MAL'KOV, V., starshiy leytenant

Group of voluntary propagandists. Komm. Vooruzh. Sil 4 no. 19:83 O '63. (MIRA 17:7)

MALKOV, U.Kh.

"Elementary mathematical programming" by R.W.Metzger. Reviewed by U.Kh.Malkov. Zhur. vych. mat. i mat.fiz. 4 no.1:208 Ja-F '64. (MIRA 17:6)

S/208/62/002/002/013/014
D234/D302

Algorithm of solution ...

to be more advantageous than the simplex method of inverse matrices. There are 2 references: 1 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: S.L. Gass: Linear programming. New York - Toronto - London, 1958.

SUBMITTED: June 1, 1961

Card 3/3

/6

Algorithm of solution ...

$$\sum_{i=1}^{n} x_{ij} \leqslant B_j \qquad (j = 1, \ldots, m), \tag{3}$$

$$x_{ij} \geqslant 0 \qquad (i = 1, \ldots, n; \quad j = 1, \ldots, m). \tag{4}$$

and

$$\sum_{j=1}^{m} a_{ij} x_{ij} + x_{io} = A_i \qquad (i = 1, \ldots, n) \tag{2'}$$

$$\sum_{i=1}^{n} x_{ij} + x_{oj} = B_j \qquad (j = 1, \ldots, m). \tag{3'}$$

$$x_{ij} \geqslant 0 \qquad (i = 0,1,\ldots,n; \quad j = 0,1, \ldots, m) \tag{4'}$$

these are stated to occur in many practically important problems of linear programming. The algorithm of solution is described in detail, and stated

/B

Card 2/3

16 6800

S/208/62/002/002/013/014
D234/D302

AUTHOR: Malkov U.Kh.

TITLE: Algorithm of solution of the distribution problem

PERIODICAL: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 2, no. 2, 1962, 358 - 366

TEXT: The author considers the problems of finding the minimum of

$$f = \sum_{i=1}^{n} \sum_{j=1}^{m} c_{ij} x_{ij} \qquad (1)$$

or

$$f = \sum_{i=1}^{n} \sum_{j=1}^{m} c_{ij} x_{ij} + M \sum_{i=1}^{n} x_{io} \qquad (1')$$

with the respective limitations

$$\sum_{j=1}^{m} a_{ij} x_{ij} = A_i \qquad (i = 1, \ldots, n), \qquad (2)$$

Card 1/ 3

FROLOV, Yu.S., otv.red.; ZHAVORONKOV, N.M., red.; AGLINTSEV, K.K., red.; ALEKSEYEV, B.A., red.; BOCHKAREV, V.V., red.; LESHCHINSKIY, N.I., red.; MALKOV, T.P., red.; SINITSYN, V.I., red.; POPOVA, G.L., red.; NOVICHKOVA, N.D., tekhn.red.

[Manufacture of isotopes; Large gamma-ray machines; Radiometry and dosimetry; transactions of the All-Union Conference on the Use of Radioactive and Stable Isotopes and Radiation in the National Economy and Science] Trudy Vsesoiuznoi nauchno-tekhnicheskoi konferentsii po primeneniiu radioaktivnykh i stabil'nykh izotopov i izlucheniy v narodnom khoziaistve i nauke: Poluchenie izotopov. Moshchnye gamma-ustanovki. Radiometriia i dozimetriia. Moskva, Izd-vo Akad.nauk SSSR, 1958. 293 p. (MIRA 12:4)

1. Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya po primeneniyu radioaktivnykh i stabil'nykh izotopov i izlucheniy v narodnom khozyaystve i nauke, 2d, Moscow, 1957.
(Radioisotopes) (Gamma rays) (Nuclear counters)

L 12439-63 EWT(m)/BDS AB

ACCESSION NR: AP3004300 S/0064/63/000/005/0069/0070

AUTHORS: Popov, A. F.; Pushkin, D. L.; Antipin, L. M.; Mal'kov, S. V.

TITLE: Airtight centrifuge for purifying liquids from finely-dispersed solid admixtures

SOURCE: Khimicheskaya promy*shlennost', no. 5, 1963, 69-70

TOPIC TAGS: centrifuge, liquid purification

ABSTRACT: Authors designed a centrifuge with a shielded electric drive. Advantage of this is that contact of starting suspension, clarified solution and residue with air is eliminated during centrifuging. Toxic, self-igniting, oxidizable, and other liquids can be purified from solid finely-dispersed impurities in this centrifuge. Centrifuging can be effected at elevated pressures or under vacuum. An experimental centrifuge of this type was used for a long time to purify solutions of various pyrophoric aluminum alkyls of finely-dispersed aluminum and sodium chloride. Results were good. Orig. art. contains: 1 figure and 1 table.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 15Aug63 ENCL: 00

SUB CODE: CH NO REF SOV: 005 OTHER: 005

1/1

A Silicon-Iditol Lacquer for Wire Tensiometers Exposed to High Moisture

SOV/32-24-9-51/53

ASSOCIATION: Zavod "Faneroprodukt" ("Faneroprodukt" Plant)

Card 2/2

SOV/32-24-9-51/53

AUTHORS: Malkov, S.I., Nessonov, B.D., Matveyev, V.A., Nessonova, G.D.

TITLE: A Silicon-Iditol Lacquer for Wire Tensiometers Exposed to High Moisture (Kremneiditolovyy lak dlya provolochnykh tenzometrov, rabotayushchikh v usloviyakh vysokoy vlazhnosti)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol 24, Nr 9, pp 1166-1166 (USSR)

ABSTRACT: The sensitivity of tensiometers can be reduced by the effect of moisture. For this reason the tensiometer must be protected against moisture. 1948-1949 a lacquer for the protection against moisture was devised at the Moskovskiy khimiko-tekhnologicheskiy institut im. D.I. Mendeleyeva (Moscow Chemical and Technological Institute imeni D.I. Mendeleyev). This lacquer is based on a compound of ortho-silicic ester and iditol and magnesium oxide (lacquer Nr 216), and it meets all requirements. The technique of application of this lacquer is very simple, i.e. it is just painted on. The lacquer is sufficiently resistive, elastic, and it is also resistant to attacks of atmospheric nature and temperature changes. The production of lacquer Nr 216 was started at the "Faneroprodukt" plant (Moscow, 38, Novosimonovskaya sloboda, 2).

Card 1/2

MALKOV, G., kand. tekhn. nauk; TALYANSKIY, L., inzh.

Personality in technical servicing. Grazhd. av. 22 no.5:22-23 My '65.
(MIRA 18:7)

MALKOV, S.

Continuous reconditioning of units. Grazhd.av. 20 no.11:27-28 N '63.
(MIRA 17:2)

1. Vedushchiy inzh. Gosudarstvennogo nauchno-issledovatel'skogo instituta Glavnogo upravleniya Grazhdanskogo vozdushnogo flota.

MALKOV, S., inzh.

Great deal in little. Grazhd.av. 18 no.9:14 S '61. (MIRA 14:9)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut Grazhdanskogo vozdushnogo flota.
(Technological innovations)

LEKHTMAN, I., inzh.; MALKOV, S., inzh.; MASLOV, P., inzh.

