BARABASHOV, N.P.

Luminous spor on Mars observed at the Kharkov Astronomical Observatory on August 23, 1956. Astron.tsirk. no.174:3 N '56.
(MLRA 10:3)

1. Direktor Khar'kovskoy astronomicheskoy laboratorii.
(Mars (Planet))

BARABASHOV, N.P.

Forty-years of activities at the Astronomical Observatory of the Kharkov State University. Uch.zap.KHGU 91:5-13 '57.
(MIRA 15:3)
(Kharkov Astronomical Observatory)

BARABASHOV, N.P., akademik.

Preliminary data from the observation of Mars. Vest. AN SSSR 27 no.5:34-36 My '57. (MLRA 10:6)

1. Akademiya nauk USSR.
(Mars (Planet))

BARABASHOV, N.P.

Observations of Arend-Roland's comet at the Kharkov Astronomical Observatory. Astron.tsir. no.180:15-16 My '57.
(MIRA 13:4)

1. Khar'kovskaya astronomicheskaya observatoriya.
(Comets--1956)

BARABASHOV, N.

Color of Mars' surface and coloring properties of its atmosphere.
Astron. tsir. no.183:7-9 Jl '57. (MIRA 11:3)
(Mars (Planet))

BARABASHOV, N.P.

Photographic observations of Mrkos' comet. Astron.tsir. no.185:2
O '57. (MIRA 11:4)

1.Khar'kovskaya astronomicheskaya observatoriya.
(Comets--1957)

3(1) PHASE I BOOK EXPLOITATION SOV/2323

Barabashov, Nikolay Pavlovich, Academician, Academy of Sciences, Ukrainian SSR
Luna (The Moon) Moscow, Izd-vo "Sovetskaya Rossiya," 1958. 66 p. 45,000 copies printed.

Ed.: Yu. E. Berenson; Tech. Ed.: L. Ye. Lukina.

PURPOSE: This book is intended for the general reader.

COVERAGE: The booklet contains basic information on the moon. A four-page insert was added to the booklet after publication. In it the launching of the Soviet interplanetary rocket, Jan 2, 1959, is described. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

Card 1/2

AVIALABLE: Library of Congress

Card 2/2 TM/lsb

BARABASHEV, N. P. (Prof.) and GORDON, I. M. (Dr.)

"Invisible Flares and Proof of their Reality by the Rocket Observations of the Short-wave Radiation of the Sun," paper presented at 10th General Assembly, Int'l Astronomical Union, Moscow, Aug 1958.

BARABASHOV, N.P.

AUTHOR: Chekirda, A. T., Candidate of Physical and Mathematical Sciences SOV/30-58-8-21/43

TITLE: From the Council of Astronomers (V astronomicheskom sovete) Transactions of the Plenary Meeting of the Committee of Planetary Physics (Plenum Komissii po fizike planet)

PERIODICAL: Vestnik Akademii nauk SSSR, 1958, Nr 8, pp. 113-114 (USSR)

ABSTRACT: This plenary meeting was held in Khar'kov from May 20-22. It was attended by the astronomers of a number of observatories of the USSR, by representatives of the Council of Astronomers and by the Director of the Nanking Observatory Chzhan Yuy-chzhe. Results of observations of the surface of Mars and of the moon in 1956 were the subject of the reports. The following lectures were held:

V.V. Sharonov stated that the surface of Mars is darker and more red than corresponding samples from terrestrial deserts.

N.P. Barabashov discussed results of Mars photometry which were conducted by him in the Khar'kov observatory with the assistance of I.K. Koval'.

Card 1/4

K.I. Kozlova, Yu.V. Glagolevskiy communicated some results of Mars photometry which was carried out by the Sektor astrobotaniki Akademii nauk Kazakhskoy SSR (Department of Astrobotany AS Kazakh USSR).

A.N. Suslov spoke on the intensity of [illegible] lines.

N.P. Barabashov, V.I. Yezerskiy, A.T. Chekirda reported on [illegible] photometry obtained in the observatory of Crimea.

N.D. Kalinenkov reported on spectrophotometric measurements of details of the surface of Mars which were conducted in Kazan'.

B.A. Bronshten, O.B. Rzhanitsyna reported on results of photographic photometry of the bright region Argir on Mars.

M.M. Butelava, A.A. Kalinyak, L.A. Kamionko reported on the first utilization of electron-optical transducer in photographing Mars in the Pulkovo observatory.

V.V. Sharonov reported on most recent Mars research in foreign countries.

N.P. Barabashov spoke about problems and methods of lunar research.

From the Council of Astronomers. Transactions of the Plenary Meeting of the Committee of Planetary Physics SOV/30-58-8-21/43

B.Yu. Levin, S.V. Mayeva spoke about results of the theoretical investigation of the thermal history of Mars and the moon.

B. Yu. Levin spoke about the history of the motion of the moon and about geological properties of its material.

V.V. Sharonov, Professor, read the paper by N.N. Sytinskaya on the development and the confirmation of the hypotheses concerning the nature of the surface layers of the moon.

A.V. Markov reported on the equipment in Pulkovo for thermoelectrical temperature measurements of narrow strips of the surface of the moon.

Yu.N. Chistyakov communicated the first results of research with this equipment.

N.N. Kaydanovskiy spoke about prospects in the investigation of thermal radiation from the moon (based upon observations by Ye.K. Kokhan in the Abastumani observatory).

N.P. Barabashov, I.K. Koval' reported on preliminary results of the investigation of the polarization of the moon

Card 3/4

by means of light filters.

Yu.N. Lipskiy spoke about the necessity of taking into consideration the variations in the degree and the direction of polarization of moon details, when they are spectrophotographed simultaneously.

T.A. Polozhemtseva, V.G. Teyfel', A.N. Sergeyeva, N.P. Barabashov, V.I. Yezerskiy, V.A. Fedorets reported on the determination of color contrasts on the surface of the moon by means of photographic spectrophotometry.

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: Barabashov, N.P. SOV/33-35-6-6/18

TITLE: Main Results of the Observations of the Mars During the Favorable Opposition of 1956

PERIODICAL: Astronomicheskiy zhurnal,1958,Vol 35,Nr 6, pp 869 - 880 (USSR)

ABSTRACT: The observations carried out have been organized by the Komissiya po issledovaniyu fizicheskikh usloviy na Lune i planetakh Astrosoveta AN SSSR (Committee for the Research of the Physical Conditions on the Moon and on the Planets of the Astronomic Council of the Academy of Sciences, USSR).
The following scientists participated in the observations : N.A. Kozyrev, N.P. Barabashov, A.T. Chekirda, V.I. Yezerskiy and A.A. Kalinyak (Pulkovo), Kharkovskaya astronomicheskaya observatoriya (Kharkov Astronomical Observatory).
In the Tashkentskaya astronomicheskaya observatoriya (Tashkent Astronomical Observatory) there observed an expedition from the Astronomicheskaya observatoriya Leningradskogo universiteta (Astronomical Observatory of the Leningrad University) under guidance of V.V. Sharonov.

Card 1/3

Main Results of the Observations of the Mars During the Favorable Opposition of 1956

SOV/33-35-6-6/18

V.P. Dzhapiashvilli, V.I. Mikhkyurya, N.I. Kucherov, Abastumanskaya astrofizicheskaya observatoriya (Abastumani Astrophysical Observatory),
D.Ye. Shchegolev, N.V. Fatchikhin, A.A. Kiselev, Pulkovskaya gosudarstvennaya observatoriya (Pulkovo State Observatory).

In the Astrophysical Mountain Observatory of Astrofizicheskiy institut Akademii nauk Kaz SSR (Astrophysical Institute of the AS Kazakh SSR): V.G. Fesenkov. Section of Astrobotany, Academy of Sciences, Kazakh SSR: Yu.V. Glagolevskiy, K.I. Kozlova, I.D. Kupo, V.G. Teyfel'.
The Union Society for Astronomy and Geodesy observed under guidance of V.A. Bronshten at the Observatory of the Stalingrad Orrery.
From May 20 - 22, 1958 there was reported on the results at the full assembly of the Astronomical Council (Chang Yü-che , Professor, Directory of the Nanking Observatory was present as visitor).
The present paper contains : the results of visual, photographic, photoelectric and spectrophotometric observations.

Card 2/3

Main Results of the Observations of the Mars During the Favorable Oppostion of 1956 SOV/33-35-6-6/18

The causes of the disappearance of the southern polar cap during August 30 to September 14 are discussed as well as the appearance of intense yellow-orange formations, which for a long time hid different regions of the planet. Moreover some conclusions are made on the structure of the polar cap, continents and "maria" and also the absorption and scattering properties of the planet's atmosphere.
N.N. Sytinskaya is mentioned in the discussion of the observations. Persons whose observations are also given: O. B. Rzhanitsyna, A.A. Kolchin, I.D. Novikov, I.K. Koval', M.M. Butslov, A.A. Kalinyak, L.A. Kamionko. - There are 4 figures, 3 tables, and 12 references, 9 of which are Soviet, and 3 American.

