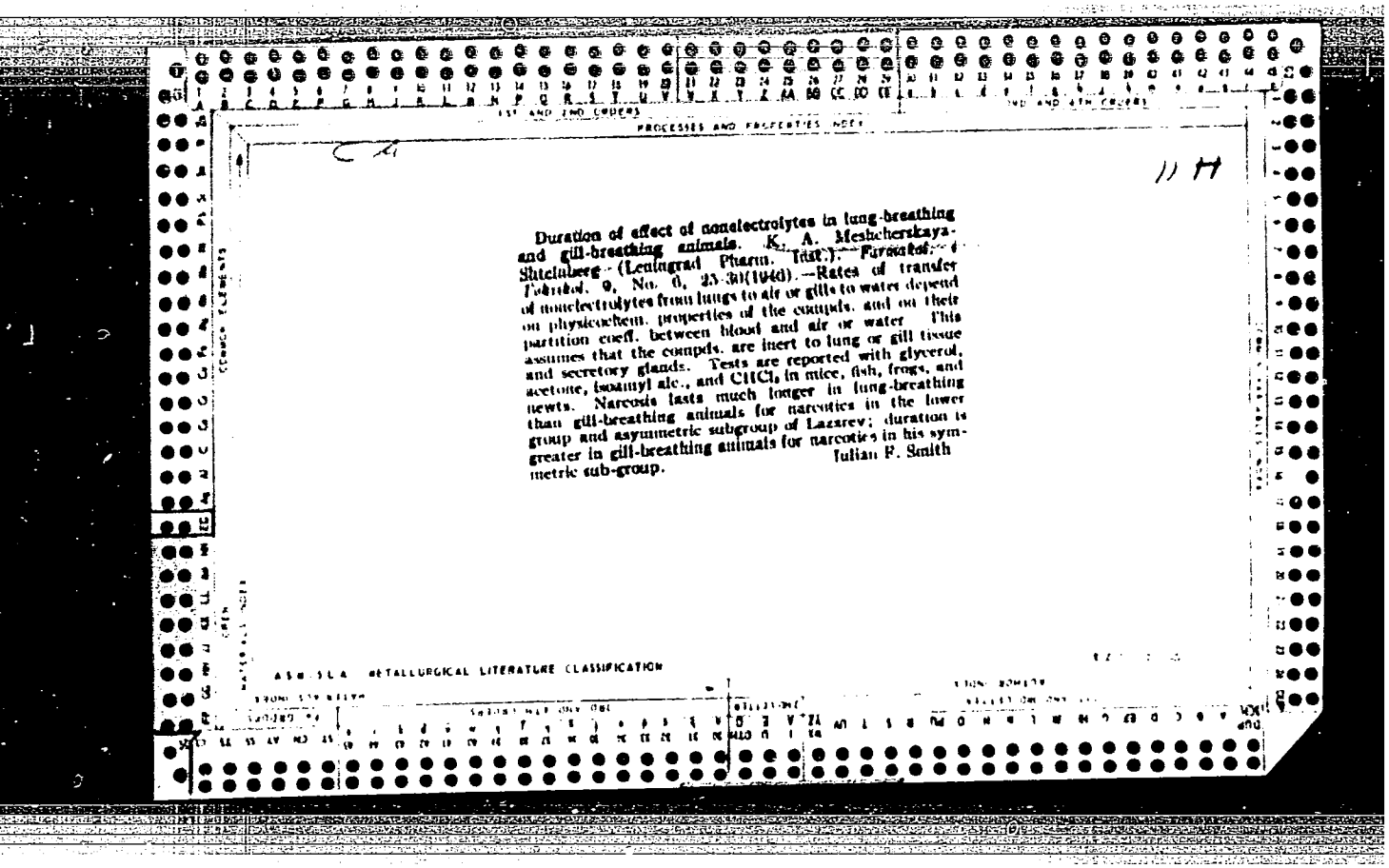


Influence of sulfonamides on the protozoan fauna of frog intestines. K. A. Mesheheriakava-Shteinberg (Leningrad Inst. of Pediatric Med.). *Farmakol. i Toksikol.* 9, No. 4, 36-9(1946).—Sulfadiazine (I), sulfathiazole (II), sulfidine (III), marfanil (p-sulfonamidobenzylamine, IV), sulfanilamide (V), disulfan (VI), and acriquine (VII) were toxic (in descending order as listed) to: *Opalina ranarum*, *Nictotherus*, *Nematoda aplectana aculeata*, *Gorgodera gorgoderina*, *Diplodiscus subclavatus*, and *Polystomum interrebium*. Nicotinic acid (1 subcutaneous dose) protects the intestinal protozoa. The observed changes in protozoa can be used to advantage in teaching students the effects of sulfa drugs. J. F. Smith

