Results of photographic observations of Mars at the Kharkov Astronomical Observatory during 1954. (Cont.)

atmosphere is more transparent above the "seas" than above the "continents".

The polar cap is reddish compared with a white screen. This confirms previous results obtained at the Kh.A.O. The fact that the smoothness factor for the southern polar cap has a maximum value in the blue region of the spectrum agrees well with N.P. Barabashov's hypothesis that the polar cap of Mars consists of a thin layer of hoar-frost or ice, above which float cloud-like formations.

There are 9 tables, 1 figure and 9 references, 8 of which are Slavic.

ASSOCIATION: Kharkov Astronomical Observatory (Kharkovskaya Astronomicheskaya Observatoriya)

SUBMITTED: November 9, 1956.

AVAILABLE: Library of Congress

Card 3/3

KOVAL', I.K.

Integral brightness of the solar corona of June 30, 1954. Uch.-zap.KHGU 91:241-248 '57. (MIRA 15:3)
(Sun--Corona)

Kova[illegible], I.K.

3(1) p.3 PHASE I BOOK EXPLOITATION SOV/1391

Akademiya nauk SSSR. Astronomicheskiy sovet.

Polnyye solnechnyye zatmeniya 25 fevralya 1952 i 30 iyunya 1954 g. Trudy ekspeditsiy po nablyudeniyu zatmeniy (Total Eclipse of the Sun, February 25, 1952 and June 30, 1954. Transactions of the Expedition to Observe Solar Eclipses) Moscow, Izd-vo AN SSSR, 1958. 357 p. 1,200 copies printed.

Editorial Board: Pariyskiy, N.N., Candidate of Physical and Mathematical Sciences (Resp. Ed.); Kononovich, E.V. (Secretary); Kuz'min, A.D., Candidate of Technical Sciences; Mogilevskiy, E.I., Candidate of Physical and Mathematical Sciences (Deputy Resp. Ed.); Mustel', E.R., Corresponding Member, USSR Academy of Sciences; Ed. of Publishing House: Yegorova, N.B.; Tech. Ed.: Kashina, P.S.

PURPOSE: This book is intended for amateur and professional astronomers interested in eclipse phenomena.

COVERAGE: The present compendium is the fourth in a series published by the Academy of Sciences of the USSR on solar eclipses observed in the Soviet Union. The present collection reports on the results

Card 1/8

of observations obtained by scientific teams of 20 research institutions during the total solar eclipses of 1952 and 1954. The reports include studies of the sun's chromosphere, its total coronal brightness, monochromatic glow, structure, polarization photometry, and colorimetry. The results of studies on coronal radio emissions for various wavelengths and on the effect of the sun on the earth's atmosphere, based on the February 1952 and June 1954 eclipses, are presented. The individual articles are accompanied by tables, diagrams and bibliographic references.

TABLE OF CONTENTS:

KOVAL', I. K. and BARABASHOV, N. P.

"Preliminary Results of the Investigation of the Polarization of the Moon by Means of Light Filters."

Report presented at the Plenary Meeting of the Committee of Planetary Physics, Council of Astronomers, Khar'kov, 20-22 May 1958.
(Vest. Ak Nauk SSSR, 1958, No. 8, p. 113-114)

3(1)

AUTHORS: Barabashov,N.P., and Koval',I.K. SOV/33-35-2-11/21

TITLE: The Structure of the Southern Polar Cap of Mars in 1956 (K voprosu o stroyenii yuzhnoy polyarnoy shapki Marsa v 1956 g)

PERIODICAL: Astronomicheskiy zhurnal,1958, Vol 35,Nr 2, pp 261-264 (USSR)

ABSTRACT: Using the data of observations of Mars in 1956, made in visual light at various observatories of the world and also observations in the ultraviolet made at the Khar'kov Astronomical Observatory the author considers one of the possible interpretations of the structure of caps of Mars. The simultaneous disappearance of the southern polar cap around September 1, 1956 in red and ultraviolet light (fig. 3,4) can be explained by the fact that at that time the caps lay wholly on the solid surface of the planet in accordance to Wright, [Ref 6]. The contrast in the brightness between the cap and the rest of the planet's surface observed in various parts of the spectrum is explained by the absorbing properties of atmosphere of Mars. An

Card 1/2

approximate estimation of the optical density of the planet's atmosphere in the ultraviolet ($\tau \approx 0.3$) has been made. The author mentions especially observations of G.A. Tikhov [Ref 5] and Ye.L.Krinov [Ref 7]. There are 6 figures, 1 table, and 9 references, 6 of which are Soviet, and 3 American.

ASSOCIATION: Khar'kovskaya astronomicheskaya observatoriya (Khar'kov Astronomical Observatory)

SUBMITTED: August 21, 1957

3(1)
AUTHOR: Koval', I.K. SOV/33-35-5-14/20

TITLE: The Absolute Photometry of Venus in the Ultraviolet and Infrared (Absolyutnaya fotometriya Venery v ul'trafioletovykh i infrakrasnykh luchakh)

PERIODICAL: Astronomicheskiy zhurnal, 1958, Vol 35, Nr 5, pp 792-796 (USSR)

ABSTRACT: From August 25 to 26, 1956, the author obtained ca. 60 photos of Venus in the neighborhood of the quadrature. The 270 mm reflector of the Khar'kov Astronomical Observatory and ultraviolet as well as infrared light filters were used. The author describes his methods in detail and collects the results in three tables. For the evaluation a method of N.N.Sytenskaya [Ref 1] at the Observatory of the Leningrad State University was used. The author compares the results with those of I.A.Parshin [Ref 2], N.P.Barabashov [Ref 3] and with the model of V.V.Sharonov [Ref 5]. He thanks the students of the Khar'kov University M.Levertov and O.Bugayenko for their aid during the observations. There are 5 tables, 1 figure, and 5 Soviet references.

ASSOCIATION: Khar'kovskaya astronomicheskaya observatoriya (Khar'kov Astronomical Observatory)

SUBMITTED: August 21, 1957

Card 1/1

KOVAL, I.K.

PHASE I BOOK EXPLOITATION SOV/4302

Akademiya nauk SSSR. Komissiya po fizike planet

Izvestiya, vyp. 1 (News of the Commission on the Physics of Planets, No. 1)
Khar'kov, 1959. 103 p. 1,000 copies printed.

Editorial Board: N.P. Barabashov, Academician of the Academy of Sciences Ukrainskaya SSR (Resp. Ed.); V.I. Yezerskiy, Candidate of Physics and Mathematics (Secretary); A.V. Markov, Professor; Yu. N. Lipskiy, Candidate of Physics and Mathematics; and A.T. Chekirda, Candidate of Physics and Mathematics; Ed.: D.A. Vaynberg; Tech. Ed.: A.S. Trofimenko.

PURPOSE: This publication is intended for astrophysicists and astronomers.

COVERAGE: This collection of articles constitutes the first issue of a new journal on problems in planetary physics. The first six articles discuss the surface features, polarimetry, and spectrophotometry of the Moon. The remaining articles deal with the physics of Mars, Jupiter, and the asteroids. No personalities are mentioned. References accompany individual articles.

Card 1/3

TABLE OF CONTENTS:

KOVAL I.K.
p 2

PHASE I BOOK EXPLOITATION SOV/3923

Akademiya nauk SSSR. Astronomicheskiy sovet. Komissiya po fizike planet

Rezul'taty nablyudeniy Marsa vo vremya velikogo protivostoyaniya 1956 g. v SSSR. (Results of the Observation of Mars in the USSR During the Great Opposition of 1956) Moscow, Izd-vo AN SSSR, 1959. 193 p. 1,300 copies printed.

Ed.: N.P. Barabashov, Academician, Academy of Sciences UkrSSR; Ed. of Publishing House: V.A. Bronshten; Tech. Ed.: V.V. Bruzgul'.