SUBMITTED: September 25, 1958

Card 3/3

SOBOL', Nikolay Aleksandrovich [Sobol', M.O.]; BARABASHOV, Nikolay Pavlovich [Barabashov, M.P.], akademik; KARDASH, G.I. [Kardash, H.I.], red.; LIMANOVA, M.I. [Lymanova, M.I.], tekhn.red.

[Soviet science in the service of our people] Radians'ka nauka na sluzhbi u narodu. Kharkiv, Kharkivs'ke knyzhkove vyd-vo, 1959. 35 p. (MIRA 13:4)

1. Golova Kharkivs'kogo radnargospu (for Sobol'). 2. Ukrainskaya Akademiya nauk (for Barabashov).
(Ukraine--Research, Industrial) (Artificial satellites)

BARABASHOV, N.P.

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. 108 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:

AVAILABLE: Library of Congress

Card 3/3

JA/dwm/mas
10-10-60

BARABASHOV N. P.

p. 2

BASE 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 3-4, 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

AVAILABLE: Library of Congress

Card 3/3

JA/cdw/mas
8-22-60

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 Kharkov 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

1/2

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 2/2

BARABASHOV, N.P., prof., akad.; CHEKIRDA, A.T., kand.fiz.-mat.nauk

Rocks which most correspond to those forming the lunar surface. Izv.Kom.po fiz.plan. no.1:5-39 '59.
(MIRA 13:7)

1. AN USSR (for Barabashov).
(Moon--Surface)

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)

BARABASHOV, N.P., prof., akad.; YEZERSKAYA, V.A.; YEZERSKIY, V.I., kand.fiz.-inst.nauk; ISHUTINA, T.I.

Photometric uniformity of the moon's surface. Izv.Kom.po fiz. plan. no.1:67-79 '59. (MIRA 13:7)

1. AN USSR (for Barabashov).
(Moon—Surface) (Photometry, Astronomical)

3(1) SOV/21-59-2-10/26

AUTHORS: Barabashov, N.P. (M.P. Barabashov), Member of AS UkrSSR and Koval', I.K.

TITLE: On the Distribution of Brightness in the Martian "Seas" (O raspredelenii yarkosti v"moryakh" Marsa)

PERIODICAL: Dopovidi Akademii nauk Ukrains'koi RSR, 1959, Nr 2, pp 153-155 (USSR)

ABSTRACT: Observing Mars in the spring of 1956 with the help of the 200 mm refractor of the Alma-Ata Astrofizichnaya observatoriya (Astrophysical Observatory), B.G. Fesenkov [Ref 5] came to the conclusion that the "seas" on the Mars must appear brighter then the "continents". In this article, the authors, making reference to a great number of pictures of Mars made by the coauthor I.K. Koval' in 1954, with the use of the "20" mm refractor of the Khar'kov Astronomical Observatory, refute the above-stated conclusion and contend that the measurements made of the "seas" and the "continents" of Mars during its last opposition, performed in infra-red rays at

Card 1/2

On the Distribution of Brightness in the Martian "Seas"

various distances from the center of the planet's image, indicate different values of the smoothness factor. According to the authors, Fesenkov's conclusion may have been wrong because of the very clouded appearance of Mars in the spring of 1956, which resulted from a dust storm raging on the planet at that time. There are 1 graph and 5 Soviet references.

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

SUBMITTED: December 17, 1958

(

SOV/25-59-5-13/56

AUTHOR: Barabashov, N.P. (Khar'kov)

TITLE: ISZ and the Problems of Cosmic Flying

PERIODICAL: Nauka i zhizn', 1959, No. 5, pp 17-19 and p 2 of centerfold (USSR)

ABSTRACT: The author is a Member of the AS UkrSSR, Director of the Astronomical Observatory and Holder of the Chair of Astronomy at Khar'kov University, Chairman of the Astronomical Council of the AS USSR, Deputy to the Supreme Soviet of the USSR and author of 230 scientific works. In his article the author states that telescopes of the 17th century made the first steps in penetrating the mysteries of interplanetary space. Modern radio telescopes advanced these studies, but practical knowledge has been collected only since the launching of the Sputniks or the ISZ (Isskustvennyye Sputniki Zemli). Knowledge was obtained regarding cosmic rays, the intensity of ultra-violet and x-ray radiation, the sun's corpuscular radiation, and the density and the source of cosmic dust and meteorites. More information was obtained from the first

Card 1/2

SOV/25-59-5-13/56

ISZ and the Problems of Cosmic Flying

Soviet artificial planet now flying around the sun. The next great advance will be made when a stationary ISZ is launched to an altitude of 35,810 km, orbiting from West to East and thus remaining stationary with respect to the earth. It will be a first step towards construction of a flying laboratory for astronomical and physical observations unaffected by the earth's atmospherics and weather conditions. The ISL (Artificial Sputnik of the Moon) and rocket landings on the Moon, will be other steps in collecting information about the Moon. The possibility of interplanetary travel is discussed in the concluding part of the article. There are 5 diagrams and 1 drawing.

ASSOCIATION: Khar'kovskiy Gosudarstvennyy universitet im. Gor'kogo (Khar'kov State University imeni Gor'kiy). Planetnaya komissiya Astronomicheskogo soveta AN SSSR. (Planetary Committee of the Astronomical Council of the AS USSR)

Card 2/2

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))

3(1)

AUTHORS: Barabashov,N.P., Yezerskiy,V.I., and Fedorets,V.A. SOV/33-36-3-16/29

TITLE: On Colour Contrasts of the Lunar Surface

PERIODICAL: Astronomicheskiy zhurnal,1959,Vol 36,Nr 3,pp 496-502 (USSR)

ABSTRACT: The paper reports on a part of the complex investigations of the Moon, carried out in the Khar'kov Observatory. The observations were made with a three-prism-spectrograph in spring and autumn 1956. The properties of reflection of the surface of the Moon, especially the colour contrasts were investigated. In the usual system of colour indices they are $0^m.2 \div 0^m.3$. In most cases it is $\Delta CI/\Delta \lg I_{550} \approx 0.6$ (almost linear). The author mentions A.T.Chekirda,V.V.Sharonov, and L.N.Radlova.
There are 10 references, 9 of which are Soviet, and 1 German.

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

SUBMITTED: February 10, 1959

Card 1/1

BARABASHOV, N.P., prof., akademik

New developments in the study of Mars. Priroda 48 no.6:13-18 Je '59. (MIRA 12:5)

1.Akademiya nayk USSR i Astronomicheskaya observatoriya Khar'kovskogo gosudarstvennogo universiteta.
(Mars (Planet))

BARABASHOV, N.P.

Observations of bright fireballs. Astron.tsir. no.205:27 O '59.

1. Khar'kovskaya astronomicheskaya observatoriya.
(Meteors)

BARABASHOV, N.P.; LIPSKIY, Yu. N.

First results of studying photographs of the other side of the moon. Astron.tsir. no.206:1-4 D '59. (MIRA 13:6)

1. Kar'kovskaya astronomicheskaya observatoriya (for Barabashov). 2. Astronomicheskiy institut im. Shternberga (for Lipskiy).

(Moon--Surface)

3.2000
~~23 (4), 3 (1)~~

67904
SOV/20-129-5-10/64

AUTHORS: Barabashov, N. P., Member of the AS ~~UkrSSR, Lipskiy, Yu. N.~~

TITLE: The First Results Obtained by Photographing the Far Side of the Moon, Which is Invisible From the Earth

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 129, Nr 5, pp 1000-1002 (USSR)

ABSTRACT: The automatic interplanetary station launched on October 4, 1959 was intended to contribute towards solving several cosmic space problems and to photograph the far side of the Moon and its boundary zones. The Moon was photographed from distances of from 65200 km (start of photographic recording) to 68400 km (end of photographing) with a camera having two objectives: the first had an F-number of 1:5.6 and F_1 = 200 mm, the second 1:9.5 and F_2 = 500 mm. During the 40 minutes' operation of the camera the far side of the Moon was photographed many times. The authors had numerous pictures taken with the focal distances of 200 mm and 500 mm at their disposal. First, the already known regions of the lunar surface obtained on these photos are described. On the invisible part of the surface of the Moon;