Chem Pharm Biology

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103



PROCESSES AND PROPERTIES INDEX

11 H

Duration of effect of nonelectrolytes in lung-breathing and gill-breathing animals. K. A. Meshcherskaya-Shtcherbeg (Leningrad Pharm. Inst.). Farmakol. i Toksikol. 9, No. 6, 25-30(1946).—Rates of transfer of nonelectrolytes from lungs to air or gills to water depend on physicochem. properties of the compds. and on their partition coeff. between blood and air or water. This assumes that the compds. are inert to lung or gill tissue and secretory glands. Tests are reported with glycerol, acetone, isoamyl alc., and $CHCl_3$ in mice, fish, frogs, and newts. Narcosis lasts much longer in lung-breathing than gill-breathing animals for narcotics in the lower group and asymmetric subgroup of Lazarev; duration is greater in gill-breathing animals for narcotics in his symmetric sub-group.

Julian F. Smith

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

MESHCHERSKAYA-SHTEYNBERG, E.A. i LAZAREV, N.V.

22037 Meshcherskaya-Shteynberg, E.A. i Lazarev, N.V. Novoye v terapii agranulotsitozov Novosti Meditsiny, vyp. 1-2, 1949, s. 11-21

SO: Letopis' Zhurnal'nykh Statey, No. 29, Moskva, 1949.

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

MESHCHERSKAYA, K. A.

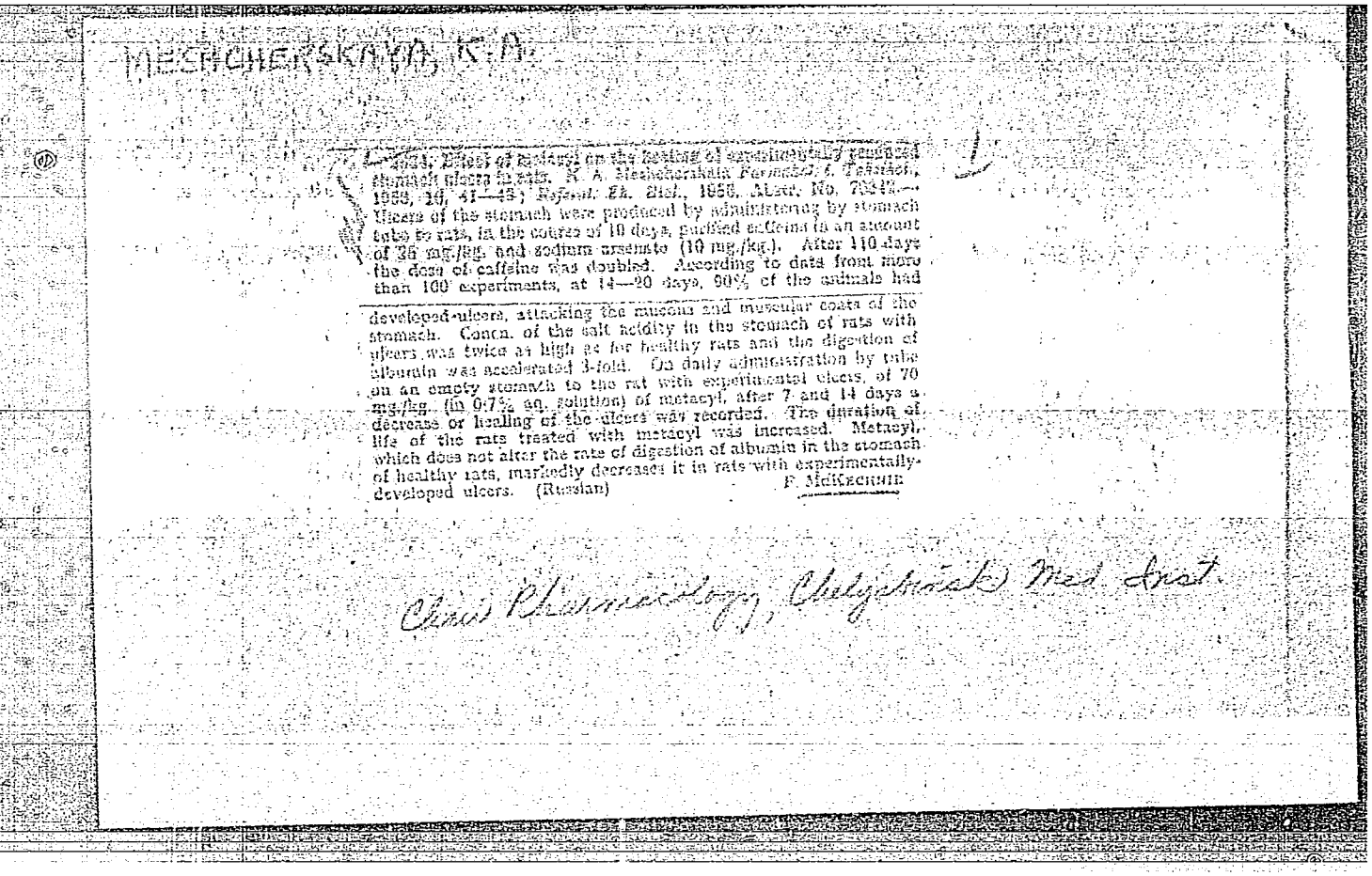
(4)