Creative initiative of maintenance personnel. Grazhd.av. 16 no.3:21 Mr '59. (MIRA 12:4)
(Airplanes--Maintenance and repair)

SOV/84-58-7-29/46

AUTHOR: Lekhtman, I., Malkov, S.

TITLE: Improving Work Conditions (Usloviya truda uluchsheny)

PERIODICAL: Grazhdanskaya aviatsiya, 1958, Nr 7, pp 33-34 (USSR)

ABSTRACT: The article reports on innovations introduced in the instrument department of an aircraft repair establishment directed by Shakhov, for improving the work conditions and the safety of workers. Work benches equipped with ventilation, instrument and parts cabinets of special design are described. The precautions taken in the special room for applying luminescent coatings to instrument scales are described in considerable detail. The authors urge the same safety measures for other establishments maintaining a special instrument shop. Three photographs accompany the text.

Card 1/1

MALKOV, S., inzhener.

Striving for technical progress. I. Over-all mechanization of labor-consuming operations. Grazhd.av. 13 no.8:34-36 Ag '56. (MLRA 9:10)

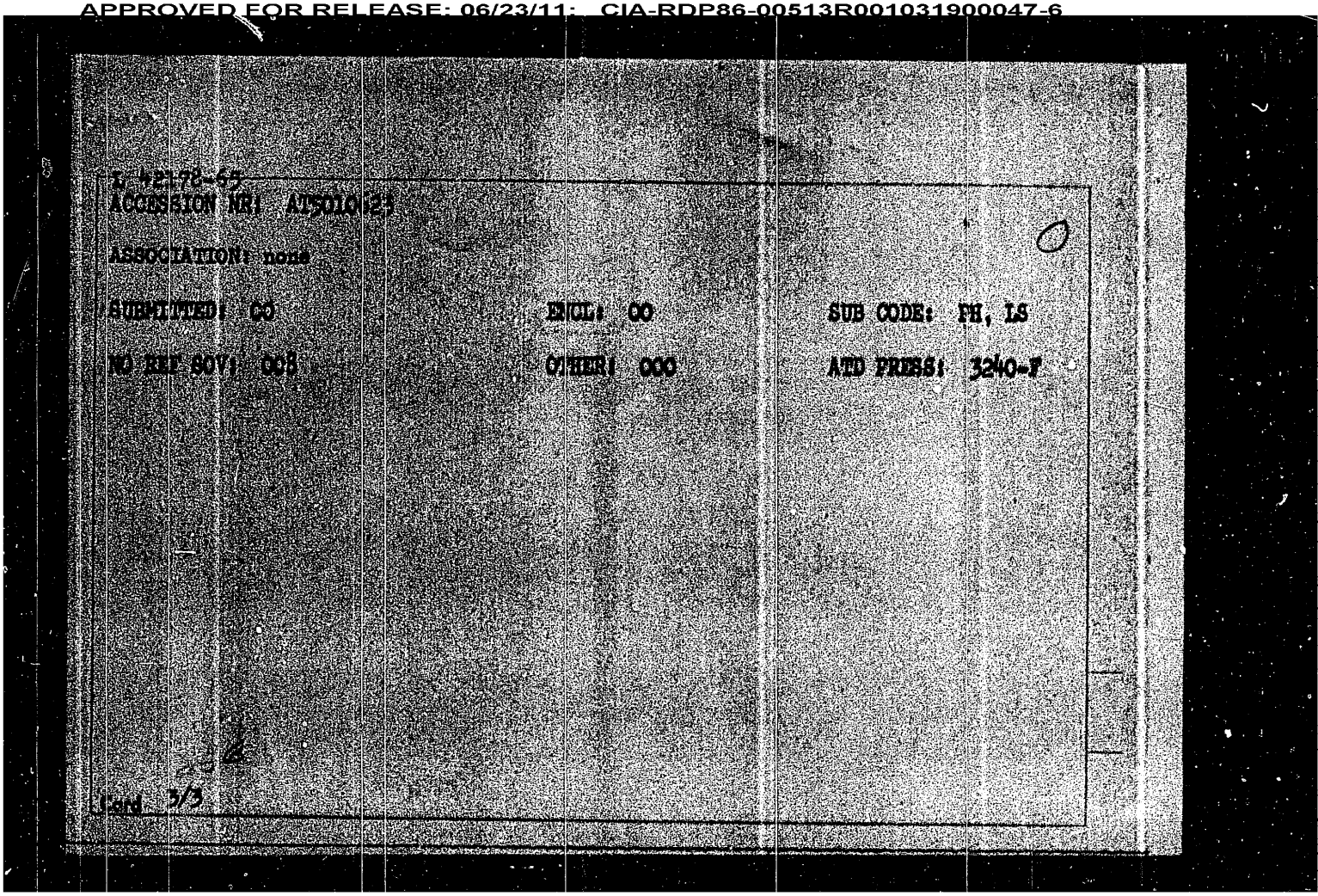
(Airplanes--Maintenance and repair)

MIL'KOV, R.A.

Role of population migrations and the marketing of the southeastern part of Western Siberia in the 18th - 19th centuries. Izv. Vses. geog. ob-va SSSR no.1:3-11 '56.
(MLRA 9:5)

MAL'KOV, P.D.

About Vladimir Il'ich Lenin. Ner. sist., 48 no.4:9-14 Ap '65.
(MIRA 18:6)



T-42178-65
ACCESSION NR: AT5010124

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: PH, LS

NO REF SOV: 003 OTHER: 000 ATD PRESS: 3240-F

Card 3/3

L 42178-65

ACCESSION NR: AT5010523

It was found that the expansion of gas in the gastrointestinal tract during drops in barometric pressure causes changes in the frequency and depth of respiration, the volume of pulmonary ventilation, pulse frequency, the force of cardiac contractions, and the magnitude of arterial pressure. The degree and nature of these changes depend on the magnitude of the pressure on the walls of the stomach and the intestines which develops during expansion of the gas. Changes in respiration and circulation which result from expansion of gas in the gastrointestinal tract due to a drop in barometric pressure are affected chiefly by the mechanism of visceral, interoceptor reflexes from the mechanoreceptors of the stomach and the intestines. The mechanical effect on the diaphragm, the heart, and the vessels of the abdominal cavity play a far lesser role in this process. The vagus, ventral, and abdominal nerves are involved in the above phenomena. The physiological mechanisms brought into play during expansion of gas in the gastrointestinal tract during drops in barometric pressure must be taken into account in the prevention and treatment of decompression disorders resulting from high-altitude flights and ascents from diving.

Orig. art. has 4 figures and 2 tables.

Card 2/3

L 8131-66 EWG(a)-2/EWG(c)/EWG(j)/EWG(r)/EWG(v)/EWG(j)/EWG(j)/Ts(v)-3 Pb-4/
Pe-5 AEDC/AFWL/AMD/AMD/AEDC DB

ACCESSION NR: AT5010125 UR/3147/64/003/000/0242/0251

AUTHOR: Zvorykin, V. N.; Koreshkov, A. A.; Mel'kov, P. I.