PURPOSE: The book is intended for astronomers and astrophysicists, particularly those interested in the study of the planet Mars.

COVERAGE: This is a collection of 8 articles on the results of observations of Mars during the opposition of 1956. The observations were organized by the Committee for the Investigation of Physical Conditions on the Moon and Planets of the Astronomic Council of the Academy of Sciences USSR, and were conducted mainly at the southern observatories of the Soviet Union during the period from August to December, 1956. The preliminary results of those observations were

Card 1/3

Results of the Observation of Mars (Cont.) SOV/3923

summarized at a conference of all participants held in Moscow, December 1-4, 1956 . The present publication covers the investigations of Mars' surface and atmosphere by photometry as well as by visual observations, problems of the flora of the planet and the photometric investigation of its luminous Argyre zone. References accompany most of the articles.

TABLE OF CONTENTS:

Card 2/3

KOVAL', I.K.

PHASE I BOOK EXPLOITATION SOV/4093

Barabashov, Nikolay Pavlovich, and Ivan Kirillovich Koval'

Fotograficheskaya fotometriya Marsa so svetofil'trami vo vremya velikogo protivostoyaniya v 1956 g. (Photographic Photometry of Mars Using Light Filters During the Great Opposition of 1956) Khar'kov, Izd-vo Khar'kovskogo univ-ta, 1959. 529 p. 1,000 copies printed.

Resp. Ed.: A.T. Chekirda; Eds.: A.N. Tret'yakova, and D.A. Vaynberg; Tech. Ed.: A.S. Trofimenko.

PURPOSE: This book is intended for scientists interested in physical conditions on planets, and may be used by students and aspirants concerned with problems of planetary physics.

COVERAGE: The book discusses the methodology and results of observations of Mars during the great opposition of that planet in 1956, and contains tabulated data compiled at the Khar'kov Astronomical Observatory on the absolute photometry of Mars. The book also contains some results of visual observations of the Martian surface. The major part of the text is a tabulation (Table 4) of spectral values of the brightness factor ρ for different points on the continent, bright areas,

Card 1/4

and polar cap of Mars: The main series of observations were not made simultaneously, but lasted from 30 to 40 minutes each, and hence, for each individual light filter, the length of the central meridian of the planet, and the values i (incident angle of light ray), ε (angle of reflection), and φ and λ (width and length of the planetocentric coordinates of the point source of light, respectively) are given for the period from June 15/16 to October 21/22. The value of the phase angle α is also shown for each date and each filter. The supplement contains graphs which plot the distribution of brightness along the equator (in a band - 10°, -30° in width) and over the central meridian of the planet. The abscissas give values of ε, and the ordinates, values of $\rho \cdot 10^2$ (for simplicity). There are 9 figures, 14 tables, and 15 references: 13 Soviet and 2 English. No personalities are mentioned.

TABLE OF CONTENTS:

Card 2/4

BARABASHOV, N.P., prof.akad.; KOVAL', I.K.

Photographic polarimetry of the moon with light filters. Izv. Kom.po fiz.plan. no.1:55-58 '59. (MIRA 13:7)

1. AN USSR (for Barabashov).
(Polariscope) (Moon--Observations)

KOVAL', I.K.

Degree of the evenness of continents and seas on Mars. Izv. Kom.po fiz.plan. no.1:85-92 '59. (MIRA 13:7)
(Mars(Planet))

BARABASHOV, N.P. [Barabashov, M.P.], akademik; KOVAL', I.K.

Distribution of brightness in Mars' seas. Dop.AN URSR no.2: 153-155 '59. (MIRA 12:5)

1. AN USSR (for Barabash). 2. Khar'kovskaya astronomicheskaya observatoriya.
(Mars (Planet))

BARABASHOV, M.P., akademik; KOVAL', I.K., kand.fiz.-mat.nauk

Main results of observations of Mars during 1956 at the Kharkov Astronomical Observatory. Visnyk AN URSR 30 no.1:15-23 Ja '59. (MIRA 12:4)

1. AN USSR (for Barabashov)
(Mars (Planet))

30273

S/035/61/000/010/027/034
A001/A101

3,1550 (1041, 1057)

AUTHORS: Barabashov, N.P., Koval', I.K., Chekirda, I.T.

TITLE: Some results of photometry of cloudy formations on Mars

PERIODICAL: Referativnyy zhurnal. Astronomiya i Geodeziya, no. 10, 1961, 66, abstract 10A457 ("Izv. Komis. po fiz. planet", 1960, no. 2, 36-40)

TEXT: Blue clouds observed mainly in the equatorial zone of the planet are described on the basis of photographs taken in 1958 by means of a 10" reflector of the Khar'kov Observatory with the equivalent focus equal to 15.3 m in ultraviolet (λ3600) and blue (λ4200) portions of spectrum. The existence of a photometric scale makes it possible to obtain the curves of brightness distribution along the equator of intensity, when the clouds are present and at their absence. The analysis of materials has shown that the presence of clouds on the disk and terminator does not depend on the albedo of the underlying solid surface of Mars. The value of cloud-background contrasts and the albedo of the clouds on the terminator are higher than on the disk. On an average, the bright-

Card 1/2

30273
S/035/61/000/010/027/034
A001/A101

Some results of photometry ...

ness of clouds exceeds the background brightness by 14%. On assumption that the clouds studied are analogous, in their nature, to cirrus clouds of the Earth's atmosphere, their thickness was estimated to be 3 - 6 m.

I. Lebedeva

[Abstracter's note: Complete translation]

Card 2/2

S/033/60/037/02/009/013
E032/E914

AUTHORS: Barabashov, N. P., Koval', I. K.

TITLE: Some Results of Studies of Contrasts on Mars

PERIODICAL: Astronomicheskiy zhurnal, 1960, Vol 37, Nr 2, pp 301-305 (USSR)

ABSTRACT: It is well-known that the continent-sea contrast K for Mars has a maximum value in red and a minimum in blue. According to measurements carried out by the present authors in 1956, $K = 0.286$ for $\lambda_{max} = 647$ mμ, and $K = 0.07$ for $\lambda_{max} = 420$ mμ. However, occasionally, the contrast in blue light reaches 80% of the contrast in red light. Usually, this is explained by increased transparency of the blue atmosphere on Mars. If one accepts the explanation that the true contrast is the same for all wavelengths and the apparent contrast depends on the state of the Martian atmosphere, then one can try and estimate the optical thickness of the Martian atmosphere in blue light from the corresponding contrast. For this purpose it is assumed

Card 1/3

S/033/60/037/02/009/013
E032/E914

Some Results of Studies of Contrasts on Mars

that K_λ = const and the red contrast is taken to be approximately equal to the true contrast, since the optical thickness of the atmosphere in red light may be taken to be approximately zero. The present paper is concerned with a critical examination of the possibility of an explanation of the variation in K_{blue} by variations in the optical thickness. Fig 1 gives the values of the contrast for red, green and blue rays (curves 1, 2 and 3 respectively) for June, July, August and September, 1956. These data refer to the central regions of the planet. Fig 2 gives the corresponding plot for the ratio K_{blue}/K_{red} for the same observational period. Another characteristic considered is $B = \rho_1(1 - K_{red}/K_{blue})$ where ρ_1 is the albedo of the

V/C

Card 2/3

S/751/61/000/008/001/005

AUTHORS: Barabashov N. P., Koval', I. K., Chekirda, A. T.

TITLE: Photometric Investigations of Mars in 1958.

SOURCE: Akademiya nauk SSSR. Komissiya po fizike planet. Izvestiya. no. 3. Kharkov, 1961. 3 - 15.