Card 1/3

mountainous regions predominate, and there are only few such seas as are on the visible part of the lunar surface. The albedo of the entire far side of the Moon adjoining the western edge ranges, with respect to its value, between the albedo of the seas and that of the mountainous regions. South-southeast of the Mare Humboldtianum a partly very high mountain range of 2000 km length extends via the equator to the southern hemisphere. Between +20° and +30° latitude and +140° and +160° longitude a sea of craters extends, which has a diameter of 300 km, and which has been named Moscow Sea. In the South this sea ends at Astronauts' Bay. On the Southern hemisphere (latitude -20° to -30° and longitude +130°) the Tsiolkovskiy Crater with a diameter of more than 1000 km is located. It has a dark bottom, a bright central crust, and a bright and wide wall. Four further craters are then described. The photographs besides show regions with slightly elevated and slightly reduced reflectivity and numerous fine details. Finally, the authors express their gratitude for the honor of having been allowed to evaluate and utilize the first photographs ever taken of the hitherto unknown far side of the

The First Results Obtained by Photographing the Far Side of the Moon, Which is Invisible From the Earth

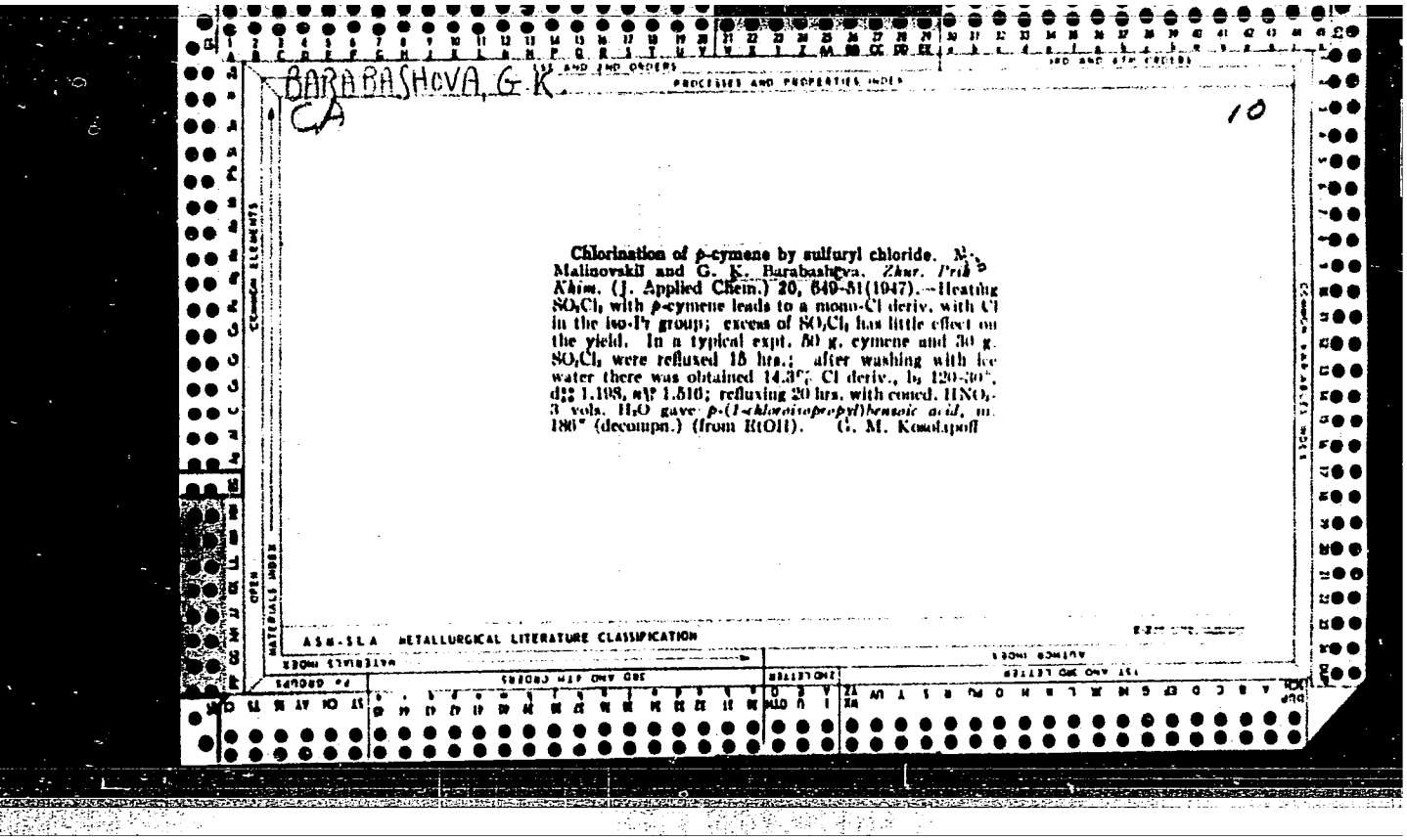
SOV/20-129-5-10/64

Moon as well as for the assistance rendered by specialists in various fields. There are 3 figures and 1 Soviet reference.

PRESENTED: November 14, 1959, by A. V. Topchiyev, Academician

SUBMITTED: November 14, 1959

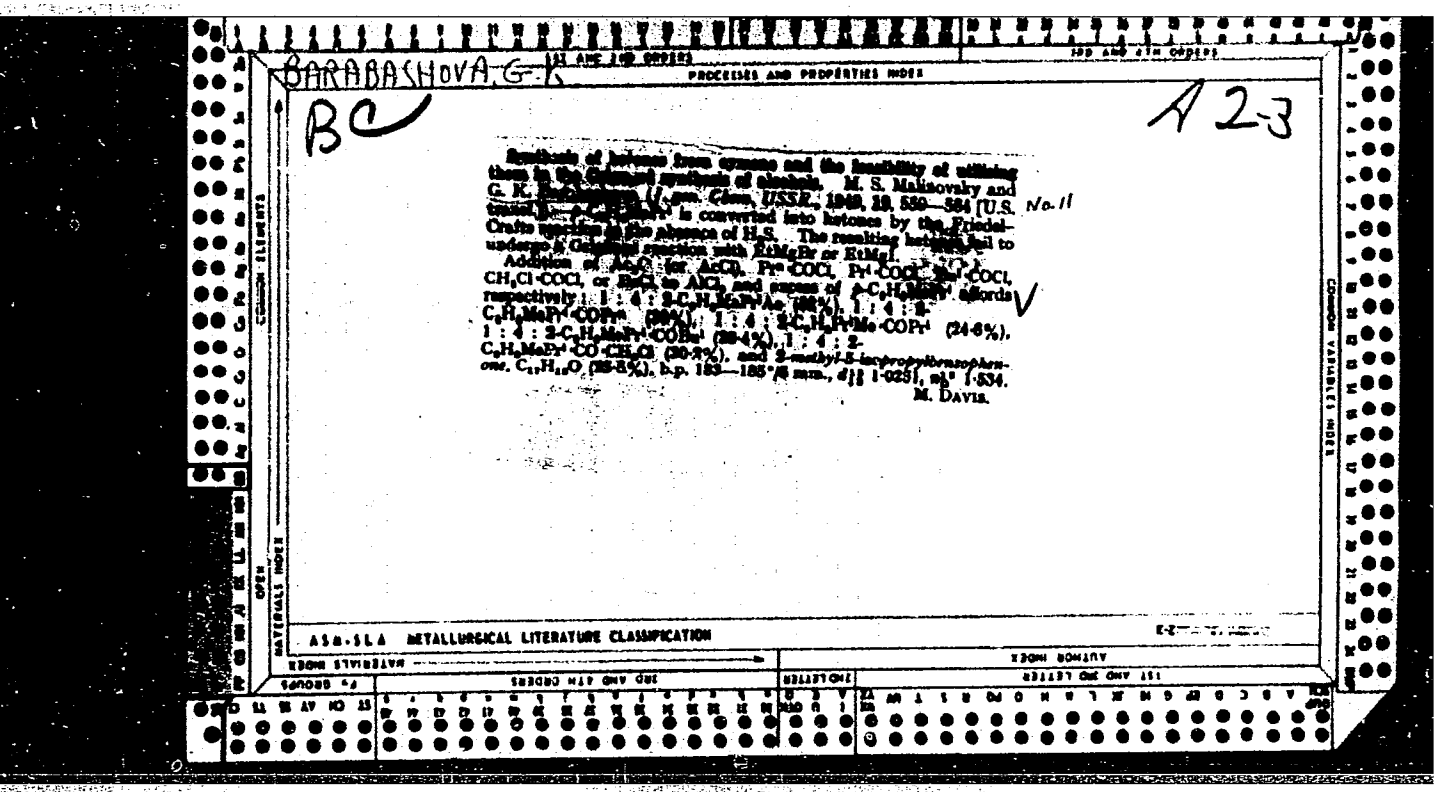
Card 3/3



BARABASHOVA, G. K.
CA
10

Chlorination of *p*-cymene by sulfuryl chloride. N. Malinovskii and G. K. Barabashova. *Zhur. Prik. Khim.* (J. Applied Chem.) 20, 649-51(1947).—Heating SO_2Cl_2 with *p*-cymene leads to a mono-Cl deriv. with Cl in the iso-Pr group; excess of SO_2Cl_2 has little effect on the yield. In a typical expt. 50 g. cymene and 30 g. SO_2Cl_2 were refluxed 18 hrs.; after washing with ice water there was obtained 14.3% Cl deriv., b_{15} 120-30°, d_4^{20} 1.103, n_D^{20} 1.510; refluxing 20 hrs. with concd. HNO_3-3 vols. H_2O gave *p*-(*1-chloroisopropyl*)*benzoic acid*, m. 186° (decompn.) (from EtOH). C. M. Kosolapoff

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION


BARABASHOVA, G. K.