Chem Abs V48
1-25-54
Pharmacology
Univ of Pharmacology

The influence of procaine and its combinations with some chemical therapeutic preparations on the course and end of experimentally caused infarction of the spleen in rats. K. A. Meshcherskaya, N. Melent'eva, and G. Obogrelova (Med. Inst., Chelyabinsk). *Farmakol. i Toksikol.* 16, No. 4, 36–40(1953).—Experimentally caused infraction of the spleen of rats could be used to det. the intensity of the dissipating power of the drug on inflammations. The infraction is produced by ligating the central part of the splenic artery. The infarction is produced after 3–5 days. Norsulfazole sodium and procaine are introduced subcutaneously. The inflammation process is lessened. 4-Aminosalicylic acid is less effective than procaine + norsulfazole. 4-Aminosalicylic acid + procaine quickens the regeneration. The antiinflammatory effect of procaine is due to the direct action on the central nervous system. L. Goldenberg

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103



MESHCHERSKAYA, K. A.

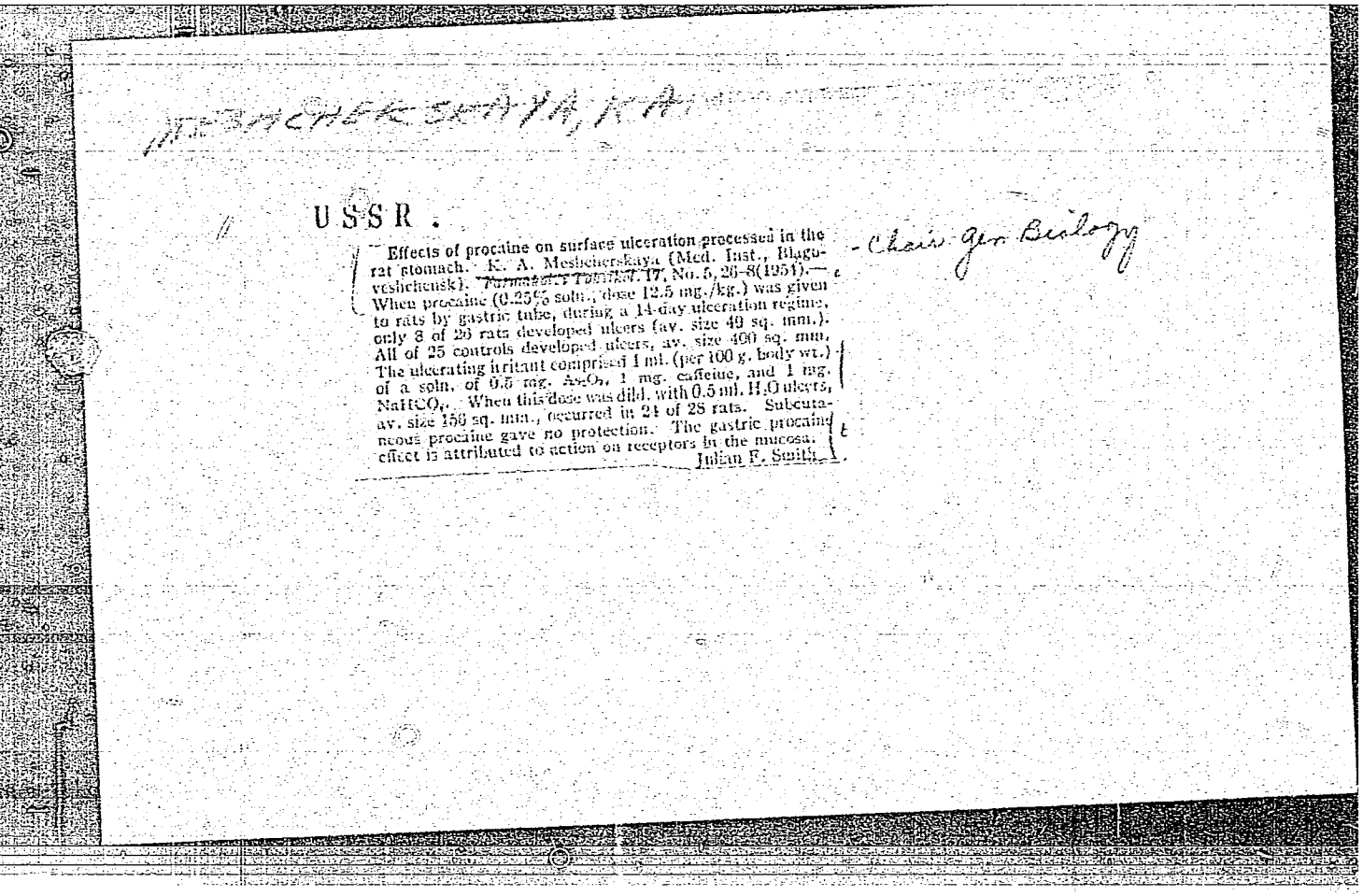
Effect of metacyl on the healing of experimentally induced stomach ulcers in rats. K. A. Meshcherskaia *Farmakol. i Toksikol.*, 1958, 21, 41—45; *Referat. Zh. Biol.*, 1958, Abstr. No. 73515.—Ulcers of the stomach were produced by administering by stomach tube to rats, in the course of 10 days, purified caffeine in an amount of 35 mg./kg. and sodium arsenate (10 mg./kg.). After 110 days the dose of caffeine was doubled. According to data from more than 100 experiments, at 14—20 days, 90% of the animals had developed ulcers, attacking the mucous and muscular coats