TEXT: Data are presented on the distribution of brightness along the intensity equator and central meridian of Mars, obtained on the basis of photographic observations of the planet using optical filters. The emulsions and filters employed are listed, and the exposures stated. No tie-in was made with the sun, since the experiment was not aimed at obtaining a detailed list of absolute brightnesses. All negatives were calibrated with a tubular photometer and measured with a MF-2 microphotometer. Data on the contrast between the bright and dark regions, and on the variation of the brightness of the northern and southern polar regions of Mars, are tabulated. Except for one longitude region, satisfactory correlation is observed between the "red" and "blue" curves, and the lack of correlation in the particular region is attributed to the specific distribution of the energy in the spectrum of the corresponding seas

Card 1/2

of Mars, with the blue atmospheric haze playing a secondary role. There are 5 tables.

ASSOCIATION: Astronomicheskaya observatoriya Khar'kovskogo universiteta
(Astronomical Observatory of the Kharkov University)

S/751/61/000/008/005/005

AUTHOR: Koval', I. K.

TITLE: Results of an investigation of contrasts on Mars

SOURCE: Akademiya nauk SSSR. Komissiya po fizike planet. Izvestiya. no.3. Kharkov, 1961. 76 - 85

TEXT: A more detailed interpretation is attempted of results previously obtained by the author (in conjunction with N. P. Barabashov (Astron. zhur. v.37, no.2, 1960) and based on photographic observations of Mars made in June-August 1956, that the contrasts between continents and oceans on Mars exhibit fluctuations from day to day when viewed in all parts of the spectrum except the ultraviolet. These fluctuations cannot be ascribed to variations in the transparency of the Mars atmosphere, for it would lead to an unreasonably large variation in the transparency coefficient in blue light. Approximate calculations are presented of the true values of the contrasts in green and blue light, and it is concluded that the contrasts do not remain constant over the spectrum, their variations being due to differences in the optical properties of the oceans of

Card 1/2

Maps themselves. Calculations are presented in favor of this assumption. The incomplete nature of the data is pointed out. There are 7 figures and 6 tables.

ASSOCIATION: Glavnaya astronomicheskaya observatoriya AN SSSR (Main Astronomical Observatory, Academy of Sciences SSSR)

33423

S/033/62/039/001/007/013
E032/E514

3.1550 (1041, 1057)

AUTHORS: Koval', I.K. and Morozhenko, A.V.

TITLE: On some properties of the yellow haze observed on Mars in 1956

PERIODICAL: Astronomicheskiy zhurnal, v.39, no.1, 1962, 65-72

TEXT: It is stated that all the observers of Mars noted a relatively sudden decrease in contrast between the bright and dark regions on the surface of the planet in the middle of September, 1956. Most observers, including the present authors, are said to ascribe this phenomenon to the appearance of a fine dust cloud in the Martian atmosphere. The aim of the present paper was to determine the optical thickness of this cloud in red and infrared light. The analysis is based on the experimental results reported by N. P. Barabashov and I. K. Koval' (Ref.5: "Photographic photometry of Mars using light filters", Izd-vo KhGU, Khar'kov, 1960). A detailed analysis of these data, including corrections for the seasonal variations in the surface contrasts, leads the present authors to the conclusion that the dust cloud had mainly scattering properties and that its optical

Card 1/3

thickness increased with increasing wavelength. It is estimated that the optical thickness was as follows:

Table 5

λ, mμ	840	750	647	530	430	360
τ_λ	0.34	0.26	0.19	(0.12)	(0.08)	(0.01)

Next, using the results reported by V. V. Shuleykin (Ref.11: Physics of the sea, Izd-vo AN SSSR, M., 1953, p.589), the authors attempt to deduce the radius of the particles of which the cloud was made up. It is estimated that this radius was 1.45 μ. Finally, a calculation is made of the sedimentation rate of such particles. It is assumed in this calculation that the particles do not collide with each other and that convective motion in the atmosphere may be neglected. Taking the mean free path of gas molecules in the Martian atmosphere to be 10^{-7} cm, and assuming

KOVAL', I.K.

Distribution of Brightness in the Edge Zone of Mare

Report to be submitted for the 4th International Space Science Symposium (COSPAR) Warsaw, 2-12 June 63

KOVAL', I.K.; MORGZHENKO, A.V.

Degree of smoothness of the Martian deserts. Izv. Kom. po fiz. plan. no.4:38-39 Ag '63. (MIRA 18:5)

1. Glavnaya astronomicheskaya observatoriya AN UkrSSR.

ACCESSION NR: AT3007874 S/2617/63/005/001/0047/0067

AUTHOR: Didy*chenko, Ya. I.; Koval', I. K.; Morzhenko, A. V.

TITLE: Results of spectrophotometric observations of Mars in 1960-1961

SOURCE: AN UkrRSR. Holovna astronomichna observatoriya. Izvestiya, v. 5, no. 1, 1963, 47-67

TOPIC TAGS: spectrophotometric observation, intensity distribution, disc radius brightness, polar cap

ABSTRACT: In view of the almost total lack of spectrophotometric observations of Mars, the three authors undertook to obtain as many photometrically standardized spectrograms of it as possible with different orientations of the spectrograph aperture, to study: 1) the distribution of intensity in the spectrum of the continents and seas at different distances from the center, the polar caps and the Right clouds; 2) the distribution of brightness along the equator of intensity, the equator of the planet and the central meridian in monochromatic rays, including a study of the spectral course of the continent-sea contrast, establishment of the boundary of its disappearance, and also possible shifts of this boundary

Card 1/3

ACCESSION NR: AT3007874

depending upon the state of the atmosphere, characterized by possible changes in the distribution of energy in the spectrum of the continents. Observations were made in the Cassegrain focus of the 70 cm reflector telescope of the State Astronomical Observatory of the Ukranian SSR Academy of Sciences from 1 October, 1960 to 6 February, 1961, with spectrograph ASP-5, aperture 0.05 mm, 70 spectrograms being obtained on "Kodak OaF", but only 23 selected as best. The authors conclude: 1) The reflecting power of Mars (center, edges, polar caps, Right clouds) according to the spectrum varies smoothly from 0.330 (lambda = 6550 A) to 0.053 (lambda = 4030 A), so that no dispersion waves were discovered during the 1960-1961 opposition; 2) the distribution of brightness along the radius of the disc (along the equator of intensity) at lambda = 6550 A near opposition is well represented by rho sub i = rho sub o cos i; but with growth of the phase angle the curve rises above the cosinusoid branch; 3) the curvature of the brightness curve along the equator of intensity diminishes smoothly from the red to the violet end of the spectrum; 4) the brightness curves along the equator of intensity and the central meridian coincide in the red rays, leading to the conclusion that both polar caps were atmospheric formations in the period of observations; 5) the spectral course of the continent-sea contrast could not be

Card 2/3

ACCESSION NR: AT3007874

studied because areas with low contrast were located near the center of the disc when the atmospheric conditions were favorable (on the dates of the observations). Photoelectric observations led to a mean contrast value of 0.33 with lambda = 6200 A. Original has 11 graphs and 6 tables (forming 2/3 of the article).

ASSOCIATION: none

SUBMITTED: 00	DATE ACQ: 28Jun63	ENCL: 00
SUB CODE: AS	NO REF SOV: 004	OTHER: 000

Card 3/3

VOLOTKOVSKIY, S.A., doktor tekh.nauk; FURSOV, V.D., inzh.; KOVAL', I.K. inzh.; RUD', V.I., inzh.

Operating characteristics of electric charging devices with semiconductor rectifiers for use in mines. Vest. elektroprom. 34 no.8: 62-64 Ag '63. (MIRA 16:9)
(Electric current rectifiers) (Electricity in mining)

KOVAL', I.K., otv. red.; FEDOROV, Ye.P., red.; GORYNYA, A.A., red.; KOLCHINSKIY, I.G., red.; LUKATSKAYA, F.I., red.; BEREZINETS, L.P., red.