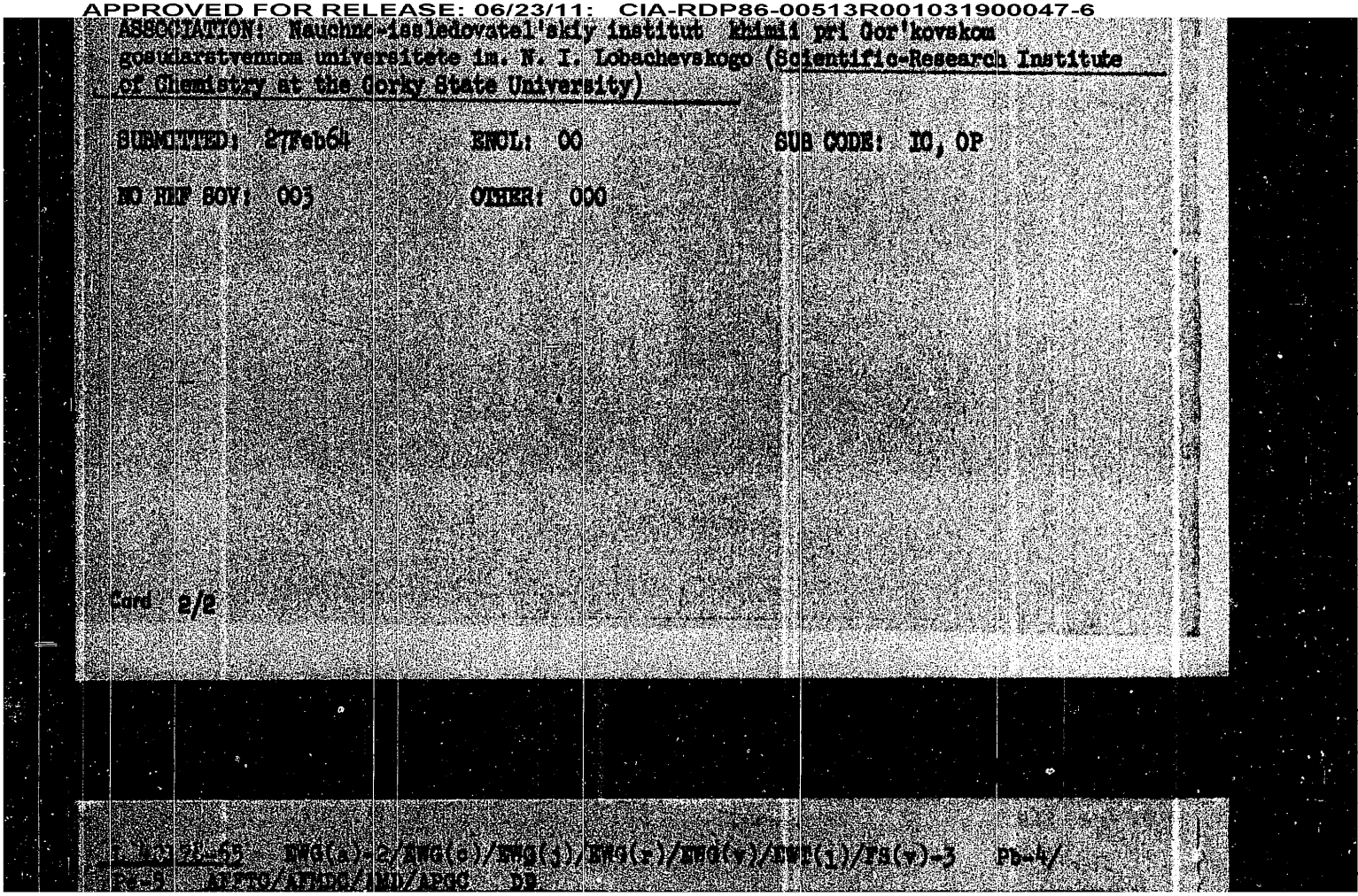
TITLE: Reflexes from mechanoreceptors of the gastrointestinal tract on respiration and the cardiovascular system during drops in barometric pressure

SOURCE: AN SSSR. Institut evolyutsionnoy fiziologii. Punktsii organizma v usloviyakh izmenennoy gazovoy sredy, v. 3, 1964, 242-251

TOPIC TAGS: pressure drop, pressure chamber, barometric pressure effect, gastrointestinal tract, mechanoreceptor, respiratory system, cardiovascular system

ABSTRACT: Two series of experiments were performed on dogs to study the physiological mechanisms set in motion by expansion of gas in the entire intestinal tract due to drops in barometric pressure. In the first series air was pumped into the gastrointestinal tract of the animals, and in the second the animals were subjected to drops in barometric pressure. Changes in respiration, arterial pressure, pulse frequency, and gas pressure in the stomach and intestines were studied. A total of 67 experiments were performed on 43 dogs.

2/3 1/3



ASSOCIATION: Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete im. N. I. Lobachevskogo (Scientific-Research Institute of Chemistry at the Gorky State University)

SUBMITTED: 2/Feb64 ENCL: 00 SUB CODE: IC, OP

NO REF SOV: 003 OTHER: 000

Card 2/2

L 24588-65 EWT(m)/EWP(t)/EWP(b) LIP(c) JD

ACCESSION NR: AP5004434 S/0075/65/020/001/0130/0132

AUTHOR: Malkova, O. F.; Tymanova, A. N.; Rudnevskiy, E. K.

TITLE: Spectrographic determination of boron in germanium and germanium films

SOURCE: Zhurnal analiticheskoy khimii, v. 20, no. 1, 1965, 130-132

TOPIC TAGS: carbon powder, germanium tetrachloride, germanium distillation, mannitol, d c arc, tetraboron

ABSTRACT: A method has been developed for the determination of boron in germanium and germanium films from a 10-mg sample. Boron is extracted from germanium into boron-free carbon powder. Simultaneously germanium is distilled as tetrachloride in the presence of mannitol. The spectrographic analysis is carried out using a d-c arc and synthetic standards, which are prepared by adding boron (as tetraboron) to a mixture of boron-free carbon powder with 20% of mannitol and 5% of sodium chloride. The absolute sensitivity of the method is 4×10^{-8} g, the accuracy is ±20%. Orig. art. has: 1 figure.

Card 1/2

MAKOVA, G.F.; ZHUKOVA, A.N.; RUDNINSKIY, N.K.

Chemical-spectral method for determining indium, gallium, bismuth, antimony, arsenic in germanium films. Zhur. anal. khim. 19 no.3 312-315 '64. (MIRA 17:4)

[illegible]ALKOV, [illegible]., inzhener.

Extinguishing fires in ventilation systems. Pozh.delo [illegible] no.[illegible] S '57. (MIRA [illegible])
(Kharkov—[illegible]—Fires and fire prevention)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031900047-6

L 5290-66 EWT(m)/EPF(c)/EWP(j)/T RPL WW/RM

ACC NR: AP5022052 SOURCE CODE: UR/0286/65/000/014/0129/0129

AUTHORS: Guseva, I. A.; Mal'kov, N. S.; Makarov, Yu. A.; Kulev, E. A.; Izmaylova, I. S.; Shvareva, G. N.; Khantsis, R. Z.; Gladyshev, A. I.; Perepelkin, V. P.; Nikitina, D. M.; Chekunin, K. I.; Rodziminskiy, V. V.