of the stomach. Concn. of the salt acidity in the stomach of rats with ulcers was twice as high as for healthy rats and the digestion of albumin was accelerated 3-fold. On daily administration by tube on an empty stomach to the rat with experimental ulcers, of 70 mg./kg. (in 0·7% aq. solution) of metacyl, after 7 and 14 days a decrease or healing of the ulcers was recorded. The duration of life of the rats treated with metacyl was increased. Metacyl, which does not alter the rate of digestion of albumin in the stomach of healthy rats, markedly decreases it in rats with experimentally-developed ulcers. (Russian)

F. MedYekhin

Chair Pharmacology, Chelyabinsk Med Inst.

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103



USSR .

Effects of procaine on surface ulceration processed in the rat stomach. K. A. Meshcheryakova (Med. Inst., Blagoveshchensk). *Farmakol. i Toksikol.* 17, No. 5, 26–8(1954).— When procaine (0.25% soln., dose 12.5 mg./kg.) was given to rats by gastric tube, during a 14-day ulceration regime, only 8 of 26 rats developed ulcers (av. size 49 sq. mm.). All of 25 controls developed ulcers, av. size 400 sq. mm. The ulcerating irritant comprised 1 ml. (per 100 g. body wt.) of a soln. of 0.5 mg. As_2O_3, 1 mg. caffeine, and 1 mg. $NaHCO_3$. When this dose was dild. with 0.5 ml. H_2O ulcers, av. size 150 sq. mm., occurred in 24 of 28 rats. Subcutaneous procaine gave no protection. The gastric procaine effect is attributed to action on receptors in the mucosa.

Julian F. Smith

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

MESHCHERSKAYA, K. A.

E-4

USSR / General Biology. Individual Development. Regeneration.