[Physics of the moon and planets] Fizika Luny i planet. Kiev, Naukova dumka, 1964. 137 p. (MIRA 17:10)

1. Akademiya nauk URSR, Kiev. Holovna astronomichna observatoriya.

L 2483-65 EWG(v) EWT(1)/EPA(t) Pe-5/Pae-2 GW/MLK
ACCESSION NR: AT4010983 S/0000/64/000/000/0046/0053

AUTHOR: Koval', I.K.

TITLE: A study of the optical properties of the Martian surface and atmosphere

SOURCE: AN UkrSSR. Glavnaya astronomicheskaya observatoriya. Fizika Luny* i planet. Physics of the moon and planets). Kiev, Naukova dumka, 1964, 46-53

TOPIC TAGS: Mars, brightness distribution, Martian surface, Mars albedo, Martian atmosphere

ABSTRACT: The paper develops the probable fundamental characteristics of the Martian surface and atmosphere, based upon a review of a series of previously published investigations. After a review of the inconsistencies in the determination of the brightness ratio $m = 60/0$ where I_{60} and I_0 are brightnesses at light impingement angles of 60° and 0° respectively, the author offers some possible explanations and concludes that various technical errors and intrinsic drawbacks of the photometric methods used may account for most of the inconsistencies. Turning to the behavior of "m" as a function of wavelength, he notes the dependence of "m" upon the dust content of the Martian atmosphere. He then discusses two variants of atmospheric characteristics on the basis of a list of observations

Card 1/2

L 4803-65
ACCESSION NR: AT4049883

drawn from several studies. The most important phenomenon relates to the dependence of contrast between continental and "maritime" portions of the Martian surface upon dust content. Summarizing, the author concludes that the Martian atmosphere has, basically, scattering characteristics. Furthermore, the color of Mars is fundamentally explainable as that of its own surface. The Dollfuss supposition of a limonite powder surface seems quite plausible. The true brightness contrasts of Martian continents and seas become completely washed-out by the atmospheric scattering at 4000 A. In the bandwidth 4000 - 6500 A, the Martian atmosphere exhibits a Raleigh behavior which slows down the rate of brightness decrease toward the visible margin at short wavelengths. The Martian atmosphere contains quantities of floating coarse particles, which behave in an anti-Raleigh manner with regard to light scattering. Thus, both to the right and to the left of 6500 A, in the investigated bandwidth of 4000-8400 A, the influence of the Martian atmosphere increases toward the edge. Observations aimed at the study of the surface alone should therefore use wavelengths in the 6500 A region. Orig. has: 3 tables and 1 formula.

ASSOCIATION: Glavnaya astronomicheskaya observatoriya AN UkrSSR, Kiev (Main Astronomical Observatory, AN UkrSSR)

SUBMITTED: 07May64 ENCL: 00 SUB CODE: AA

NO REF SOV: 011 OTHER: 001

Card 2/2

L 25046-65 EWI(l)/EWA(v)/EWI(t) Pe-5/Pae-2 GW/MLK

ACCESSION NR: AT4049884 S/0000/64/000/000/0054/0057

29

AUTHOR: Bugayenko, L. A.; Bugayenko, O. I.; Koval', I. K.; Morozhenko, A. V.

B+1

TITLE: Brightness distribution in the marginal zone of Mars

SOURCE: AN UkrSSR. Glavnaya astronomicheskaya observatoriya. Fizika Luny* i planet (Physics of the moon and planets). Kiev, Naukova dumka, 1964, 54-57

TOPIC TAGS: light scattering, Mars opposition, brightness distribution, Martian atmosphere, light absorption, turbulent vibration, photoelectric observation

ABSTRACT: The purpose of this work was to determine the optical characteristics of the Martian atmosphere by a study of brightness as a function of the angle of incident light. To obtain this information, a study of the marginal zone is imperative, but photographic methods are found to be deficient for this purpose. The method used involved a photoelectric sensor, coupled with a very small diaphragm opening subtending only 0".35. The device was placed at the Cassegrain focus of a 70-cm reflecting telescope. Photomultipliers were used with filters covering a spectral range of 350 - 9000 A. During the Mars opposition of Feb. 4, 1963, the conditions were perfect and 40 to 50 diameter transits were made for each light filter, with the zenith distance never exceeding 35°. The effective amplitude of

Card 1/3

turbulent image vibration was only 0".4. The authors found the true brightness distributio along the diameter of Mars, which requires correction for washout and image vibration, in the following way. An integral equation was set up by writing:

$$F(x) = \frac{1}{A}\int_{-\infty}^{\infty} S(x-\xi)\cdot f(\xi)d\xi \qquad (1)$$

where F(x) and f(ξ) are, respectively, the observed and true brightness distribution along the diameter of Mars. The kernel, S(x-ξ), is the brightness distribution for a finite, "normally" vibrating point light source. This can be determined from the expression

$$S(x-\xi) = A\cdot\int_{-\infty}^{+\infty} R_d - (x-\xi - y)^2 \cdot e^{-y^2/2\sigma^2}\cdot dy \qquad (2)$$

Here, A is the normalization constant, R_d is the diaphragm diameter and σ is the amplitude of image vibration. The true brightness distribution was determined by first solving expression (2) for the kernel S, and then solving the integral equation (1) by an iterative

L 2[illegible]6-65

ACCESSION NR: AT4049984

method which converges rapidly. Results of brightness determination for λ = 4200 - 6000 A are given in a table. They point to the prevalence of scattering in the visible region. Results for λ = 3550 - 4200 A are discussed quanlitatively without giving the details in table form. The conclusion is drawn that the Martian atmosphere has significant true absorption at around 3550 A. Orig. art. has: 2 tables and 6 formulas.

ASSOCIATION: None

SUBMITTED: 07May64 ENCL: 00 SUB CODE: AA

NO REF SOV: 003 OTHER: 000

Card 3/3

YAKOVKIN, A.A., otv. red.; FEDOROV, Ye.P., red.; AKSENT'YEVA, Z.N., red.; BARABASHOV, N.P., red.; BOGORODSKIY, A.F., red.; GORYNYA, A.A., red.; KOVAL', I.K., red.; KOLCHINSKIY, I.G., red.; TSESEVICH, V.P., red.; KOVALENKO, L.D., red.

[Figure and motion of the moon] Figura i dvizhenie Luny. Kiev, Naukova dumka, 1965. 135 p. (MIRA 18:7)

1. Akademiya nauk URSR, Kiev.

KOVAL', I.K., otv. red.; KOVALENKO, L.D., red.

[Problems in astrophysics; study of the atmospheres of Venus and Mars. Abstracts of the reports] Voprosy astrofiziki; issledovanie atmosfer Venery i Marsa. [Tezisy dokladov] Kiev, Naukova dumka, 1965. 164 p. (MIRA 18:9)

1. Soveshchaniye rabochey gruppy po issledovaniyu planet zemnogo tipa, Kiev, 1964.

L 16988-66 EWT(1) GW

ACC NR: AP6001541 SOURCE CODE: UR/0384/65/000/006/0053/0055

AUTHOR: Koval', I. K. (Candidate of physico-mathematical sciences) 28 B

ORG: none

TITLE: The study of earth-like planets

SOURCE: Zemlya i Vselennaya, no. 6, 1965, 53-55

TOPIC TAGS: Venus planet, Mars planet, planetary atmosphere

ABSTRACT: This is a survey of investigations of the planets Mars 12,55 and Venus, 12,55 particularly in view of setting up stations there. The Commission on Planetary Physics of the Astronomical Council of the AN SSSR organized a group in 1963 to study these planets, to gather all available information, and to plan future investigations. A conference was held in 1964 in Kiev and another in 1965 at the Crimean Astrophysical Observatory. Atmospheric pressure on Mars, first computed by optical thickness, was determined to be 60 mm Hg, but it was concluded that this value must be in error because of interference of aerosol particles. A spectroscopically determined value is 15—20 mm Hg. The photoelectric method gives a maximum of 15 mm. Data from Mariner-4 suggest a value of

Card 1/2

L 16988-66

ACC NR: AP6001541

about 10 mm Hg. V. I. Moroz considers the pressure on Venus to be 10 atm, but observational values are available only for the upper boundary of the cloud layer (20 mm Hg). Infrared spectroscopy reveals carbon dioxide, oxygen, and water vapor in the atmosphere of Venus, and carbon dioxide and water vapor in the atmosphere of Mars. Transparent particles (ice ?) have been discovered in the upper atmosphere of Venus. A number of workers spoke at the last conference (Crimea): A. V. Morozhenko and M. M. Pospergelis on polarimetric investigations, L. A. Nikrofanova on molecular absorption spectra of different gases, I. N. Minin on theoretical work at the Main Astrophysical Observatory on interpretation of polarimetric data, and N. A. Kozyrev on observations of the dark side of Venus. Orig. art. has: 2 figures.