BC

A 2-3

PROCESSES AND PROPERTIES INDEX

Synthesis of ketones from cyanides and the feasibility of utilizing them in the Grignard synthesis of alcohols. M. S. Maksovsky and G. K. [illegible]. Zhur. Obsh. Khim., USSR., 1949, 19, 580—584 [U.S. translation]. [illegible] is converted into ketones by the Friedel-Crafts reaction in the absence of H_2S. The resulting ketimines fail to undergo a Grignard reaction with EtMgBr or EtMgI.

No. 11

Addition of Ac_2O (or AcCl), $Pr^{\alpha}COCl$, $Pr^{i}\text{-}CO\text{-}Cl$, $Pr^{\beta}\text{-}CO\text{-}Cl$, $CH_2Cl\text{-}COCl$, or $EtO_2C\text{-}COCl$, to AlCl$_3$ and excess of 2-$C_5H_4NMePr^{\alpha}$ affords respectively: 1 : 4 : 2-$C_5H_4NMePr^{\alpha}Ac$ (88%), 1 : 4 : 2-$C_5H_4NMePr^{\alpha}\text{-}COPr^{\alpha}$ (89%), 1 : 4 : 2-$C_5H_4NMePr^{\alpha}\text{-}COPr^{i}$ (24·6%), 1 : 4 : 2-$C_5H_4NMePr^{\alpha}\text{-}COPr^{\beta}$ (28·4%), 1 : 4 : 2-$C_5H_4NMePr^{\alpha}\text{-}CO\text{-}CH_2Cl$ (30·2%), and 2-*methyl-5-isopropylbenzophenone*. $C_{17}H_{18}O$ (28·5%), b.p. 183—185°/8 mm., d_4^{15} 1·0251, n_D^{15} 1·534.

M. Davis.

V

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

CA BARABASHOVA, G.K.

10

No. 11

Preparation of ketones from cymene and the possibility of their utilization for the synthesis of alcohols by the Grignard method. M. S. Malinovskii and G. K. Barabashova (Gorki State Univ.). *Zhur. Obshchei Khim.* (J. Gen. Chem.) 19, 2068-93(1949).—Friedel-Crafts acylation of cymene without the usual solvent (CS_2) proceeds satisfactorily without reduced yields; the acyl group enters in the *o*-position to Me. Thus, 200 g. cymene, 34 g. Ac_2O, and 133 g. $AlCl_3$ after 5 hrs. on a steam bath gave 51.7% *Ac deriv.*, b_{758} 247-9°, b_4 125-7°, n_D^{20} 1.502, d_4^{20} 0.9510; 39 g. AcCl with 65 g. $AlCl_3$ gave a 53% yield. Similarly, 230 g. cymene, 55 g. $AlCl_3$, and 45 g. PrCOCl gave 30% *PrCO deriv.*, b. 264-6°, n_D^{20} 1.513, d_4^{20} 0.945, which after Clemmensen reduction gave *1-methyl-2-butyl-4-isopropylbenzene*, b. 233-5°, n_D^{20} 1.511, d_4^{20} 0.909. Iso-PrCOCl gave 24.6% *iso-PrCO deriv.*, b_{758} 257-9°, n_D^{20} 1.504, d_4^{20} 0.952, reduced to the *2-iso-Bu deriv.* b. 228-30°, d_4^{20} 0.921; similarly, iso-BuCOCl gave 28.4% *iso-BuCO deriv.*, b. 268-70°, n_D^{20} 1.500, d_4^{20} 0.9410, which yielded the *iso-Am deriv.*, b. 244-5°, d_4^{20} 0.8920, n_D^{20} 1.502. $ClCH_2COCl$ gave the *$ClCH_2CO$ deriv.* (30.2%), b_4 153-5°, n_D^{20} 1.520, d_4^{20} 1.075, while BzCl gave 25% *Bz deriv.*, b_4 183-5°, n_D^{20} 1.534, d_4^{20} 1.0251, when the reaction was run at 50-60°. The ketones do not react with EtMgBr or EtMgI.

G. M. Kosolapoff

SHEVCHENKO, N.N. [Shevchenko, N.M.]; BARABASHOVA, V.N. [Barabashova, V.M.]

Aquatic arthropods as intermediate hosts of helminths. Dop.AN URSR no.11:1555-1559 '60. (MIRA 13:11)

1. Khar'kovskiy gosudarstvennyy universitet. Predstavleno akademikom AN USSR A.P.Markevichem.
(Arthropoda) (Worms, Intestinal and parasitic)

BARABASHOVA, Z.I.

BARABASHOVA, Z.I.

Tissular processes during the adaptation of oxygen deficiency.
Mat.po evol. fiziol. 1:12-35 '56. (MIRA 11:1)
(ANOXEMIA) (ACCLIMATIZATION)

BARABASKIN, A.A.

Seminar on the repair of power system equipment. Prom. energ. 20 no.1:47-48 Ja '65. (MIRA 18:4)

SOMOGYI, Barnabas, dr.; BARABASNE, Peredi Gizella, dr.

Prevention of adhesions leading to intestinal obstruction. Magy. sebeszet 8 no.145-208:198-201 June 55.

1. Budapesti Orvostudomanyi Egyetem Sebeszeti Anatomiai es Mutettani Intezetenek kozlemenye. Igazgato: Nagy Denes dr. egyet. docens.
(INTESTINES, SMALL, surg.,
exper., for prev. of adhesions leading to intestinal obstruct. in dogs)
(INTESTINAL OBSTRUCTION, prev. and control,
exper. surg. in dogs)

GORODETSKIY, A.A.; BARABAY, V.A.

Review of E.F.Romantsev's book "Radiation and chemical defense."
Med. rad. 9 no.1:82-87 Ja '64. (MIRA 17:9)

BARABITS, Elemer, erdomuvelesi eloado

Snow catastrophe in the western part of the Dunantul. Erdo 12 no.4:182-184 Ap '63.

1. Northern Zala Forestry, Zalaegerszeg.

NEMKY, Erno, dr., egyetemi tanar, a biologiai tudomanyok kandidatusa;
BARABITS, Elemer, egyetemi adjunktus

Dendrologic garden of the University of Forestry and Timber Industry. Term tud kozl 8 no.6:278-280 Je'64.

1. University of Forestry and Timber Industry, Sopron.

IGNATOV, B.V.; BARABLIN, Ye.K.; VASIL'YEV, N.N., inzh.

Using mechanisms in track maintenance. Put' i put. khoz. 8 no.1:4-5 '64. (MIRA 17:2)

1. Glavnyy inzh. sluzhby puti Kotel'nichskoy distantsii, Gor'kovskoy dorogi (for Ignatov). 2. Nachal'nik Kotel'nichskoy distantsii Gor'kovskoy dorogi (for Barablin). 3. Kotel'nichskaya distantsiya Gor'kovskoy dorogi (for Vasil'yev).

BARABLINA, G.V.; GRISHCHENKO, N.V.; PEN'KOV, V.Ya.; SELYUKOV, V.P.; POPOV, V.D.

Efficiency of the group-bonus wage system for integrated brigades in stopes. Nauch. trudy KNIUI no.14:427-438 '64.

Ways of improving the overall organization of work in Karaganda Basin stopes. Ibid.:455-464 (MIRA 18:4)

S/044/62/000/010/011/042
B180/B186

AUTHOR: Barabński, F.

TITLE: Certain sufficient conditions for the expansion of a kernel in a bilinear series

PERIODICAL: Referativnyy zhurnal. Matematika, no. 10, 1962, 52, abstract 10B241 (Roczn. Polsk. towarz. mat., Ser. 1, 6, 1961, 91-107 [Pol.; summaries in Russ. and Eng.])