ORG: none

TITLE: Method for obtaining copolymers. Class 39, No. 144021

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 14, 1965, 129

TOPIC TAGS: copolymer, pressure casting

ABSTRACT: This Author Certificate presents a method for obtaining copolymers on the basis of methyl methacrylate and esters of acrylic acid by a suspension method. To obtain colorless copolymers suitable for fabricating products by casting under pressure, higher alcohols, e.g., octyl, as a plasticizer, esters of phthalic acid, e.g., dicyclohexyl, as a stabilizer, and derivatives of aminocumarone, e.g., phenyl ester of (naphtho-1", 2":4', 5')-triazoline (2')-stilbene-2-sulfoacid, as a clarifier are added to the mixture.

SUB CODE: MT, GC/ SUBM DATE: 15May61/ ORIG REF: 000/ OTH REF: 000

Card 1/1

0901.0501

MAL'KOV, N.P., mashinist

Performance of the TE3 diesel electric locomotive must be improved. Elek.i tepl.tiaga 3 no.10:45 O '59.
(MIRA 13:2)

1. Depo Kochetovka Yugo-Vostochnoy dorogi.
(Diesel locomotives)

MAL'KOV, N.I.

In the Committee of the Council of the Exhibition of Achievements of the National Economy of the U.S.S.R. Zashch. rast. ot vred. i bol. 6 no.7:8-9 Jl '61. (MIRA 16:5)

1. Nachal'nik otdela nagrad Vystavki dostizheniy narodnogo khozyaystva SSSR.
(Aeronautics in agriculture) (Rewards (Prizes, etc.))

MAL'KOV, N.

Prizes of the Exhibition of Achievements of the National Economy of the U.S.S.R. Prof.-tekh. obr. 19 no.6:25 Je '62. (MIRA 15:7)
(Vocational education--Exhibitions)

MAL'KOV, M.Yu.

Some problems in the characteristics of mobility in human nerve processes. Nauk. zap. Nauk.-dosl. inst. psykhol. 11:267-270 '59. (MIRA 13:11)

1. Institut psikhologii, Kiyev.
(Nervous system)

KHARITON, Yu.B.; KONDRAT'YEV, V.N.; BOROVIK-ROMANOV, A.S.; ZAVARITSKIY, N.V.; MALKOV, M.P.; KHAYKIN, M.S.; SHARVIN, Yu.V.

Aleksandr Iosifovich Shal'nikov; on his 60th birthday. Usp. fiz. nauk 87 no.1:171-172 S '65. (MIRA 18:9)

L 60293-65
ACCESSION NR: AT5009451

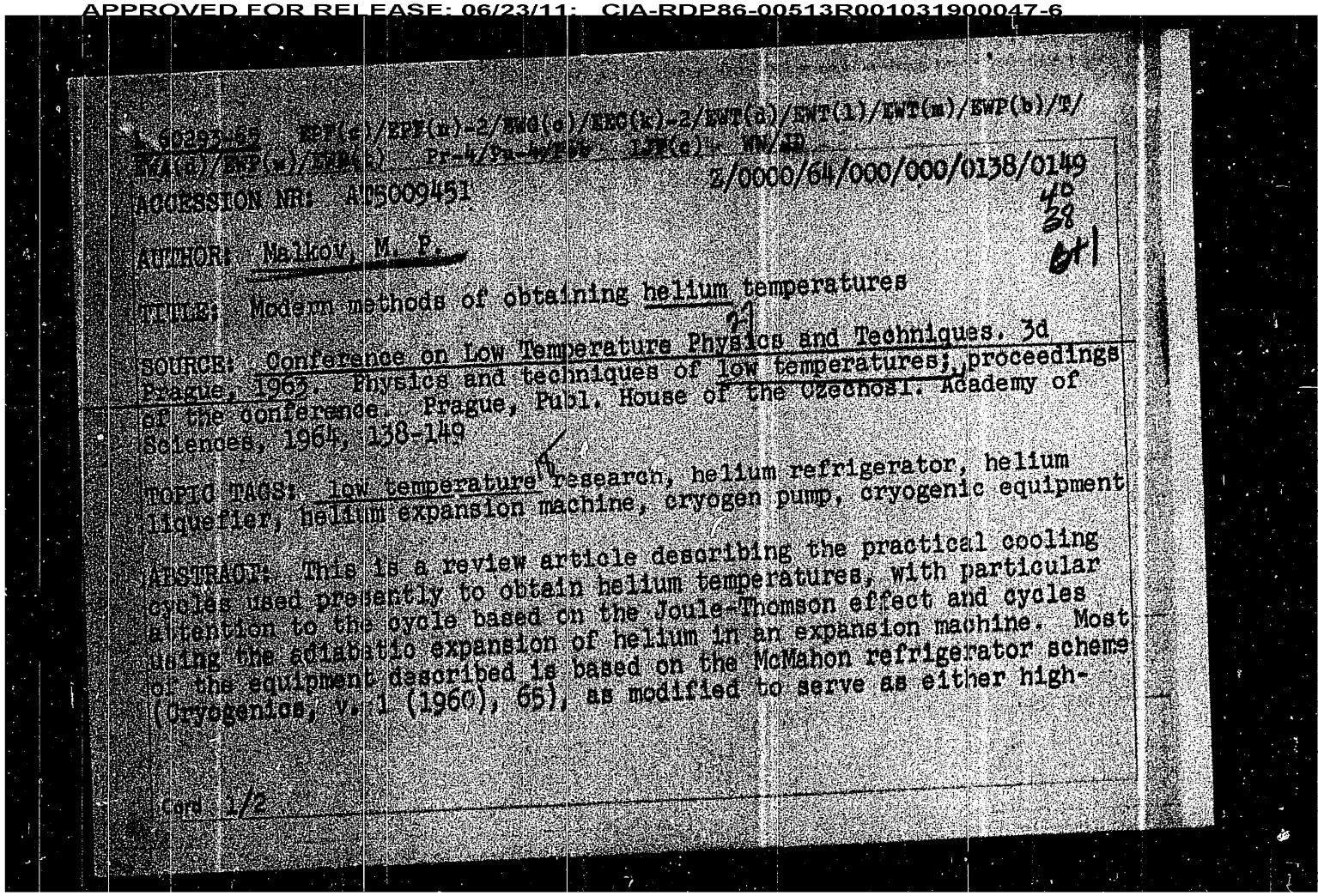
output devices, medium-output devices (laboratory type), or miniature devices with very small cooling capacity. Most of the equipment is of western construction, although some Soviet designs are also mentioned, mostly by I. B. Danilov with co-workers. A miniature device using the design of McMahon and Gifford (Advanced Cryogenic Engineering v. 6 (1961) 133), and constructed by P. L. Kapitsa and I. B. Danilov (ZhTF v. 31 (1961) 486 and v. 32 (1962) 457) is briefly described. Tables of relative outputs and efficiencies are included. Orig. art. has: 11 figures, 1 formula and 2 tables.