SUB CODE: 03/ SUBM DATE: none

Card 2/2

L 11528-66 EWT(1) GW

ACC NR: AR6001134 SOURCE CODE: UR/0269/65/000/009/0055/0055

SOURCE: Ref. zh. Astronomiya, Abs. 9.51.470

AUTHOR: Koval', I. K.

51
B

TITLE: Photoelectric measurements of the brightness distribution over the disk of Mars

REFERENCED SOURCE: Astron. tsirkulyar, no. 319, marta 15, 1965, 1-4

TOPIC TAGS: Mars planet, optic brightness, Gaussian distribution, atmosphere, photoelectric method, telescope, solar radiation

TRANSLATION: An attempt is made to correct observed curves of the brightness distribution over the disk of Mars for the entire set of distortions caused chiefly by the earth's atmosphere. For these purposes, parallel observations of Mars and stars by the method of photoelectric image scanning were begun in 1965 at the Main Astronomical Observatory, Academy of Sciences, Ukrainian SSR, with the 70-cm reflector. The stellar profiles obtained from the observations are well approximated by a Gaussian distribution. This result was used for an approximate correction of the photoelectric profiles of Mars obtained in the opposition of 1963. For a filter with λ_{eff} 600 mμ, the corrected curve of the decrease in brightness toward the limb has a shape that is close to $\sqrt{\cos i}$ (i is the angle of incidence of the solar rays), instead of the

Card 1/2

UDC: 523.43

L 11528-66
ACC NR: AR6001134

observed Lambert curve. It is concluded that the surface of Mars differs from the Lambertian in that it is rougher. I. K.

SUB CODE: 03

Card 1/2

PLAKSENKO, N.A.; KOVAL', I.K.

Characteristics of the distribution of impurity elements in the rocks of siliceous-ferruginous formation of the Kursk Magnetic Anomaly and their genetic significance. Dokl. AN SSSR 161 no.1:210-213 Mr '65. (MIRA 18:3)

1. Voronezhskiy gosudarstvennyy universitet. Submitted June 8, 1964.

ACC NR: AT6033321 SOURCE CODE: UR/0000/66/000/000/0018/0030

AUTHOR: Bugayenko, L. A.--Bugayenko, O. I.; Koval', I. K.; Morozhenko, A. V.

ORG: none

TITLE: Electrophotometric sections of the Mars planet disk in the spectral range of the 355—600 mμ interval

SOURCE: AN UkrSSR. Fizika i planet (Physics of the Moon and the planets) Kiev, Naukova dumka, 1966, 18-30

TOPIC TAGS: Mars planet, star, Mars, brightness distribution

ABSTRACT: Electrophotometric sections of the images of Mars and of some stars situated at a small angular distance from the planet were obtained with a 70-cm reflector at the Main Astronomical Observatory of USSR in 1956. The information now being published represents the experimental part of an investigation aimed at correcting the brightness distribution curve along the disk of Mars by calculating the influence of factors in the earth atmosphere. The authors thank Z. Merkulova

Card 1/2

ACC NR: AT6033321

and V. Pipko for their assistance in calculations. Orig. art. has: 5 figures and 3 formulas. [Based on authors' abstract]

SUB CODE: 03/SUBM DATE: 19Mar66/ORIG REF: 017/OTH REF: 003/

Card 2/2

ACC NR: AT6033322 SOURCE CODE: UR/0000/66/000/000/0031/0044

AUTHOR: Koval', I. K.

ORG: none

TITLE: Position of the maximum brightness on the disk of Mars

SOURCE: AN UkrSSR. Fizika Luny i planet (Physics of the Moon and the planets) Kiev, Naukova dumka, 1966, 31-44

TOPIC TAGS: optic brightness, planetary atmosphere, Mars planet, Mars atmosphere thickness

ABSTRACT: The results of the photometric processing of several photographs of the planet Mars, obtained in 1956 for several phases along the equator of intensity, are given. It is shown that with a decrease in the wavelength the optical-brightness maximum shifts from the subsolar point to the limb. In the case of pure scattering, the optical thickness of Mars' atmosphere and the surface albedo for blue and green rays (429 mμ and 530 mμ) are estimated for spherical indicatrices on Lambert's ground. In the case of pure UV diffusion, there is no agreement between the theoretical curves; this indicates the existence of true absorption

Card 1/2

ACC NR: AT6033322

in the spectral region. Orig. art. has: 16 figures and 2 tables. [Based on author's abstract]

SUB CODE: 03/SUBM DATE: 19Mar66/ORIG REF: 003/OTH REF: 002/

Card 2/2

KOVAL', I. P.

Dissertation defended for the degree of Candidate of Agricultural Sciences at the Institute of Forest and Wood; Siberian Branch

"Role of the Pine Tree in Increasing the Productivity of Low-Bonitetic Oak Forests of the Northwest Caucasus."

Vestnik Akad. Nauk, No. 4, 1963, pp 119-145

KOVAL', I.P.

Silvicultural economic evaluation of some types of oak and oak-pine forests in the northwestern Caucasus. Trudy Inst. lesa AN Gruz. SSR 10:205-214 '62. (MIRA 17:3)

BELEN'KIY, Dmitriy Mikhelevich; KOVAL', I.V., ved. red.

[Main conveyors] Magistral'nye konveiery. Moskva, Nedra, 1965. 220 p. (MIRA 18:5)

SUSTER, M., prof. dr., DrSc.; CTSARIK, A.; HAVRILA, L.; KOVAL, J.; DEMKOV, J.; JABLONICKY S.; STOLINA, J.; SVATY, I.; VRZAL, J.; ZRUBEC, P.

Incidence of scleroma in eastern Slovakia. Cesk. otolaryng. 14 no.1:10-13 F'65.

1. Otoryngologicka klinika Lekarskej fakulty University P.J. Safarika v Kosiciach (prednosta: prof. dr. M. Suster, DrSc.) a ORL oddelenia Obvodniho ustavu narodniho zdravi, Presov, Kosice, Humenne, Spisska Nova Ves, Michalovce, Poprad a Roznava.

KOVAL, J.

Unusual case of foreign body (raw potato) in the pharynx. Cesk. otolar. 6 no.3:144-145 June 57.

1. Otolaryngologicka klinika UK v Kosiciach, predniosta doc. MUDr. Michal Suster.

(PHARYNX, foreign bodies
raw potato, surg. (Cz))

SUSTER, M.; HAVRILA, L.; KOVAL, J.

Course of severe esophageal wounds in current combined therapy.
Cesk. otolaryng. 11 no.6:370-371 D '62.
(ESOPHAGUS) (ESOPHAGITIS) (MEDIASTINITIS)

KOVAL, Jan, inz.; SLAVIK, Ivan, inz.