TEXT: In the part which deals with the uniform convergence of a bilinear series, the well-known Mercer theorem goes over to indefinite kernel δ. Symmetrical non-degenerate kernels are here considered, bounded, or at least weakly singular, in the square [a,b;a,b]. The following hypothesis is made for kernels of this kind: If the kernel $K(x,y)$ is continuous in the square $Q[a+\alpha, b-\beta; a+\alpha, b-\beta]$, where $\alpha \geqslant 0$ and $\beta \geqslant 0$ are fixed numbers and

$$\int_a^b |K(x_1,u)-K(x_2,u)|^2 du < \omega(|x_2-x_1|)$$

($\omega(x)$ is a non-negative non-vanishing function which is specific for all $x \geqslant 0$ for which $\omega(0) = 0$, $\omega(x) > 0$, for $x > 0$, $(\omega(x)/x) \to 0$ at $x > 0$) for any two points x_1 and x_2 of ([a+α, b-β]), then the bilinear series

Card 1/2

Certain sufficient conditions ...

$$\sum_{i=1}^{\infty} \frac{\varphi_i(x)\,\varphi_i(y)}{x_i}$$

in the Q square will converge uniformly toward the kernel K(x,y). With slightly different conditions at the kernel, it becomes permissible to differentiate the bilinear series term-by-term through the variable x, with uniform convergence of the differentiated series toward the derivative $K'_x(x,y)$, in a square rather smaller than the Q square. At the end of the work there is a relaxation of the conditions of one of Hammerstein's propositions regarding the uniform convergence of a bilinear series, for the two-dimensional kernel $K(x,y;\xi,\eta)$. [Abstracter's note: Complete translation.]

Card 2/2

BARABOI, V., candidat in stiinte medicale

Rays against rays. St si Teh Fu: 15 no.4:14-15 Ap '63.

ANASHKIN, I.A., kapitan 1 ranga; BARABOLYA, P.D., polkovnik yuridicheskoy sluzhby; VOLKOV, A.S., inzh.-kapitan 1 ranga; VOROB'YEV, A.P., kapitan 1 ranga; VASIL'YEV, I.V., kapitan 1 ranga zapasa; V'YUNENKO, N.P., kand.voyenno-morskikh nauk, kapitan 1 ranga; GENKIN, M.L., dotsent, kand.tekhn.nauk, inzhener-kontr-admiral; YEREMENKO, B.Ya., kapitan 1 ranga; ZVEREV, B.I., kand.istor.nauk, mayor; KAZANKOV, A.A., kapitan 1 ranga; KOZIN, K.K., kapitan 1 ranga zapasa; KOLYADA, N.I., kapitan 1 ranga zapasa; KULINICH, D.D., inzh.-kapitan 1 ranga; LOBACH-ZHUCHENKO, M.B., dotsent, inzhener-kapitan 2 ranga zapasa; MASHAROV, A.I., polkovnik zapasa; MYASISHCHEV, V.I., inzhener kontr-admiral; PETROV, L.G., kapitan 1 ranga v otstavke; PROKOF'YEV, V.M., kapitan 1 ranga; POZNAKHIRKO, A.S., kapitan 1 ranga zapasa;

(Continued on next card)

ANASHKIN, I.A.---(continued) Card 2.
PYASKOVSKIY, G.M., polkovnik; SINITSYN, N.I., polkovnik. Prinimali uchastiye: ANDREYEV, V.V., kapitan 1 ranga; IVANOV, V.P., inzhener-kapitan 2 ranga; CHERNOUS'KO, L.D., inzhener-kapitan 1 ranga; SHIKANOV, Ye.P., inzhener-kapitan 2 ranga. FADEYEV, V.G., vitse-admiral zapasa, glavnyy red.; GERNGROSS, V.M., kapitan 1 ranga zapasa, red.; STAROV, N.N., kapitan 1 ranga v otstavke, red.; SOKOLOVA, G.F., tekhn.red.

[Marine dictionary] Morskoi slovar'. Moskva, Voen.izd-vo M-va obor. SSSR. Vol.2. O - IA. 1959. 440 p. (MIRA 12:12)
(Naval art and science--Dictionaries)
(Merchant marine--Dictionaries)

BARABOLYA, P.D., polkovnik yustitsii

Basic positions of the naval ceremonial. Mor. sbor. 48 no.9:10-16 S '65. (MIRA 18:8)

BARABOLYA, P.D., polkovnik yustitsii; LESNIKOV, N.D.

New instructions on border protection for the U.S.S.R. Mor.sbor. 44 no.2:11-19 F '61. (MIRA 14:4)
(Russia—Boundaries) (Border guard)

BARABOLYA, P.D., polkovnik yustitsii; IVANASHCHENKO, L.A., dotsent, kand. yuridicheskikh nauk, kapitan 1-go ranga

Status of territorial waters under International Law. Mor.sbor. 46 no.2:32-41 F '63. (MIRA 16:2)

(Territorial waters)

BARABOLYA, S.Ya.; SMIRNOV, F.V.

Milling radial grooves and segments on a gear-milling machine.
Stan. i instr. 34 no.9:31-32 S '63. (MIRA 16:11)

BARABOLYA, S.Ya.

Cutting ratchet-wheel teeth on a gear-shaping machine. Stan. i instr. 35 no.10:41 O '64. (MIRA 17:12)

[redacted]

BARANOVA, T.Ya.

Multiple Hg. Stan. i instr. 35 no.11:38 N '64. (MIRA 18:3)

BARABOS, JANOS

HUNGARY/Optics - Optical Technology K-4

Abs Jour : Ref Zhur - Fizika, No 5, 1958, No 11642

Author : Barabos Janos
Inst : Not Given
Title : Magnification of Sighting Tubes

Orig Pub : Kep-es hangtechn., 1957, 3, No 3, 82

Abstract : For Part I see Referai Zhur Fizika, 1958, No 3, 6881

Card : 1/1

BERESTOV, A.V. (Head District Veterinary Doctor), BERESTOV, V.A. (Candidate of Veterinary Sciences), KLYAPISHEV, I.A., SHAKMAKOVA, V.I. and MAKAROV, N.V. (Veterinary Doctors), BARABOSHIN, S.A., BUCHINOV, I.N., LYAMIN, A.F., FEDOROV, Yu. I., and FILIMONOV, I. Ya. (Veterinary Medical Assistants, Ul'yanov Oblast', Terentul'sk District).

"Protein hydrolysates in dispepsia in newborn calves..."
Veterinariya, vol. 39, no. 3, March 1962 pp. 71

BELEN'KIY, B.G.; BARABOSHINA, I.S.

Microanalytical hydrogenation. Zhur.anal.khim.16 no.3:337-342 My-Je '61. (MIRA 14:6)

1. Leningrad Scientific-Research Institute of Antibiotics.
(Hydrogenation)
(Microchemistry)

16(1)

AUTHOR: Beraboshin, N.M. SOV/140-59-3-3/22

TITLE: Dual-Conformal Transformation of the Complex of Straight Lines

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Matematika, 1959, Nr 3, pp 22-29 (USSR)

ABSTRACT: In the three-dimensional Euclidean space let the straight line of a complex be defined according to Blaschke by the dual vector $E_1 = E_1(u^1, u^2, u^3)$. Let $E_1 = E_1(t)$ be one of the ruled surfaces of the complex and $\sqrt{dE_1^2} = dS$. Two complexes are called dual-conformal if between the rays of them there exists a one-to-one relation for which the dual angles between two neighboring straight lines of corresponding surfaces satisfy the condition $d\Lambda^2 = \Lambda^2 dS^2$. Theorem 1 contains necessary and sufficient conditions that two complexes ΛC and C are dual-conformal. In theorem 2 the existence of such complexes is proved. In theorem 3 and 4 the author gives invariants of the dual-conformal transformation. In theorem 5 special dual-conformal transformations are considered. As a special case the author obtains

Card 1/2

the k-transformation of K.N.Tikhotskiy. The author thanks A.D.Aleksandrov for the discussion of the present paper. There are 4 references, 2 of which are Soviet, 1 German, and 1 Italian.

ASSOCIATION: Ufimskiy gosudarstvennyy universitet (Ufa State University)

SUBMITTED: May 4, 1958

BARABOSHIN, V.F., inzh.

Unevenness of rail surface as source of ballast deformations.
Put' i put. khoz. 9 no.12:34-35 '65. (MIRA 19:1)

ACC NR: AR6027500 SOURCE CODE: UR/0137/66/000/004/G023/G024

AUTHOR: Baraboshkin, A. N.; Lebedeva, K. P.