ASSOCIATION: Institut fizicheskikh problem AN SSSR (Institute of Physics Problems AN SSSR)

SUBMITTED: 0000064 ENCL: 00 SUB CODE: GP, TD

NR REF SOV: 008 OTHER: 017

Card 2/2



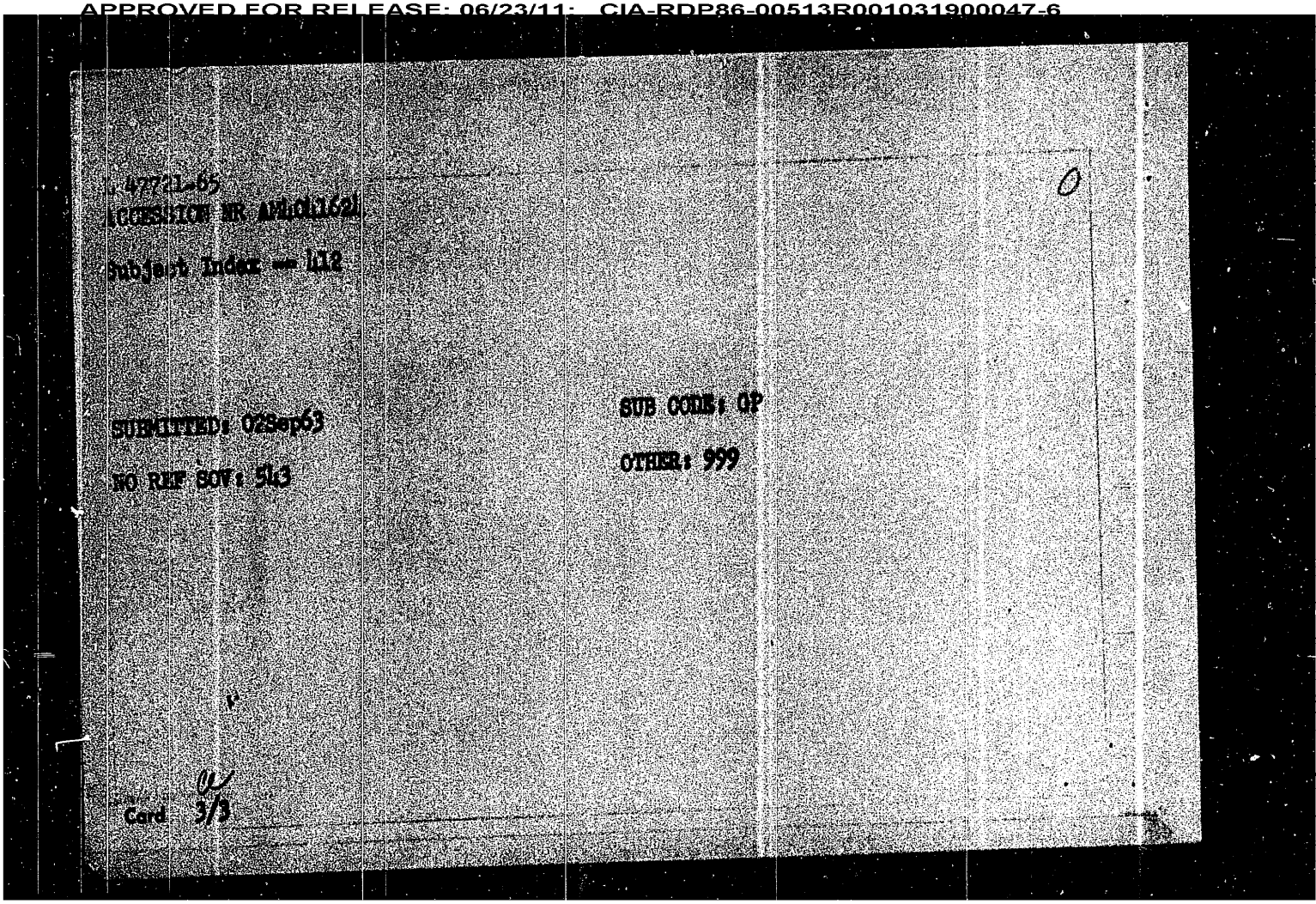
L 60292-65 EPF(c)/EPR(n)-2/EWG(c)/EEC(k)-2/EWT(d)/EWT(l)/EWT(m)/EWP(b)/T/
EWA(c)/EWP(w)/EWA(c) Pr-4/Pu-4/Pab-10 IJP(c) WW/AT
ACCESSION NR: AP5009451 Z/0000/64/000/000/0138/0149
45
38
071
AUTHOR: Malkov, M. P.
TITLE: Modern methods of obtaining helium temperatures
21
SOURCE: Conference on Low Temperature Physics and Techniques, 3d Prague, 1963. Physics and techniques of low temperatures; proceedings of the conference. Prague, Publ. House of the Czechosl. Academy of Sciences, 1964, 138-149
TOPIC TAGS: low temperature research, helium refrigerator, helium liquefier, helium expansion machine, cryogen pump, cryogenic equipment
ABSTRACT: This is a review article describing the practical cooling cycles used presently to obtain helium temperatures, with particular attention to the cycle based on the Joule-Thomson effect and cycles using the adiabatic expansion of helium in an expansion machine. Most of the equipment described is based on the McMahon refrigerator scheme (Cryogenics, v. 1 (1960), 65), as modified to serve as either high-
Card 1/2

MALKOV, M. P. and DANELOV, I. B. (Inst. of Physical Problems)

"Cryogenic Techniques at the Institute for Physical Problems"

Report submitted for the Cryogenic Engineering Conference, 18-21 August 1964, Philadelphia, Pa.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031900047-6