Possibility of using acetic acid for wood delignification.
Papir a celuloza 18 no.11:215-216 N'63.

1. Ceskoslovenska akademie ved, Chemicky ustav Slovenskej akademie vied, Bratislava.

KOVAL', L.A.

Selection of formulas for computing on calculating machines errors caused by the effect of relief in gravity prospecting. Izv. AN Kazakh. SSR Ser.geol. no.2:120-124 '62. (MIRA 15:6)
(Calculating machines) (Gravity prospecting)

KAZHKINA, A.O.; KOVAL', L.A.; LYAPICHEV, B.I.

"Electron mathematics" in the service of geophysics. Izv. AN Kazakh. SSR. Ser.geol. no.3:100-101 '62. (MIRA 15:7)
(Electronic calculating machines) (Geophysics)

L 15259-63 EWT(1)/FDS/ES(v) AFFTC Pg-4/Po-4/Pe-4/Pq-4
ACCESSION NR: AR3002962 S/0169/63/000/005/D018/D018

68

SOURCE: RZh. Geofizika, Abs. 5D98

AUTHOR: Koval', L. A.

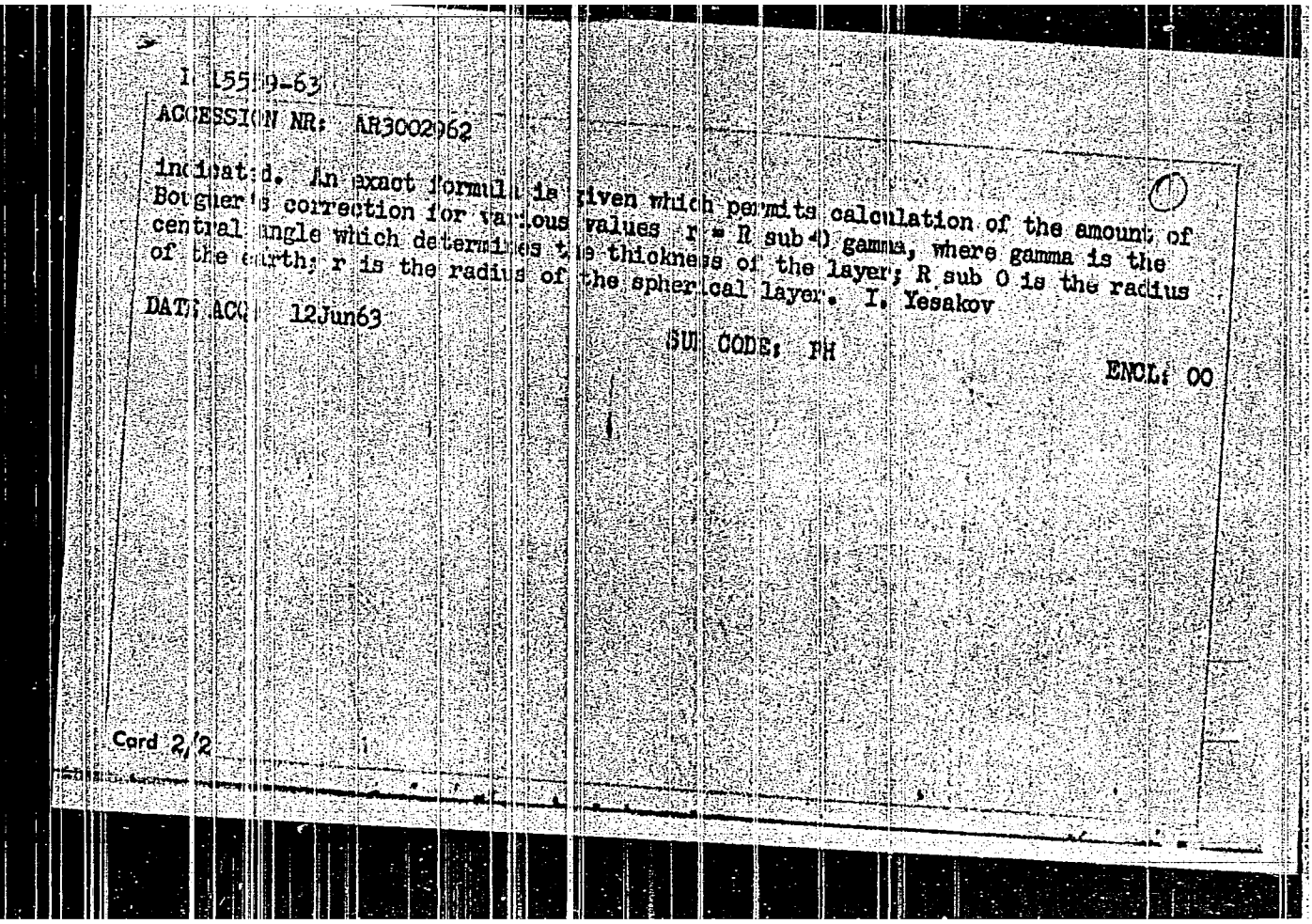
TITLE: On the calculation of the effect of relief during a gravimetric survey

CITED SOURCE: Tr. Kazakh. politekhn. in-ta, sb. 22, 1962, 173-177

TOPIC TAGS: relief, Bouguer correction, intermediate layer, spherical layer, gravimetric survey

ABSTRACT: Corrections for relief can be calculated on computers; hence the question is posed concerning the determination of the necessary radius for calculating the effect of relief and the compilation of maps of the effect of relief which correspond to the requirements of various surveys. Correction for the effect of relief is a supplement (heterovalent) to the correction for the attraction of the intermediate layer (Bouguer correction). It is proposed to calculate the effect of relief within the same limits in which the attraction of the intermediate layer on the near-to-the-spherical surface of the earth must be taken into consideration. The need for alteration of Bouguer's correction under mountain conditions is

Card 1/2



L 1559-63

ACCESSION NR: AR3002962

indicated. An exact formula is given which permits calculation of the amount of Bouguer's correction for various values r = R sub 0 gamma, where gamma is the central angle which determines the thickness of the layer; R sub 0 is the radius of the earth; r is the radius of the spherical layer. I. Yesakov

DATE ACQ: 12Jun63

SUB CODE: PH

ENCL: 00

Card 2/2

GRDINA, Yu. V.; SOFROSHENKOV, A. F.; KOVAL', L. A.

Wear resistance of combined coatings under the effect of hydro-abrasive friction. Izv. vys. ucheb. zav.; chern. met. 7 no. 4: 124-128 '64. (MIRA 17:5)

1. Sibirskiy metallurgicheskiy institut.

ACCESSION NR: AP4033704 S/0148/64/000/004/0124/0128

AUTHOR: Grdina, Yu. V.; Sofroshenkov, A. F.; Koval', L. A.

TITLE: Resistance of Combined Coatings During Hydroabrasive Wear

SOURCE: IVUZ. Chernaya metallurgiya, no. 4, 1964, 124-128

TOPIC TAGS: diffusion layer, heat treatment, hydroabrasive wear, calorization, titanization, chrome plating, siliconizing

ABSTRACT: In an earlier paper the authors investigated the properties of diffusion layers produced by combining chemical treatment with heat treatment, and they continue their research by reporting additional test results. Sleeves, checkers and segments were exposed to hydroabrasive wear. The treatment consisted of calorizing (950-10000 C) for 12 hrs, titanizing (1080 C) for 10 hrs., siliconizing (1080-1100 C) for 11 hrs. and chromizing (1150 C) for 8 hrs. All parts were ground, degreased and nitrided at 500-550-520 C for 70 hrs. The authors found that wear resistance depended not only on microhardness but also on microstructure, brittleness of the layer and test conditions in which pulp- and coal lines as well as hot steel runners were simulated. Although the method

Card 1/2

ACCESSION NR: AP4033704

appears somewhat complicated, it is recommended for many parts exposed to hydroabrasive wear. Orig. art. has: 4 figures and 2 tables.