TITLE: Effect of electrolysis conditions on the structure of zirconium deposits. III. The role of the valence state of zirconium in the melt

SOURCE: Ref. zh. Metallurgiya, Abs. 4G182

REF SOURCE: Tr. In-ta elektrokhimii. Ural'skiy fil. AN SSSR. vyp. 7, 1965, 59-67

TOPIC TAGS: electrolysis, zirconium

TRANSLATION: Studies showed that the nature of cathodic deposits changed very strongly for the same general Zr concentrations in the melt (5 wt %), constant initial values of D (i_k = 2 a/cm^2), temperature (800°C) and quantity of electricity, but for a different oxidation-reduction potential of the system. For oxidation-reduction potentials, differing significantly from the equilibrium Zr potential, very fine particles of cathodic deposit were obtained in the form of porous attachments of crystallites. With a melt composition approaching equilibrium, nodules of highly faceted coarse crystals formed on the cathode. 13 references. G. Svodtseva.

SUB CODE: 11,13

UDC: 669.296.087

Card 1/1

[redacted], Yu.F. (Kiev)

Determining some selected characteristics of the results of psychophysiological experiments by means of electronic computer. Vop. psikhol. 11 no.2:67-74 Mr-Ap '65. (MIRA 18:4)

L 30994-66 EWT(m)/ETC(f)/EWP(j)/T/EWG(m) RPL DS/WW/RM

ACC NR: AP6002471 (A) SOURCE CODE: UR/0191/66/000/001/0006/0008

AUTHORS: Kolesnikov, G. S.; Tevlina, A. S.; Chuchin, A. Ye.; Baraboshkina, I. A.

ORG: none

TITLE: Graft copolymers of styrene-divinylbenzene-polyarylene ethyl and styrene-divinylbenzene-polyarylene ethyl hydroperoxide

SOURCE: Plasticheskiye massy, no. 1, 1966, 6-8

TOPIC TAGS: graft copolymer, chain reaction, polymerization, polymer, polymer chemistry, polystyrene

ABSTRACT: Graft copolymerization of styrene-divinylbenzene-polyaryl-ethyl and styrene-divinylbenzene-polyarylethyl hydroperoxide were studied to investigate the possibility of synthesizing large-pore sulfo-cation-exchangers on the basis of three-dimensional graft-copolymers. The copolymers were synthesized by two methods: 1) by grafting styrene to a polymeric hydroperoxide as described by the authors (Vysokomolek, soyed., 7, 10, 1753, 1965), and 2) by chain transfer via the mobile hydrogen atom of polyarylene ethyl in the presence of a free radical initiator. The degree of swelling in benzene solution, the molecular weight distribution, the ion absorption capacity, and the amount of hydroperoxide in the synthesized polymers were determined. The experimental results are presented in graphs and tables (see Fig. 1). It was found that the synthesized sulfo-cation-exchangers were able to

Card 1/2 UDC: 678.746.22—134.6

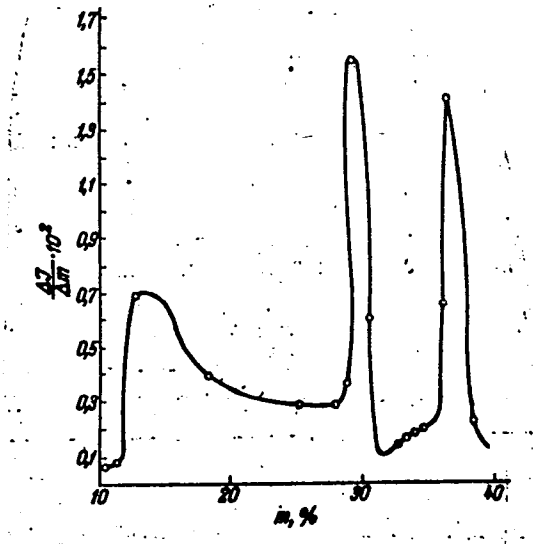


Fig. 1. Molecular weight distribution determined by turbidometric titration of dioxane solution of the products of polymerizing styrene in the presence of polyarylethyl.

sorb large organic ions. The sorption of low molecular weight ions was more complete than of higher molecular weight ions. Orig. art. has: 3 tables and 4 graphs.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 007/ OTH REF: 001

L 2324-66 EWT(m)/EPF(c)/EWP(j)/T/ETC(m) WW/RM

ACCESSION NR: AP5022222 UR/0191/65/000/009/0016/0019
678.673.01:536.495:537.311

AUTHOR: Vinogradova, S. V.; Korshak, V. V.; Fridman, Ye. I.; Andreyeva, M. A.; Baraboshkina, L. N.

TITLE: Heat-resistant electroinsulating polyarylate plastic material

SOURCE: Plasticheskiye massy, no. 9, 1965, 16-19

TOPIC TAGS: plasticizer, heat resistant plastic, heat resistant material, polyaryl plastic, terephthalic acid, electric insulator, plastic , heat resistance, polyarylate, phenolphthalein, bisphenol A, isophthalic acid, softening point

ABSTRACT: The possibility of preparing heat-resistant plastics suitable for electric insulators and capable of being compression molded was studied by preparing neat and mixed compositions from phenolphthalein isophthalate or terephthalate based polyarylates (i.e., aromatic polyesters). It was also attempted to prepare polymers which had to be kept at their melting temperature during compression molding for a minimum time. Thus, powdered poly(phenolphthalein isophthalate) could be compression molded at 270—300C into semitransparent light-brown samples of plastic designated as F-1, while the poly(phenolphthalein terephthalate), designated as plastic F-2, cracked

Card 1/2

L 2324-66
ACCESSION NR: AP5022222

and disintegrated after being taken out of the molds. The addition of plasticizers, "Sovol" [biphenol dichloride], a polysiloxane and some other polyarylates based on either bisphenol A or phenolphthalein sebacate, made it possible to prepare compression molded samples from F-2 with softening points from 255 to 340C. The addition of Sovol in varying amounts or the same polysiloxane to F-1 produced plastics with softening points between 250 and 285C. Even the sample with 10% Sovol still had a softening point of 230C, which was considered to be sufficiently high, combined with good workability of the material. The introduction of fillers (up to 40% by weight of the composition) was also studied for the purpose of reducing cracking of the plastic and to save polymer materials. Good results were obtained with quartz flour or talcum, while aluminum oxide or silica gel were ineffective. The filled F-2 polyarylate samples were resistant to thermal shock; they withstood repeated sharp temperature change from -60 to 250C. The polyarylate compositions obtained had high dielectric properties in a rather wide range of temperatures. Orig. art. has: 4 figures and 4 tables. [BN]

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MT, OC

NO REF SOV: 004 OTHER: 000 ATD PRESS: 4107

Card 2/2 nd

34382
S/539/61/000/032/011/017
D204/D301

1.1800

AUTHORS: Kudryavtsev, N.T., Golovchanskaya, R.G. and Baraboshkina, N.K.

TITLE: The cathode process in the electrolysis of Ti from aqueous solutions

SOURCE: Moscow. Khimiko-tekhnologicheskiy institut. Trudy, no. 32, 1961. Issledovaniya v oblasti elektrokhimii, 272-277

TEXT: Electrodeposition of Ti was studied on Cu, brass, Pt and Pb cathodes, with Pt and stainless steel anodes, from alkaline and acid aqueous solutions, since little work has been done in this field. The standard potential, position in the electronegative series and hydrogen overvoltage of Ti are first discussed, on the basis of results obtained by Soviet and Western workers. The metatitanates of Na, Mn, Cr and Fe were tried but proved only sparingly soluble in aq. NaOH and hydrolyzed readily. In the case of Na metatitanate the maximum concentrations (15-20 g Ti/l) were obtained by dissolving the titanate in 20-30% aq. NaOH, with additives,

Card 1/3

The cathode process in the ...

at 20°C. Electrolysis was conducted in a 250 ml glass bath, finding that Ti deposited from tetravalent ions only. The current efficiency (η) fell sharply over 20-30 min., from 45-60% to ~ 0.5%, independently of the material of the cathode, (except during the first few minutes), owing probably to the high cathode potential of Ti and the relatively low hydrogen overvoltage on Ti. η Also decreased with increasing current density, D_k, (20-40 amp/dm^2) and increasing temperature (20 to 50°C). The acid electrolytes were based on 40% HF and metallic Ti and the experiments were conducted in a 250 ml plexiglass bath, dividing the cathode and anode regions with a polyvinyl diaphragm. It was found that Ti was deposited only from Ti^{3+} ions and only when Ti^{3+}:Ti^{4+} was 1:1 or higher. Current efficiency fell as before, from 10-20% to ~ 1 - 6%, after 30 min. The temperatures studied were 20 and 50°C, D_k 40 - 20 amp/dm^2 and the pH 2.2 - 2.4. Brilliant silvery coatings of Ti, 3-4 μ thick were obtained from both the alkaline and acid electrolytes, but deposits from the fluoride solutions tended to be more porous. Methods of analysis of the solutions and of the deposit are given in full. There are 3 figures,

Card 2/3

The cathode process in the ...