4772-65
ACCESSION NR: AP4041621

Subject Index -- U12

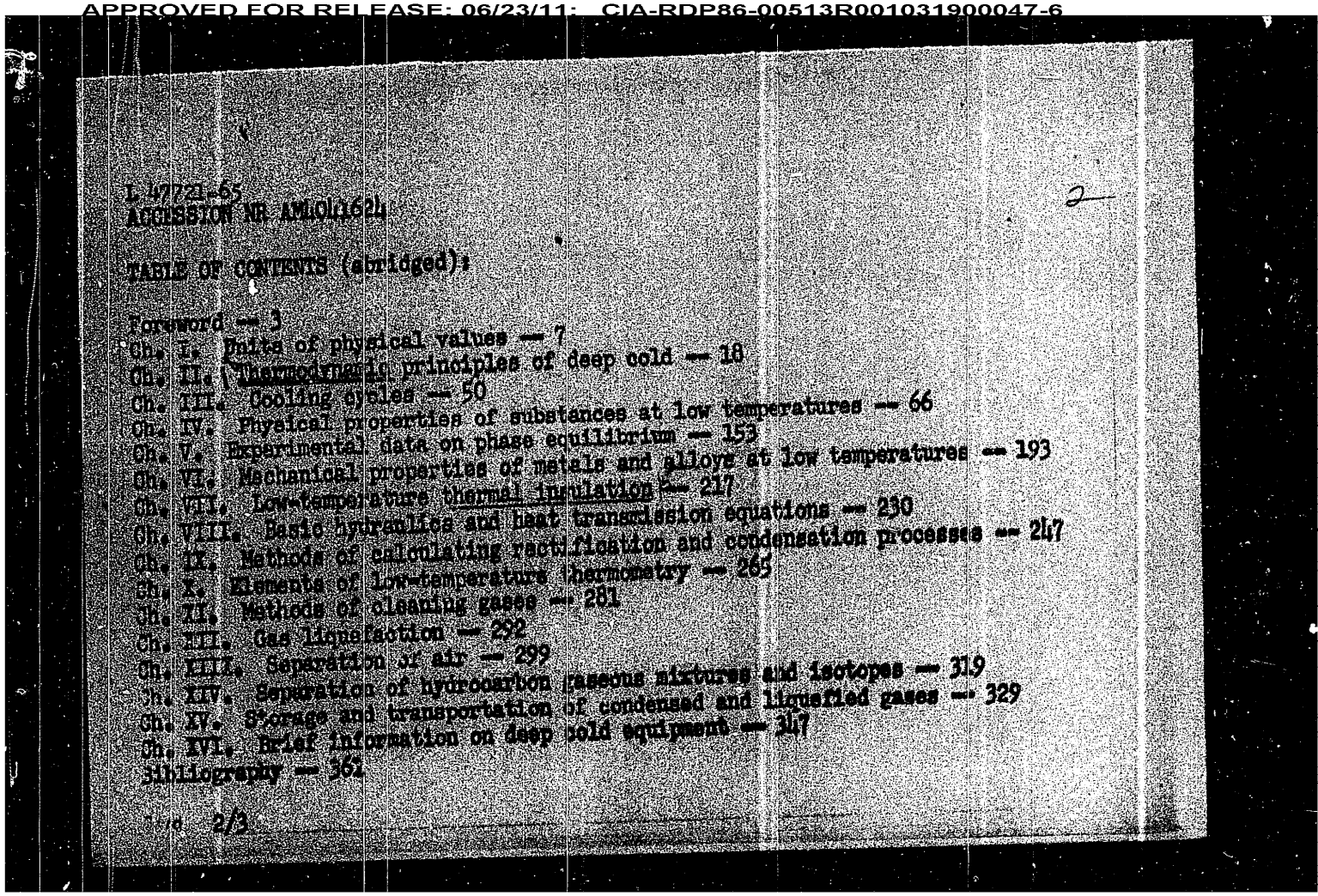
SUBMITTED: 02Sep63

SUB CODE: OP

NO REF SOV: 5U3

OTHER: 999

Card 3/3



L 47721-65
ACCESSION NR AM4041624

2

TABLE OF CONTENTS (abridged):

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L 1[illegible]21-65 EWT(d)/EWT([illegible])/[illegible]A(s)-1/EWT(m)/EWP(w)/EPF(c)/EEC(k)-2/EPF(n)-2/EWG(v)/ EWA([illegible])/EPR/EPA(w)-2/[illegible]/EWP(t)/EWG([illegible])/EW[illegible](b) Pc-4/Pab-10/Pe-5/Pr-4/Ps-4/Pt-7/Pu-4 IJP(c) JD/WW/JW/[illegible]

ACCESSION NR AM6011624 BOOK EXPLOITATION S/ 72 70 B+1

Malkov, Mikhail Petrovich (Professor); Danilov, I. B.; Zel'dovich, A. G.;
[redacted]

Handbook on the physical and technical bases of deep cold (Spravochnik po fiziko-tekhnicheskim osnovam glubokogo okhlazhdeniya), Moscow, Gosenergoizdat, 1963, 416 p. illus., biblio., diagrs., index. Errata slip inserted. 14,000 copies printed.

TOPIC TAGS: cryogenic engineering, cryogenic equipment, thermodynamics, carbon steel, low alloy steel, austenitic steel, nonferrous metal, weldment, insulation, hydraulics, gas

PURPOSE AND COVERAGE: This handbook gives the basic physical-chemical constants, thermodynamic and thermal engineering relationships, and production indicators required for calculating and designing deep cold equipment and in research in low-temperature physics. The book describes typical schemes of gas liquefaction and separation of gaseous mixtures. The theory of the processes is included. The handbook is intended as an aid for engineers and researchers; it can also serve as a textbook for students in advanced courses specializing in low-temperature physics and engineering.

Card 1/3

MALKOV, M.P., prof., red.;KEYLIN, V.Ye.[translator]; GULYAYEV, A.I. [translator]; SIDOROV, V.Ya., red.; DZHATIYEVA, F.Kh., tekhn. red.

[Problems in deep freezing] Voprosy glubokogo okhlazhdeniia; sbornik statei. Moskva, Izd-vo inostr. lit-ry, 1961. 429 p. (MIRA 15:2)

(Refrigeration and refrigerating machinery)

MAIKOV, M.P.; ZEL'DOVICH, A.G.; FRADKOV, A.B.; DANILOV, I.B.; KOROBTSOVA, N.A., red.; MAZEL', Ye.I., tekhn. red.

[Isolation of deutrerium from hydrogen by the deep cooling method] Vydelenie deiteriia iz vodoroda metodom glubokogo okhlazhdeniia. Pod obshchei red. M.P.Malkova. Moskva, Gos.izd-vo lit-ry v oblasti atomnoi nauki i tekhn. 1961. 150 p. (MIRA 14:6)
(Deuterium) (Hydrogen--Isotopes)

[redacted]

Industrielle Erzeugung von schwerem Wasser[1])

M. P. Malkov

Nach einer kurzen Darlegung der möglichen Verfahren zur industriellen Schwerwassererzeugung werden die wirtschaftlich vorteilhaftesten näher beschrieben und technisch-ökonomisch miteinander verglichen. Am günstigsten dürfte die Anwendung der Tieftemperaturdestillation und das Schwefelwasserstoffverfahren sein.

Schweres Wasser hat als Moderator für schnelle Neutronen sowie als Kühlmittel für die Kernenergetik große Bedeutung. Gegenüber anderen Moderatoren besitzt es mehrere Vorzüge (Tab. 1), aber auch einen wesentlichen

Tabelle 1. Eigenschaften einiger Moderatoren [1]

Eigenschaft	H_2O	D_2O	Be	C	BeO
Atom- oder Molekulargewicht	18	20	9	12	25
Einfangquerschnitt bei 0,025 eV, barn	0,66	$0,92 \cdot 10^{-3}$	$8 \cdot 10^{-3}$	$4,5 \cdot 10^{-3}$	$9,2 \cdot 10^{-3}$
Streuquerschnitt bei 0,025 eV, barn	[illegible]	13	6,9	4,8	11,1
Bremsverhältnis	67	5820	160	192	180

Nachteil: es zersetzt sich unter Strahleneinwirkung in Sauerstoff und Deuterium, so daß wirksame Maßnahmen getroffen werden müssen, um eine kontinuierliche Rekombination des Sauerstoffs und Deuteriums zu ermöglichen.

In den USA [2] werden an das schwere Wasser als Fertigerzeugnis folgende Bedingungen gestellt: D_2O-Anreicherung mindestens 99,7 Gew.-% (nach Korrektion auf ^{18}O), d. h. mindestens 99,75 Gew.-% im Mittel in einer Probe (bei p_H 6–6,8).

Die chemische Reinheit wird durch Messung der elektrischen Leitfähigkeit überwacht; zulässig ist die Verwendung von Schwerwasser mit einem spezifischen Widerstand von 15 kΩ·cm.

Für ein Kernkraftwerk mittlerer Leistung benötigt man 100–250 t D_2O. Folglich besteht in einer auf Schwerwasserreaktoren begründeten Energiewirtschaft ein Bedarf von Tausenden von Tonnen, so daß der Preis des schweren Wassers möglichst niedrig zu halten ist.