ASSOCIATION: Sibirskiy metallurgicheskiy institut (Siberian Metallurgical Institute)

SUBMITTED: 08Jun63 DATE ACQ: 07May64 ENCL: 00

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

Card 2/2

DOBACH, P.G.; KOVAL', L.A.

Effect of prolonged administration of qualitatively different foods on periodical motor function of the small intestine. Vop.pit. 15 no.2:5-11 Mr-Ap '56. (MLRA 9:7)

1. Iz Instituta fiziologii Kiyevskogo gosudarstvennogo universiteta imeni T.G.Shevchenko.

(INTESTINES, SMALL, physiology,
off. of food of various types on motor funct. (Rus))
(FOOD), effects,
on small intestinal motor funct., eff. of prolonged admin. of various foods (Rus))

KOVAL', L.A.

Role of acetylcholine and adrenaline in the motor regulation of the small intestine. Nauk zap. Kyiv. un. 16 no.17:103-111 '57.
(MIRA 13:2)

(ACETYLCHOLINE) (ADRENALINE) (INTESTINES)

KOVAL', L.O.; DOBROVOL'SKAYA, Z.O. [Dobrovol's'ka, Z.O.]

Comparative characteristics of the effect of acetylcholine and carbocholine on the motor function of isolated sections of the small intestine. Nauk zap. Kyiv. un. 16 no.18:83-88 '57.
(MIRA 13:2)

(INTESTINES) (CHOLINE)

BOHACH, P.G. [Bohach, P.H.]; KOVAL', L.A. [Koval', L.O.]

Mechanism of reflex influences from the rectum on the motor activity of the small intestine. Fiziol.zhur. [Ukr.] 5 no.3:329-336 My-Je '59. (MIRA 12:10)

1. Naukovo-doslidniy institut fiziologii Kiivs'kogo derzhuniversitetu im. T.G.Shevchenka, viddil fiziologii travlennya i krovoobigu.
(INTESTINES--INNERVATION)

SOV/21-59-7-25/25

17(3,4)
AUTHOR: Koval', L. O. (Koval', L. A.)

TITLE: Action of Adrenalin and Acetylcholin of the Blood on the Motor Function of the Small Intestine Through the Central Nervous System

PERIODICAL: Dopovidi Akademii Nauk Ukrains'koi RSR, 1959, Nr 7, pp 806-810 (UkrSSR)

ABSTRACT: On introducing adrenalin into the isolated blood stream of a dog's head connected with the body by nerve connections only, the motor activity of the intestine is inhibited (latent period of reaction 20 -45 seconds). After the inhibitory phase a second, excitation phase sometimes sets in. On introducing acetylcholin into the blood stream of the head, inhibition of the intestinal motor function also sets in after 10-120 seconds. Proceeding from these data and the results of experiments on stimulation of the vagus nerves on a background of the inhibitory phase after introducing acetylcholin before and after adrenalectomy of animals with a crushed spinal cord and severed

Card 1/2

Action of Adrenalin and Acetylcholin of the Blood on the Motor Function of the Small Intestine Through the Central Nervous System

vagus nerves (with undisturbed circulation) the motor function during the second phase of acetylcholin action is effected as a consequence of the action of the latter through the central nervous system and the influence of the adrenalin of the adrenals. There are 3 diagrams and 4 references, 3 of which are Soviet and 1 French

ASSOCIATION: Naukovo-doslidchyy instytut fiziolohiyi tvaryn pry Kyivskomu derzhavnomu universyteti, (Scientific-Research Institute of Animal Physiology at Kiyev State University)

PRESENTED: D.S. Vorontsov, Member AS UkrSSR

SUBMITTED: February 5, 1959

Card 2/2

KOVAL', L.A. [Koval', L.O.]

Effect of acetylcholine and adrenaline on the motor activity of the small intestine as related to functional state and age. Fiziol.zhur.[Ukr.] 6 no.2:213-220 Mr-Ap '60.
(MIRA 13:7)

1. Institut fiziologii zhivotnykh Kiyevskogo gosudarstvennogo universiteta im. T.G. Shevchenko, otdel fiziologii pishcheva-reniya i krovoobrashcheniya.
(INTESTINES) (CHOLINE) (ADRENALINE)

KOVAL', L. A.

Cand Biol Sci - (diss) "Role of adrenalin and acetylcholine in the control of the motor function of the small intestine." Kiev, 1961. 18 pp; (Academy of Sciences Ukrainian SSR, Division of Biological Sciences); 110 copies; price not given; list of author's works at end of text (12 entries); (KL, 6-61 sup, 207)

KOVAL', L.A.

Use of electronic computers for calculating gravimetric terrain. Izv.AN Kazakh.SSR. Ser.geol.nauk no.4:96-107 '63.(MIRA 16:9)

1. Kazakhskiy politekhnicheskiy institut, Alma-Ata.

KOVAL', L.G. [Koval', L.H.]

Zooplankton of the northwestern part of the Black Sea. Nauk. zap. Od.biol. sta no.3:27-44'61. (MIRA 16:6)
(BLACK SEA—ZOOPLANKTON)

KOVAL', L.G. [Koval', L.E.]

Zooplankton in estuary areas of the northwestern part of the Black Sea in 1954-1957. Nauk.zap.Od.biol.sta. no.1:34-51 '59. (MIRA 14:7)
(Black Sea—Zooplankton)

KOVAL', L.G.

Ecologic characteristics of the development and distribution of zooplankton in the northwestern part of the Black Sea. Vop. ekol. 5:98-100 '62. (MIRA 16:6)

1. Biologicheskaya stantsiya AN UkrSSR, Odessa.
(Black Sea—Zooplankton)

KOVAL', L.G. [Koval', L.H.]

Zooplankton of Eastern Sivash. Pratsi Inst. gidrobiol. AN URSR no.35:41-49 '60. (MIRA 14:4)

(Sivash--Zooplankton)

KOVAL', L.G. [Koval', L.H.]

Zooplankton of Lake Molochnoye. Pratsi Inst. gidrobiol. AN URSR no.35:138-142 '60. (MIRA 14:4)
(Molochnoye, Lake--Zooplankton)

KOVAL', Lev Mikhaylovich; YAROSLAVTSEV, Boris Alekseyevich; GUROV, S., red.; KUZNETSOVA, A., tekhn. red.

[From small-scale to over-all mechanization] Ot maloi mekhanizatsii - k kompleksnoi. Moskva, Mosk. rabochii, 1961. 102 p. (MIRA 15:2)

(Assembly-line methods)
(Moscow--Electric machinery industry)

KOVAL', L.M.

Modernizing the clutch of the hydraulic drive of a press. (MIRA 15:8)
Mashinostroitel' no.8:14 Ag '62.
(Power presses--Hydraulic drive)

KOVAL', L.P.

Scientific and technical conference at the Volgodonsk Combine of Synthetic Fat Substitutes. Masl.-zhir. prom. 27 no.9:48 S '61. (MIRA 14:11)

1. Vneshtatnyy korrespondent zhurnala "Masloboyno-zhirovaya promyshlennost'".

(Oils and fats) (Acids, Fatty)

KOVAL', M. A.

KOVAL', M. A. — "Roentgeno-Vasographic Method in the Evaluation of the Changes of the Permeability of the Blood-Carrying Vessels in the Presence of Inflammation. (Experimental-Clinical Investigation)." Crimean State Med Inst imeni I. V. Stalin, Simferopol', 1955. (Dissertation For the Degree of Candidate in Medical Sciences).

SO: Knizhnaya letopis', No. 37, 3 September 1955

KOVAL', M.A. kand. med. nauk.