4 tables and 16 references: 3 Soviet-bloc and 13 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: Sin-ichi Satoh and Koshin Jamane, J. of the Scientific Research Institute, v. 50, March(1956); Tadzima, Fudzivara and Mori, [Abstracter's note: Names transliterated], J. Electrochem.Soc. Japan, 24, 212-216, (1956); M.E. Straumanis, S.T. Shin and A.W. Schlechten, J. Phys. Chem., 59, 317, (1955); Tadzima, Seki and Mori, J. Electrochem. Soc. Japan, (1956).

Card 3/3

S/539/61/000/032/014/017
D204/D301

AUTHORS: Kudryavtsev, N.T., Tyutina, K.M. and Baraboshkina, N.K.

TITLE: The effects of organic additives on the cathode process in the electrolysis of Sn-Ni alloys

SOURCE: Moscow. Khimiko-tekhnologicheskiy institut. Trudy, no.32, 1961. Issledovaniya v oblasti elektrokhimii, 289-292

TEXT: Continuation of earlier work, inspired by Soviet and Western investigations which showed the addition of surface active organic compounds could influence the composition and quality of alloys deposited from electrolytes containing more than 1 metallic salt. Additions of p-phenyl sulphonic acid (I) prepared from (a) freshly distilled phenol, (b) chemically pure synthetic phenol, (c) technical phenol and (d) crude carbolic acid, were made to the electrolyte consisting of 300 g/l $NiCl_2 \cdot 6H_2O$, 50 g/l $SnCl_2 6H_2O$ and 60 g/l NH_4F, to investigate their effects on the quality and composition of the deposit and on the cathodic polarization.

Card 1/2

The effects of organic ...

The additions were made at 50-65°C, at pH 4.5. It was found that the cathodic polarization, quality and composition of the deposits depended on the purity of the phenol from which I was prepared. Additions of I prepared from freshly distilled or chemically pure phenol had practically no effect. 0.5-0.7 moles/l of I prepared from technical phenol displaced the electrodeposition potentials in the electronegative direction by 100-200 mv and lowered the Sn content in the alloy by 11-14% (to 51-54%), with current densities of 0.5-4.0 amp/dm^2. The deposits were shiny and elastic. Raising the temperature to 55-65°C further decreased the Sn to 49-50%. The effect of I prepared by the sulphonation of crude carbolic acid increased the cathodic polarization by 400 mv during the deposition of Sn and, thereby, lowered the latter to 20% in the alloy; the deposits were gray when the current density exceeded 0.2 amp/dm^2. The addition of 1-1.5 g/l of di-2-dimethylamino-5-pyridyl methane increased the cathodic polarization for both Sn and Ni and had, therefore, little effect on the alloy composition. The deposits were elastic, light in color and contained up to 60% Sn. There are 2 figures and 5 references: 4 Soviet-bloc and 1 non-Soviet-bloc.

Card 2/2

S/080/62/035/002/020/022
D258/D302

N,T

AUTHORS: Kudryavtsev, V. N., Baraboshkina, N. K. and Batrukova, M. G.

TITLE: A photometric method for studying the conditions under which metallic powders are formed

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 2, 1962, 450-452

TEXT: The author developed a method for the accurate determination of the moment, at which a powdery metallic deposit begins to form during electrodeposition. The method consists in continuously measuring the reflective capacity of the cathode as a function of time or of current density. A light beam was concentrated on the cathode surface and reflected on to a photocell; the resulting current was measured and registered on a recorder as a function of time. A typical curve started with a short horizontal section, corresponding to the pre-deposition period; this was followed by a sloping section which indicated the decrease in reflective capacity caused by the onset of powder deposition; the curve was finished by another horizontal section at a lower level. Slope of the middle

Card 1/2

section became more steep with rising current density. It was shown in the electrodeposition of Ni that the quality of the deposit underwent a sudden change from lustrous to powdery, within a relatively narrow range of current densities. This could be detected by continuously recording the change in reflective capacity as a function of current density. There are 5 figures and 13 Soviet-bloc references.

SUBMITTED: February 20, 1961

Card 2/2

L 48983-65 EWP(z)/EWT(m)/EWG(m)/EWP(b)/EWP(t)/T Pad IJP(c) RWH/JD/HW

ACCESSION NR: AP5011469 UR/0076/65/039/004/0870/0876

AUTHOR: [illegible] N.T.; Golovchanskaya, R.G.; Baraboshkina, N.K.; [illegible]

TITLE: [illegible] titanium-iron and titanium-nickel [illegible] solutions

SOURCE: Zhurnal fizicheskoy khimii, v. 39, no. 4, 1965, 870-876

TOPIC TAGS: electroplating, alloy deposition, titanium alloy, iron alloy, nickel alloy, current efficiency, metatitanate electrolyte

ABSTRACT: Ti-Fe alloys of varying composition were deposited from alkaline solutions of sodium and iron metatitanate. The cathodes used were made of platinum [illegible] Armco plates served as the cathodes [illegible] at 20, 50, and 75C. The nickel-titanium [illegible] boric acid solutions. The latter [illegible] relative discharge rates of the [illegible] were measured in the course of separate and joint deposition of the [illegible] influence of concentration of the salts in the electrolyte, current density, stirring, and other factors on the composition and quality of the deposits, current efficiency, and

Card 1/2

L 48093-65

ACCESSION NR: AP5011466

4

carbide penetration was studied. In the case of Ti-Fe alloys, coatings containing

[illegible] and V. F. Moiseyev

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. [illegible]
(Moscow Chemical Engineering Institute)

SUBMITTED: 03Aug63 ENCL: 00 SUB CODE: MM

NO REF SOV: 004 OTHER: 000

Card 2/2 mf

BARABOSHKINA, N.K.; VAGRAMYAN, A.T.; TITOVA, V.N.

Feasibility of determining by photometry the adhesion of an electrolytic deposit to the base. Zashch. met. 1 no.2:230-232 Mr-Ap '65. (MIRA 18:6)

1. Institut fizicheskoy khimii AN SSSR.

L 2618-66 EWT(m)/EPF(c)/EWP(i)/EWP(t)/EWP(b) JD/WB

ACCESSION NR: AP5011366 UR/0365/65/001/002/0230/0232
620.199.621.351.7

53
50
B

AUTHOR: Baraboshkina, N. K.; Vagramyan, A. T.; Titova, V. N.
44,55 44,55 44,55

TITLE: On the possibility of photometric determination of adhesion of electrolytic plating to its base

SOURCE: Zashchita metallov, v. 1, no. 2, 1965, 230-232

TOPIC TAGS: nickel plating, corrosion protection, electrolytic deposition, adhesion
44,55, 18

ABSTRACT: The feasibility of continuous photometric characterization of the adhesion of nickel-plating to a metal base during the electroplating process was examined. After focusing a light beam on an electrode surface subjected to electrolytic nickel-plating the intensity of the reflected light was measured photometrically. The nickel plating reflectivity and polarization were measured in an electrolyte containing: 300 g/l of $NiSO_4 \cdot 7H_2O$, 60 g/l of $NiCl_2 \cdot 6H_2O$, and 38 g/l of H_3BO_3; at pH = 3, with a current density of 40 mA/cm^2, and at 25°C. The nickal platings were deposited on passivated (immersed for 20 sec in a chromic acid--250 g/l) or activated (immersed in 5% H_2SO_4) nickel and steel electrodes. The

Card 1/3

L 2618-66

ACCESSION NR: AP5011366

3

change in reflectivity and polarization during the process of nickel-plating of steel samples is shown in fig. 1 of the Enclosure. The electrode surface activity and the strength of adhesion of nickel plating is well characterized in terms of reflectivity decline after the initial current switch-on. The strength of the plating-base adhesion is determined by the photometric method more accurately than by either mechanical or electrochemical methods. It is found that passivation with chromic acid impairs the adhesion strength. Orig. art. has: 3 figures.

ASSOCIATION: Akademiya nauk SSSR, Institut fizicheskoy khimii (Academy of Sciences SSSR, Institute of Physical Chemistry) MM55

SUBMITTED: 20Aug64 ENCL: 01 SUB CODE: MM

NO REF SOV: 003 OTHER: 001

Card 2/3

L 2618-66

ACCESSION NR: AP5011366

ENCLOSURE: 01

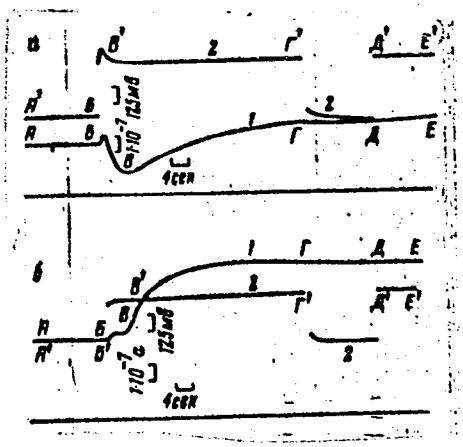


Fig. 1. a--passivated sample; b--activated sample; 1--reflectivity; 2--polarization; AB and A'B'--prior to current switch-on; BCD and B'C'D'--during the electrolysis process, DE and D'E'--current-off period; EF and E'F'--after the second on-current period.