Abs Jour: Ref Zhur-Biol., No 18, 1958, 81040.

Author : Meshcherskaya, K. A.
Inst : Not given.
Title : The Influence of Methylthiouracil on the Processes of Developing and Healing of Ulcerous Surfaces in the Stomachs of Rats.

Orig Pub: Tr. Blagoveshchen. gos. med. in-ta, 1956, 2, 94-98.

Abstract: To clarify the problem of the influence of hypothyreosis on regeneration, methylthiouracil (M) was injected into 3-4-week old rats (1 ml of 1% suspension to 100 g weight). Subsequently, an experimental ulcer was induced by three different methods: (1) The injection of 0.0005 of arsenous acid anhydride, 0.001 of pure caffein and sodium bicarbonate to 100 g of the animal's weight in the

Card 1/2

17

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

MESHCHERSKAYA, K. A.

V

COUNTRY : USSR
CATEGORY : Pharmacology and Toxicology. Analeptics

ABS. JOUR. : RZhBiol., No. 5 1959, No. 23062

AUTHOR : Meshcherskaya, K. A.
INST. : -
TITLE : Influence of the Extract of Ginseng Root upon the Processes of Appearance and Healing of Ulcerous Surfaces in Rats' Stomach

ORIG. PUB. : V sb.: Materialy k izuch. zhen'shenya i limonnika. Vyp. 3, L., 1958, 52-55

ABSTRACT : Gastric and intestinal ulcers were induced in rats by various means. Previous introduction of ginseng (during 3 days) decreases the extent of necroses and somewhat increases the area of ulcers which develop by reflex as a result of stimulation of the C.N.S. The introduction of aqueous extract of ginseng (1:10) by a sound, before feeding, in a dose of 0.1 ml per 10 g during 7 days accelerates the processes of healing of wounds, improves the course of the ulcerous pro-

Card: 1/2

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

MESHCHERSKAYA, K.A.; BORODINA, G.P.; KOROLEVA, N.P.; LITVAK, F.I.; OSTROVSKAYA, L.A.

Effect of β-sitosterol on the course of experimentally induced atherosclerosis in rats and rabbits. Farm.i tokс. 22 no.5:434-440 S-O '59. (MIRA 13:3)

1. Kafedra farmakologii, biokhimii, patanatomii i fakul'tetskoy terapii Blagoveshchenskogo meditsinskogo instituta.
(STEROLS pharmacol.)
(ARTERIOSCLEROSIS exper.)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

ABRAMOVA, Zh.I., kand. med. nauk; ANICHKOV, S.V., prof.; BELEN'KIY, M.L., prof.; VAL'DMAN, A.V., doktor med. nauk; VEDENEYEVA, Z.I., kand. med. nauk; VINOGRADOV, V.M., kand. med. nauk; GERSHANOVICH, M.L., kand. med. nauk; GINETSINSKIY, A.G., prof.; GORBOVITSKIY, S.Ye., prof.; GREBENKINA, M.A., dotsent; GREKH, I.F., dots.; DENISENKO, P.P., kand. med. nauk; D'YACHENKO, P.K., kand. med. nauk; ZHESTYANIKOV, V.D., kand. med. nauk; ZAUGOL'NIKOV, S.D., prof.; ZEYMAL', E.V., kand. med. nauk; ISKAREV, N.A., kand. med. nauk; KARASIK, V.M., prof.; KIVMAN, G.Ya., kand. med. nauk; KOZLOV, O.D., kand. med. nauk; KROTOV, A.I., doktor veter. nauk; KUDRIN, A.N., doktor med. nauk; LAZAREV, N.V., prof.; LAPIN, I.P., kand. med. nauk; MEL'NIKOVA, V.F., prof.; MESHCHERSKAYA, K.A., prof.; MIKHEL'SON, M.Ya., prof.; MOSHKOVSKIY, Sh.D., prof.; PADEYSKAYA, Ye.N., kand. med. nauk; PARIBOK, V.P., prof.; PERSHIN, G.N., prof.; PLANEL'YES, Kh.Kh., prof.; PONOMAREV, G.A., prof.; POSKALENKO, A.N., kand. med. nauk; MUKHIN, Ye.A., dots.; ROZOVSKAYA, Ye.S., dots.; RYBOLOVLEV, R.S., starshiy nauchnyy sotr.; SALYAMON, L.S., kand. med. nauk; SAFRAZBEKYAN, R.R., kand. biol. nauk; TIUNOV, L.A., kand. med. nauk; TOMILINA, T.N., dots.; FELISTOVICH, G.I., kand. med. nauk; FRUYENTOV, N.K., kand. med. nauk; KHAUNINA, R.A., kand. med. nauk; TSYGANOV, S.V., prof.[deceased]; CHERKES, A.I., prof.;