Roentgen vasographic date of vascular changes in experimental tuberculous inflammation. Vest. rent. i rad. 33 no.6:22-28 N-D '58. (MIRA 12:1)

1. Iz Nauchno-issledovatel'skogo instituta travmatologii, ortopedii i protezirovaniya g. Stalino (dir. - kand. med. nauk. N.V. Novikov).
(TUBERCULOSIS, exper.
vasc. changes, angiography in dogs (Rus))
(ANGIOGRAPHY
in tuberc., determ. of vasc. changes in dogs (Rus))

KOVAL', M.A., kand.med.nauk (Yalta, ul. Voykova, d.10); VLASOV, I.V.; Dobritskaya, A.A.

Use of vasography in inflammatory diseases of the extremities. Nov. khir.arkh. no.5:68-74 S-O '59. (MIRA 13:3)

1. Khirurgicheskiye otdeleniya Alushtinskoy gorodskoy bol'nitsy i Yaltinskoy gorodskoy bol'nitsy. Nauchnyy rukovoditel' - zaveduyushchiy kafedroy fakul'tetskoy khirurgii Krymskogo meditsinskogo instituta prof. P.P. Sarenko.
(EXTREMITIES, LOWER) (ANGIOGRAPHY)

KOVAL', M.M., inzh.-mekhanik

Universal tractor-mounted loader. Mekh. sil'. hosp. 9 no. 8:3 of cover Ag '58. (MIRA 11:8)

(Loading and unloading)
(Agricultural machinery)

BONDARENKO, M.G. [Bondarenko, M.H.]; VORONEZHSKIY, V.I. [Voronezhs'kyi, V.I.]; KITAYTSEVA, Z.P.; KOVAL', M.M.; KOLODA, V.D.; KORSAKOV, O.O.; KREMINSKAYA, Ye.D. [Kremins'ka, E.D.]; KUKTA, G.M. [Kukta, H.M.], inzh.-mekhan.; PIVOVAR, S.G. [Pivovar, S.H.]; SOLOVEY, V.I.; OLEFIRENKO, G.A. [Olefirenko, H.A.], red.; GULENKO, O.I. [Hulenko, O.I.], tekhn.red.

[New agricultural machines] Novi sil's'kohospodars'ki mashyni. Kyiv, Derzh.vyd-vo sil's'kohospodars'koi lit-ry URSR, 1959. 231 p. (MIRA 13:4)

(Agricultural machinery)

KOVAL', M. P., Engineer

"New Principles for Designing the General Layout of Heavy Machine Building Plants (With a Centralized Storeshouse of Basic Raw Materials)." Sub 25 Jun 51, Moscow Order of the Labor Red Banner Construction Engineering Inst imeni V. V. Kuybyshev

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

KOVAL', M.N., kand. tekhn. nauk.

Joint operational technology of industrial, water, and railroad transport. Zhel. dor. transp. 40 no.2:38-42 F '58. (MIRA 11:3)
(Transportation) (Railroads--Freight)

KOVAL', M.N., kand.tekhn.nauk

Drawing up general plans for heavy industrial plants in connection with water and rail supply of raw materials. Trudy MIIT no.105:243-287 '58. (MIRA 11:9)
(Material handling)

KOVAL', M. P.: Master Vet Sci (diss) -- "The fauna and cellulosolytic activity of the microflora of scars on cows". Leningrad, 1959. 17 pp (Leningrad Vet Inst of the Min Agric USSR), 150 copies (KL, No 13, 1959, 110)

KOVAL', M.P., assistant

Use of a nutrient salt solution in dyspepsia of calves.
Veterinariia 42 no.5:83 My '65. (MIRA 18:6)

1. Grodnenskiy sel'skokhozyaystvennyy institut.

KOVAL', M.P., kand. veter. nauk; VAS'KO, I.V.

Case of carbamide poisoning in cows. Veterinariia 41 no.10:49-50 O '64. (MIRA 18:1)

1. Grodnenskiy sel'skokhozyaystvennyy institut (for Koval').
2. Glavnyy veterinarnyy vrach stantsii po bor'be s boleznyami zhivotnykh Grodnenskogo proizvodstvennogo upravleniya (for Vas'ko).

STASHEVSKIY, Dmitriy Nikolayevich [Stashevs'kyi, D.M.]; KOVAL', M.V., red.; RAKHLINA, N.F., tekhn.red.

[International significance of the seven-year plan for the development of the national economy of the U.S.S.R.] Mizhnarodne znachennia semyrichnoho planu rozvytku narodnoho hospodarstva SRSR. Kyiv, Vyd-vo Akad.nauk URSR, 1959. 72 p. (MIRA 13:3)

(Russia--Economic policy)

GANZHA, Ivan Fomich [Hanzha, I.Kh.]; KOVAL', M.V., red.; BUNIY, R.O., tekhn.red.

[First collective farms in the Ukraine, 1917-1920] Pershi kolektyvni hospodarstva na Ukraini, 1917-1920 rr. Kyiv, Vyd-vo Akad.nauk URSR, 1960. 154 p. (MIRA 13:9)
(Ukraine--Agriculture, Cooperative)

(N) L 12087-66 EWT(m)/EWA(d)/T/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c) IJP(c)

ACC NR: AP6000610 SOURCE CODE: UR/0129/65/000/012/0040/0043

MJW/JD/HW

AUTHOR: Vil'yams, O. S.; Bol'shova, N. M.; Koval', M. Ya.

ORG: Nikopol' Southern Tube Plant (Nikopol'skiy yuzhnotrubnyy zavod)

TITLE: Effect of temperature and rate of heating on the grain size of Kh18N12T steel

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 12, 1965, 40-43

TOPIC TAGS: grain size, steel, metal tube, titanium, heat treat furnace/ Kh18N12T steel

ABSTRACT: Annular specimens of Kh18N12T steel (0.08% C, 1.41% Mn, 0.66% Si, 0.017% P, 0.007% S, 17.85% Cr, 11.39% Ni, 0.57% Ti), cut from cold-rolled boiler superheater tubes, were heated at 800-1200°C, on increasing the temperature by 50-100°C at a time, for 30 min, and air-cooled, with the object of determining the conditions under which grain homogeneity can be maximized. Experiments with the use of different furnaces (muffle, induction, box, continuous roller) showed that the most suitable furnace for this purpose is the continuous roller furnace, (furnace length 10 m, traveling rate of tubes 0.4 m/min, temperature 1200-1230°C). The higher the heating rate, the higher is the temperature needed to obtain a roughly identical grain size. In addition, the effect of Ti on grain size was investigated on specimens of work-hardened tubes from two melts and compared with specimens of Ti-free Kh18N10 steel;

Card 1/2 UDC: 621.785.16:620.186.5:669.14.018.84

L 12087-66

ACC NR: AF6000610

it was found that in Ti-containing steel the grain size decreases with decreasing temperature and increases with increasing temperature at a faster rate than in Ti-free steel. In addition, given the same heating temperature, the microstructure of Kh18N12T steel containing 0.44% Ti becomes more coarse-grained than the microstructure of the same steel containing 0.65% Ti. This is attributable to the retarding effect of titanium carbides on grain growth. As the titanium carbides become dissolved at elevated temperatures, an intensive grain growth sets in so that then, at temperatures above 1150°C, the grain size in Ti-containing steel (Kh18N12T) becomes much larger than in Ti-free steel (Kh18N10). Orig. art. has: 2 tables, 5 figures.

SUB CODE: 11, 13, 20/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 000

Card 2/2

KOVAL', N.

Moldavia's products on the international market. Vnesh. torg. 42 no.8:44-45 '62. (MIRA 15:9)

1. Predsedatel' Gosudarstvennogo planovogo komiteta Soveta Ministrov Moldavskoy SSR.
(Moldavia—Commerce)