In den USA sollen Kernkraftwerke konkurrenzfähig mit den konventionellen kohlebeheizten Elektrizitätswerken sein, wenn der Schwerwasserpreis unter 90 Dollar je kg liegt. Dabei betrug der Marktpreis für 1 kg D_2O in den USA lange Zeit 150–200 Dollar ([2]–[5]); heute wird schweres Wasser in den USA mit 62 Dollar/kg gehandelt.

Eine Schwierigkeit bei der Schwerwassererzeugung besteht darin, daß Deuterium im natürlichen Wasserstoff und in wasserstoffhaltigen Verbindungen nur in sehr geringer Menge enthalten ist (etwa 0,0143%). Die Trennverfahren müssen mithin eine Verarbeitung sehr großer Rohstoffmengen bei möglichst geringem Energieverbrauch und kleinen Investitionskosten gewährleisten.

In den verschiedenen Ländern wurden zahlreiche Verfahren zur Deuteriumabtrennung entwickelt, aber nur wenige eignen sich für eine ökonomisch vorteilhafte industrielle Anwendung.

Die Trennung des Wasserstoffisotopengemischs beruht auf den unterschiedlichen physikalischen Eigenschaften der H-Isotope; derartige Unterschiede treten z. B. in den Molekülabmessungen, der Masse, den magnetischen Eigenschaften und den intermolekularen Wechselwirkungskräften auf.

Folgende Trennverfahren wurden bisher untersucht: Diffusion durch poröse Wände und Zentrifugierung; Elektrolyse des Wassers; chemischer Isotopenaustausch; Rektifikation wasserstoffhaltiger Verbindungen (H_2O, NH_3 usw.); Rektifikation von flüssigem Wasserstoff; Adsorption, Absorption und Ionenaustausch; Thermodiffusion; Extraktion und fraktionierte Kristallisation. Davon sind für die großtechnische Anwendung geeignet: Elektrolyse des Wassers; verschiedene Modifikationen des chemischen Isotopenaustausches; Rektifikation wasserstoffhaltiger Verbindungen; Absorption; Rektifikation von flüssigem Wasserstoff.

Einige der letztgenannten Verfahren finden bereits für die industrielle Schwerwassererzeugung Anwendung.

Bezüglich des Ausgangsmaterials kann man die Verfahren der Schwerwasserdarstellung in zwei Gruppen einteilen.

1. Verfahren, für die als Ausgangsstoffe Zwischen- oder Nebenprodukte anderer Produktionen benutzt werden (z. B. Wasserstoff aus Ammoniakwerken oder Hydrieranlagen, Wasserstoff, der bei der Elektrolyse anfällt, usw.). Aus dem bei der Ammoniakproduktion anfallenden Wasserstoff lassen sich z. B. 0,21 kg schweres Wasser je t erzeugten Ammoniaks gewinnen, d. h., ein Düngemittelwerk mit einer Jahreskapazität von 100000 t Ammoniak könnte nicht mehr als 20 t schweres Wasser im Jahr liefern [1].

2. Verfahren, für die andere als die derart erhaltenen Ausgangsmaterialien verwendet werden (z. B. Destillation von gewöhnlichem Wasser oder Isotopenaustausch in

[1]) М. П. Малков, Промышленное получение тяжелой воды, АЭ 7 (1959), Н. 2, S. 291.

MALKOV, M.P.

Rec'd by magazine 10 Dec 58

3-

AUTHOR: Malkov, M. P., Doctor of Technical Sciences

S/030/60/000/03/018/044
B015/B007

TITLE: The Tenth International Congress on Low-temperature Refrigeration

PERIODICAL: Vestnik Akademii nauk SSSR, 1960, Nr 3, p 80 (USSR)

TEXT: The Congress was held in Copenhagen from August 29 to September 2, 1959, and was attended by 1150 delegates from 44 countries. It had been convened by the International Institute of Refrigeration and dealt with such problems as the industrial use of low-temperature refrigeration, the electric and thermal properties of metals, thermodynamics and the equations of state, thermometry, as well as with some problems of low-temperature physics (mainly the velocity of sound in liquefied gases, and some properties of He^4 and the mixture He^3-He^4). In Soviet reports the BR-1-plant, which is one of the largest in the world, is described and an outline is given of the present stage of designing and building large turbo engines driven by compressed gas in the USSR.

Card 1/1

C

21(0)
AUTHOR: Chentsov, B.

SOV/53-67-4-7/7

TITLE: The Fifth All-Union Conference on the Physics of Low Temperatures (5-ye Vsesoyuznoye soveshchaniye po fizike nizkikh temperatur)

PERIODICAL: Uspekhi fizicheskikh nauk, 1959, Vol 67, Nr 4, pp 743-750 (USSR)

ABSTRACT: This Conference took place from October 27 to November 1 at Tbilisi; it was organized by the Otdeleniye fiziko-matematicheskikh nauk Akademii nauk SSSR (Department of Physico-mathematical Sciences of the Academy of Sciences, USSR), the Akademiya nauk Gruzinskoy SSR (Academy of Sciences, Gruzinskaya SSR), and the Tbilisskiy gosudarstvennyy universitet im. Stalina (Tbilisi State University imeni Stalin). The Conference was attended by about 300 specialists from Tbilisi, Moscow, Khar'kov, Kiyev, Leningrad, Sverdlovsk, and other cities as well as by a number of young Chinese scientists at present working in the USSR. About 50 lectures were delivered which were divided according to research fields.

V. Various Questions.

One of the most interesting lectures delivered at this Conference was that by I. A. Gindin, B. G. Lazarev, Ya. D. Starodubov and V. I. Khotkevich (KhFTI) on the polymorphism of metals at low temperatures; P. L. Kapitsa commented on this topic during the discussion. R. P. Bulatova, V. S. Kogan and B. G. Lazarev (KhFTI) investigated the system hydrogen-deuterium by the methods of low-temperature-radiography, thermal analysis, and the visual observation of crystallization. Kh. I. Amirkhanov, Sh. Kh. Amirkhanova and R. I. Bashirov investigated the thermomagnetic properties of compounds of the type $A^{III}B^{V}$ and $A^{II}B^{VI}$, and dealt with the phenomenon of the "photon wind" predicted by Gurevich; the investigation was carried out at the Dagestanskiy filial AN SSSR (Dagestan Branch, AS USSR).

Card 9/11

N. M. Reynov and A. P. Shimov (LFTI - Leningrad Physico-technical Institute) gave a report on the measurement of the electricity limit of tin- and indium polycrystals at very low temperatures (1°K), and N. M. Reynov and N. I. Krivko (LFTI) spoke about attempts made to find the expected diamagnetic resonance on polarons in cuprous oxide. G. R. Khutsishvili (TGU i Institut fiziki AN Gruzinskoy SSR - Tbilisi State University and Institute of Physics AS Gruzinskaya SSR) carried out a theoretical investigation of the Overhauser effect in non-metals. Lomkadze investigated the electron- and nuclear (proton) resonance in diphenylpicryl hydracyl at helium temperature. B. N. Samoylov spoke about experiments carried out concerning the orientation of Co^{60}- and Au^{198}-nuclei (in iron) at extremely low temperatures. B. I. Zakharchenya and Ye. F. Gross (LFTI) investigated the absorption spectrum of a cuprous oxide crystal in the magnetic field at helium temperature and observed the effect of magneto-optical oscillations. V. P. Peshkov and M. P. Malkov gave information concerning scientific work of Soviet scientists in foreign countries (zagranichnaya nauchnaya komandirovka), and E. V. Shpol'skiy spoke about the abstracting journal "Fizika".