(Continued on next card)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

ABRAMOVA, Zh.I.---(continued) Card 2.
CHERNOV, V.A., doktor med. nauk; SHADURSKIY, K.S., prof.; YAKOVLEV, V.Ya., doktor khim. nauk; MASHKOVSKIY, M.D., red.; NIKOLAYEVA, M.M., red.; RULEVA, M.S., tekhn. red.; CHUMAYEVA, Z.V., tekhn. red.

[Manual on pharmacology] Rukovodstvo po farmakologii. Leningrad, Medgiz. Vol.2. 1961. 503 p. (MIRA 15:1)

1. Deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR (for Anichkov, Karasik, Cherkes). 2. Chlen-korrespondent Akademii meditsinskikh nauk SSSR (for Belen'kiy, Ginetsinskiy, Moshkovskiy, Planel'yes).

(PHARMACOLOGY)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

MESHCHERSKAYA, K.A.; KOROLEVA, N.P.; BORODINA, G.P.

Influence of lignoceryl alcohol on the course of experimental atherosclerosis in rats. Farm. i tok. 24 no.5:583-586 S-O '61. (MIRA 14:10)

1. Kafedry farmakologii, patologicheskoy anatomii i biologicheskoy khimii Blagoveshchenskogo meditsinskogo instituta.
(ARTERIOSCLEROSIS) (LIGNOCERYL ALCOHOL)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

MESHCHERSKAYA, K.A.; BORODINA, G.P.

Role of bile acids in the hypocholesterinemic action of β -sitosterol. Farm. i toks. 25 no.1:44-47 Ja-F '62. (MIRA 15:4)

1. Kafedra farmakologii (zav. - prof. K.A.Meshcherskaya) i biokhimii (zav. - dotsent A.Ye.Borodin) Blagoveshchenskogo gosudarstvennogo meditsinskogo instituta.
(SITOSTEROLS) (CHOLESTEROL) (BILE ACIDS)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

MESHCHERSKAYA, K.A.; BORODINA, G.P.

Sorptive properties of skeletal rat muscles in alloxan diabetes.
Trudy MOIP. Otd. biol. 9:27-29 '64. (MIRA 18:1)

1. Meditsinskiy institut, g. Blagoveshchensk.

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

SIKACHEV, V.A.; MESHCHERSKAYA, M.V.

Comparator manufactured by the Experimental Optical and Mechanical Factory of the Central Scientific Research Institute of Geodesy, Aerial Surveying and Cartography. Geod.i kart. no.1:32-36 Ja '63. (MIRA 16:2)

(Measuring instruments)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

MESHCHERSKAYA, Ye. N.

3(5) PHASE I BOOK EXPLOITATION SOV/2219

RSFSR. Glavnoye upravleniye geologii i okhrany nedr

Geologiya i neftegazonosnost' Vostochnoy Sibiri (Geology and Oil- and Gas-bearing Possibilities of Eastern Siberia) Moscow, Gostoptekhizdat, 1959. 486 p. 1,650 copies printed.

Additional Sponsoring Agency: Vostochno-Sibirskiy neftegeologicheskiy trest.

Ed.: V.G. Vasil'yev; Executive Ed.: Ye.G. Pershina; Tech. Ed.: I.G. Fedotova.

PURPOSE: The book is intended for geologists interested in the stratigraphy, lithology, tectonics, and the oil- and gas-bearing possibilities of the Eastern Siberian platform and Zabaykal'ye.

COVERAGE: This collection of articles contains materials on the stratigraphic classification and lithologic characteristics of sediments of the Cambrian system and of the so-called "ancient" beds developed along the northern slope of the Eastern Sayan Mountains and the western littoral of Lake Baykal. Extensive information on the petrography and paleontology of these deposits is presented. A number of articles deal with the tectonics of the southern part of the Siberian platform and its oil- and gas-bearing possibilities of the Baykal-type depressions. There are 40 tables, 74 figures, and 4 charts. There are 205 Soviet references.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress

MM/ad
8-20-59

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

S/009/60/000/008/005/005
B027/B076

AUTHORS: Per'kova, Ya. N., Meshcherskaya, Ye. N.