Card 3/3

L 16127-66 EWT(m)/EWP(t) IJP(c) JD/HW/WB

ACC NR: AP6004178 SOURCE CODE: UR/0076/66/040/001/0063/0067

AUTHOR: Bagramyan, A.T.; Baraboshkina, N.K.

ORG: Institute of Physical Chemistry, Academy of Sciences SSSR (Institut fizicheskoy khimii, Akademiya nauk SSSR)

TITLE: Study of the reflectivity and structure of thin film nickel electrodeposits

SOURCE: Zhurnal fizicheskoy khimii, v. 40, no. 1, 1966, 63-67

TOPIC TAGS: nickel plating, copper, steel, light reflection, electrodeposition, electrolysis, metal film, electrode, electrolyte, solid mechanical property

ABSTRACT: The effect of the nature of the substrate metal and chemical state and finish of the surface on the reflectivity of thin-film nickel electrodeposits was studied during electrolysis at pH 4, D_c = 40 mA/cm^2, and t = 40C in an electrolyte consisting of 300 g $NiSO_4 \cdot 7H_2O$, 60 g $NiCl_2 \cdot 6H_2O$, and 38 g H_3BO_3 per liter. It was found that the nature of the substrate metal (copper, nickel, steel) affects the reflectivity of the nickel electrodeposit to a lesser extent than does the chemical state of the surface. The reflectivity is determined primarily by the finish of the electrode surface. From the reflectivity-electrodeposit thickness curves an approximate determination can be made of the leveling

Card 1/2 UDC: 541.13

capacity of surface active admixtures and the roughness and true surface area of the electrode. The data also led to the following conclusion of practical significance: lustrous nickel deposits with good mechanical properties can be obtained by depositing a 1.5 — 2 μ film of lustrous nickel on ordinary electrolytic nickel. The first layer provides the desirable mechanical and anticorrosive properties, and the second makes the deposit lustrous without any mechanical polishing. The electron micrographs were taken in the laboratory of V.M. Luk'yanovich by Z.Ye. Shishenina, to whom the authors express their gratitude. Orig. art. has: 5 figures and 2 formulas.

SUB CODE: 07,11 / SUBM DATE: 08Sep64 / ORIG REF: 002

L 08110-67 EWP(e)/EWT(m)/EWP(v)/EWP(t)/ETI IJP(c) BS/GD/AA/AT

ACC NR: AP6033076 SOURCE CODE: UR/0032/66/032/010/1223/1226

AUTHOR: Vagramyan, A. T.; Baraboshkina, N. K.; Batrukova, M. G.; Titova, V. N. 44 B

ORG: Institute of Physical Chemistry AN SSSR (Institut fizicheskoy khimii AN SSSR)

TITLE: Photometric method for determining the reflectivity and the adhesion of a deposited metal to the backing

SOURCE: Zavodskaya laboratoriya, v. 32, no. 10, 1966, 1223-1226

TOPIC TAGS: electrolytic deposition, light reflection coefficient, adhesive bonding

ABSTRACT: The article describes a method and apparatus for determining the adhesion of an electrolytic coating to the base directly during the electrolysis process, and also for evaluation of the reflectivity of the coating at the time of its deposition. A schematic diagram of the apparatus is shown in Fig. 1. The electrolytic cell consists of a removable cathode 1 and an anode 2, which are fixed to the body of the instrument. The anode is so located with respect to the cathode that uniform distribution of the flow over the whole surface of the electrode is assured. The electrolyte under investigation is placed in a glass vessel 3, which is placed in a thermostatted jacket 4, connected to an ultrathermostat. The photoelectric unit consists of a light source 6, a system of lenses, and the photoelement 7. The reflectivity and the polarization of a nickel deposit were studied in a solution of $NiSO_4 \cdot 7H_2O$—300 grams/liter;

Card 1/3 UDC: 621.357.1:539.61:535.312

L 08110-67
ACC NR: AP6033076

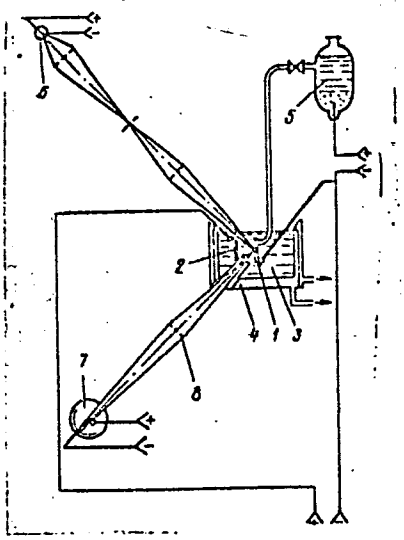


Fig. 1. Schematic diagram of photoelectric instrument

$NiCl_2 \cdot 6H_2O$—60 grams/liter; H_3BO_3—38 grams/liter; pH = 4; D_k = 40 ma/cm^2; t = 25°C. The nickel was deposited on nickel and steel samples with different preliminary treatments of the surface of the metal. The experimental results are shown in graphic

Card 2/3

L 08110-67

ACC NR: AP6033076 O

form. The method is said to be applicable for the determination of adhesion at very high current densities. Orig. art. has: 4 figures.

SUB CODE: 20,07,11/ SUBM DATE: none

Card 3/3 nst

BARABOSHKIN, S.A.

AUTHOR BARABOSHKIN, S.A., KARAMYAN, A.S., FLEROV, [illegible]

TITLE Interaction Between Nitrogen and Gold Nuclei.- (Vzaimodeystviye yader azota s yadrami zolota -Russian)

56-6-4/56

PERIODICAL Zhurnal Eksperim.i Teoret.Fiziki,1957,Vol 32,Nr 6,pp 1294-1297 (U.S.S.R.)

ABSTRACT By using the source of multiply charged ions developed by Morozov (Atomnaia energiia,Vol 3,p 272(1957)) the authors obtained by means of the 150 cm cyclotron of the Academy of Science an intense bundle of monoenergetic ions of five-fold charged N^{14} with the energy of 115 MeV.This bundle was used for the following purposes: 1) Investigations of the dependences of the cross sections of the reactions Au(N,4n), Au(N,5n) and Au(N.6n) on the energy of the nitrogen ions. 2) Determination of the absolute cross sections of these reactions. 3) Determination of the principal mechanism of the interaction of heavy ions with gold nuclei.On the occasion of these experiments stacks of from 10 to 15 nickel foils with a thin coating of gold were irradiated.After irradiation the α-activity of the foil was determined by means of a photomultiplier with ZnS crystal and by means of an amplitude discriminator.The reactions were determined according to the half-value periods of the α-active isotopes concerned.

The thus obtained dependences of the cross sections of the above mentioned reactions on the energies of the nitrogen ions are illustrated by a diagram.The characteristic course taken by the curves with the maxima is due to the presence of competing reactions (with

Card 1/2

56-6-4/56

Interaction Between Nitrogen and Gold Nuclei.

emission of a different number of neutrons) and also to the fission of the composed nucleus.The sharp decrease of the cross section of the reaction (N,4n) at energies of more than 9o MeV is explained by the fact that within this energy domain the reactions with an emission of 5 neutrons predominate.In a similar manner also the decrease of the cross section of the reaction (N,5n) and (N,6n) at energies of more than 1oo and 11o MeV reppectively bay be explained. The curve for the dependence of the sum of the cross sections of all reactions (with emission of neutrons) upon the energy of the nitrogen ions has also a characteristic maximum.
(3 illustrations)

ASSOCIATION Not Given.
PRESENTED BY
SUBMITTED 21.1.1957
AVAILABLE Library of Congress.
Card 2/2

BARABOSHKIN, S. A., DRUIN, V. A., FLEROV, G . N., KARAMYAN, A. S., and Polikanov, S. M. (Acad. Sci. USSR)

"Interaction between Nitrogen Nuclei and Heavy Elements Nuclei,"

paper submitted at the A-U Conf. on Nuclear Reactions in Medium and Low Energy Physics, Moscow, 19-27 Nov 57

BARABOSHKIN, V.; KRISTAL', V.

Radio-controlled ship model. Voen.znan. 31 no.12:25 D '55.
(MLRA 9:5)
(Ship models--Radio control)

BARABOSHKIN, V.

Apparatus for radio-controlled ship models. Voen.znan. 33 no.5:34-35 My '57. (MLRA 10:7)
(Ship models--Radio control)