TITLE: Reservoir rocks in Lower Cambrian deposits of the Irkutsk Amphitheatre

PERIODICAL: Geologiya nefti i gaza, no. 8, 1960, 28-33

TEXT: In the general problem of oil and gas prospecting in Eastern Siberia the search for reservoir rocks occupies a special place. In the territory of the Irkutsk Amphitheatre research work is being carried out by the geological Trust Vostsibneftegeologiya mainly in the Lower Cambrian deposits. Drilling has already shown here that oil and gas were present, and that, moreover, this cross section is the best sealed off. The lower part of the layers consists of carbonate sulfate deposits and the upper part of terrigenous rocks. Two types of reservoir rocks were determined, i.e., granular and cracked. Among the granular reservoir rocks, the sandstones in the region of Moty which were divided into four layers are of interest. The first zone of these layers extends along the Sayan Range

Card 1/2

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

Reservoir rocks in Lower Cambrian deposits ...

from southeast to northwest and shows the highest porosity and permeability. The second zone frames the first one and is less favorable with respect to the properties of the reservoir rocks. The cracked reservoir rocks were studied according to the method of Ye. S. Romm and L. P. Gmid, coworkers of VNIGRI, which consists in determining porosity and permeability in flat parallel sections over large areas. The study of the carbonate cross section of the Lower Cambrian was carried out in two horizons, i.e., the Osa horizon and the horizon between Bel'sk and Usol'ye. These two horizons, especially that of Osa, show a marked crack formation probably extending over the whole investigated part of the Irkutsk Amphitheatre. There are 5 figures and 2 Soviet-bloc references.

ASSOCIATION: Trest Vostsibneftegeologiya

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103[illegible]

MESHCHERSKAYA, Ye.N.

Reservoir properties of the rocks of the southern part of the East Siberian [illegible] Geol. nefti i gaza [illegible] (MIRA [illegible])

1. Trest "[illegible]".

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103[illegible]

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

MESHCHERSKIY, A.

MESHCHERSKIY, A.; TAGAROV, Z.

New historicogeographical data on the Amur. Izv.Vses.geog.ob-va 89 no.4:359-362 Jl-Ag '57. (MIRA 10:10)
(Amur River)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

ENTIN, I.I., kand.tekhn.nauk; MESHCHERSKIY, I.N.

From the experience of leveling in regions of high mountains. Geod. i kart. no.6:7-10 Je '58. (MIRA 11:7)
(Leveling)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

MESHCHERSKIY, I.N.

Invar rods with a single graduation scale. Geod.i kart. no.5:60 My '61. (MIRA 14:6)

(Surveying—Instruments)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

MESHCHERSKIY, I.N.; ENTIN, I.I.

Study of the NB-4 level. Geod.i kart. no.4:32-34 Ap '62.
(MIRA 15:12)
(Level (Surveying instrument)--Testing)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

MESHCHERSKIY, I.N.; ENTIN, I.I.

Leveling errors caused by the use of invar rods.
Trudy TSNIIGAIK no.147:65-91 '62. (MIRA 15:9)
(Leveling)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

MESHCHERSKIY, I.N.

Some sources of errors in the operation of an Ni-2 level with a compensator. Trudy TSNIIGAIK no.147:93-98 '62.
(MIRA 15:9)

(Leveling)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

ENTIN, I.I., kand.tekhn.nauk; MESHCHERSKIY, I.N.

Determination of vertical displacements of the earth's crust in the Surkhob Valley. Trudy TSNIIGAIK no.154:91-106 '63.
(MIRA 16:9)

(Surkhob Valley—Earth movements) (Leveling)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

MESHCHERSKIY, I.N.

Ni-b3 level with a self-adjusting line of sight. Geod. i kart. no.6: 6-11 Je '63. (MIRA 16:9)
(Hungary—Level (Surveying instrument))

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

MESHCHERSKIY, I.N.

Making allowance for systematic errors of self-reducing levels. Geod. i kart. no.10:77 O '63. (MIRA 16:12)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

ACCESSION NR: AP4038949 S/0006/64/000/005/0018/0023

AUTHOR: Meshcherskiy, I. N.

TITLE: Investigations of the level KONI 007

SOURCE: Geodeziya i kartografiya, no. 5, 1964, 18-23

TOPIC TAGS: surveying instrument, surveying level, earth measurement, level KONI 007, level NB 4, level Ni 004, level NA 1, level NG

ABSTRACT: The author described quantitatively the results of field and laboratory tests evaluating the surveying level KONI 007. Data were presented on the optical qualities, weight, and size of the instrument; measurements of longitudinal and transverse precision were taken and presented in tables. Further tests were performed to quantify the instrument's behavior under varying distance and ambient temperature conditions and also for various manners of instrument setup. Tabulated results include mean quadratic error calculations. Field tests involved observations of instrument performance in foul and windy weather and under conditions of vibration. The author indicates general satisfaction with the instrument's characteristics. The levels NB-4, Ni-004, NA-1, and NG were used in making the

Card 1/2

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

ACCESSION NR: AP4038949

tests. Orig. art. has: 2 photographs, 8 tables, and 10 equations.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00

SUB CODE: ES NO REF SOV: 001 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

L 44243-66

ACC NR: AT6011151 SOURCE CODE: UR/3197/65/000/002/0261/0266

AUTHOR: Meshcherskiy, I. N.

ORG: Central Scientific Research Institute of Geodesy, Aerial Surveying and Cartography (Tsentral'nyy nauchno-issledovatel'skiy institut geodezii, aeros"yemki i kartografii)

TITLE: Repeated leveling at the TsNIIGAiK polygon

SOURCE: AN EstSSR. Institut fiziki i astronomii. Sovremennyye dvizheniya zemnoy kory. Recent crustal movements, no. 2, 1965, 261-266

TOPIC TAGS: geodetic leveling, geodetic polygon, ~~repeated leveling~~, ~~reciprocal leveling~~, ~~leveling~~ surveying instrument

ABSTRACT: Results are presented for the first-order repeated leveling (1958, 1960, and 1963) of the TsNIIGAiK polygon located just north of Moscow. The accuracy of the leveling was evaluated by three different methods, and conclusions have been drawn concerning the changes in relative elevation between adjacent bench marks. The total mean square errors (m_1, m_2, m_3) per km for the first-order reciprocal leveling, along lines 9—10 km in length were $m_1 = \pm 0.53$ mm/km (deviation of individual measurements of relative elevations by sectors from the mean

Card 1/2

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

L 11243-66
ACC NR: AT6011151

values from all repeated leveling), m_2 = ±0.50 mm/km (closing errors of closed loops), and m_3 = ±0.40 mm/km (by the differences $d = h_{for} - h_{back}$). At the turning stations and wherever the soil conditions are unfavorable, better results are obtained if smaller polygons are established with 5 or 6 bench marks. These should then be leveled several times in the interval between successive repeated first-order leveling of the whole line. This method will provide an opportunity for using only the most reliable bench marks for the study of contemporary crustal movements. Inherent large errors in third-order leveling make it unsuitable for studying contemporary movements or determining benchmark stability. Orig. art. has: 3 formulas and 3 tables. [SI]

SUB CODE: 08/ SUBM DATE: none/

Card 2/2

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

AL 10744-66 EWT(1)

ACCESSION NR: AP5023484

UR/0006/65/000/009/0017/0021
UDK.528.389

AUTHOR: Entin, I.I.; Meshcherskiy, I.N.

TITLE: Repeated levellings in the river Surkhob valley

SOURCE: Geodeziya i kartografiya, no. 9, 1965, 17-21

TOPIC TAGS: geodetic survey, geodetic instrument, geodesy

ABSTRACT: Repeated high precision levelling surveys were made by the TsNIIGAiK in the active seismic region of the shores of the river Surkhob, between the mountain ranges of Peter the Great (north), and Gissarsky (south of the river) in the high mountains region of the Tadzhik SSR, in cooperation with the Institute of Earth Sciences, A.N., USSR. The aim was to develop methodology for the precise evaluation of relative vertical movements of the earth's surface. Six repeated levellings were made during the years 1957-1961 and in 1964, based on two benchmark networks on both shores of the Surkhob river. Evaluation of the results showed that the relative vertical velocities of the surface were constant on all survey lines except one, a situation permitting a good estimate of levelling precision. For a numerical

Card 1/2

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033