Card 10/11

The head of the department for problems of the physics of low temperatures, Academician P. L. Kapitsa and the President of the Academy of Sciences Gruzinskaya SSR, Academician N. I. Muskhelishvili closed the Conference. The 6. All-Union Conference on the Physics of Low Temperatures will be held in June and July 1959 in the city of Sverdlovsk.

MALKOV, M.P., doktor tekhn. nauk

Tenth International Congress on Refrigeration. Kislorod 12 no.5:59 '59. (MIRA 13:2)
(Copenhagen--Refrigeration and refrigerating machinery--Congresses)

the most advanced and economical. There are 5 figures, 3 tables, and 18 references, 1 of which is Soviet.

SUBMITTED: December 10, 1958

Card 2/2

21(1)
AUTHOR: Malkov, M. P.

SOV/89-7-2-1/24

TITLE: Industrial Production of Heavy Water
(Promyshlennoye polucheniye tyazheloy vody)

PERIODICAL: Atomnaya energiya, 1959, Vol 7, Nr 2, pp 101-109 (USSR)

ABSTRACT: Using the experiences mainly made in America and England in different industrial D_2O installations, the following methods are described:
1) electrolysis of water, 2) rectification of hydrogen-containing compounds, 3) chemical isotope exchange, 4) rectification of liquid hydrogen, and 5) absorption method. There is a brief mention of the industrial installations recently constructed in India, West- Germany and France. The article mentions only the method described in the Geneva Report 2323 of all the Russian developments, i.e. distillation at low temperatures. There is a special emphasis on the fact that in the USSR temperatures of 20° K are mastered in an industrial scale. The low temperature and the two-temperature sulfur-hydrogen methods are described as those methods which are at present

Card 1/2

SOV/67-59-6-1/26

14(1)

AUTHORS: Malkov, M. P., Doctor of Technical Sciences, Zel'dovich, A. G., Doctor of Technical Sciences, Fradkov, A. B., Candidate of Technical Sciences, Danilov, I. B., Candidate of Technical Sciences

TITLE: Separation of Deuterium From Hydrogen by Means of the Low-temperature Distillation Method

PERIODICAL: Kislorod, 1959, Nr 6, pp 1 - 13 (USSR)

ABSTRACT: The method mentioned in above title proved to be the most suitable and economical one for the production and preparation of deuterium. It was worked out and first applied on a large industrial scale in the USSR. In the present paper, a survey of the present state and problems connected with it in the USSR and abroad is given on the basis of published data. The main schemes of deuterium separation plants are represented and described in figures 1 and 2. The following problems are dealt with: rectification, heat emission, heat insulation, purification of hydrogen from impurities, and realization of the method in industry. There are 15 figures and 27 references, 8 of which are Soviet.

Card 1/1

MALKOV, M. P.

USYUKOV, Ivan Petrovich, prof., kand.tekhn.nauk; AVER'YANOV, Ivan Grigor'yevich; GOROKHOV, Vladimir Semenovich; GORSHKOV, Anatoliy Maksimovich; ZAKHAROV, Aleksandr Vasil'yevich; YELUKHIN, Nikolay Kasparovich; MALKOV, M.P., prof., doktor tekhn.nauk, retsenzent; IONOV, P.M., inzh., red.; BOL'SHAKOV, B.N., red.; KASPEROVICH, N.S., red.; TIKHANOV, A.Ya., tekhn.red.

[Machinery and apparatus for units separating air by the method of deep refrigeration; atlas of designs] Mashiny i apparaty ustanovok razdeleniia vozdukha metodom glubokogo okhlazhdeniia; atlas konstruktsii. Pod red. I.P.Usiukina. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 189 p. (MIRA 13:3)
(Gases--Separation)
(Refrigeration and refrigerating machinery)

PHASE I BOOK EXPLOITATION SOV/2713

International Conference on the Peaceful Uses of Atomic Energy. 2nd, Geneva, 1958

Doklady sovetskikh uchenykh; polucheniye i primeneniye izotopov (Reports of Soviet Scientists; Production and Application of Isotopes) Moscow, Atomizdat, 1959. 388 p. (Series: Its: Trudy, vol. 6) 8,000 copies printed.

Eds. (Title page): G.V. Kurdyumov, Academician, and I.I. Novikov, Corresponding Member, USSR Academy of Sciences; Ed. (Inside book): Z.D. Andreyenko; Tech. Ed.: Z.D. Andreyenko.

PURPOSE: This book is intended for scientists, engineers, physicians, and biologists engaged in the production and application of atomic energy to peaceful uses; for professors and graduate and nongraduate students of higher technical schools where nuclear science is taught; and for the general public interested in atomic science and technology.

COVERAGE: This is volume 6 of a 6-volume set of reports delivered by Soviet scientists at the Second International Conference on the Peaceful Uses of Atomic Energy held in Geneva from September 1 to 13, 1958. Volume 6 contains 52 reports on: 1) modern methods for the production of stable and radioactive isotopes and their labeled compounds, 2) research results obtained with the aid of isotopes in the field of chemistry, metallurgy, machine building, and agriculture, and 3) dosimetry of ionizing radiation. Volume 6 was edited by: S.V. Lovinskiy, Candidate of Medical Sciences; V.M. Prusakov, Candidate of Chemical Sciences; and V.V. Sedov, Candidate of Medical Sciences. See Sov/2681 for titles of volumes of the set. References appear at the end of the articles.

MALKOV, M.P.; ZELDOVIC, A.G. [Zel'dovich, A.G.]; FRADKOV, A.B.; DANILOV, I.B.; ZOCH, O. [translator]

Industrial separation of deuterium by low-temperature distillation. Jaderna energie 4 no.11:344-351 N '58.

Malkov M. P.

MALKOV, M. P. (Moscow)

"Some problems Encountered in the Liquefaction and Storage of Hydrogen and Helium,"

paper submitted at Conference on Low Temperature Physics, Kammerlingh Onnes, Leiden, Neth., 23-28 June 1958.

MALKOV, M. P.

24-T102

USSR/Physics - Low Temperatures; Heat Exchangers Mar 52

"A Hydrogen Liquefaction Station for Scientific-Research Institutes," M. P. Malkov and A. B. Fralkova, Inst of Phys Prob imeni S. I. Vavilov

"Zhur Tekh Fiz" Vol 22, No 3, pp 436-446

Describes hydrogen liquefaction station (LFP VGS-2) consisting essentially of gas-holder, compressor, in-purifier, and liquefier designed at the authors' institute. Work of P. L. Kapitza was used extensively in developing station, which requires only Soviet machines, instruments, and materials. Data on experimental model designed at institute is as follows: productivity, 8.6 liters of liquid H_2 per hr; expenditure of liquid nitrogen, 1.3 liter per liter H_2; specific power consumption, 4.4 kwhr per liter H_2. Submitted 10 Sep 51.

24-T102

MALKOV, M. P.

Manual on the technology of the deep freezing. Moskva, 1947.

MALKOV, M.P.; PAVLOV, K.F.

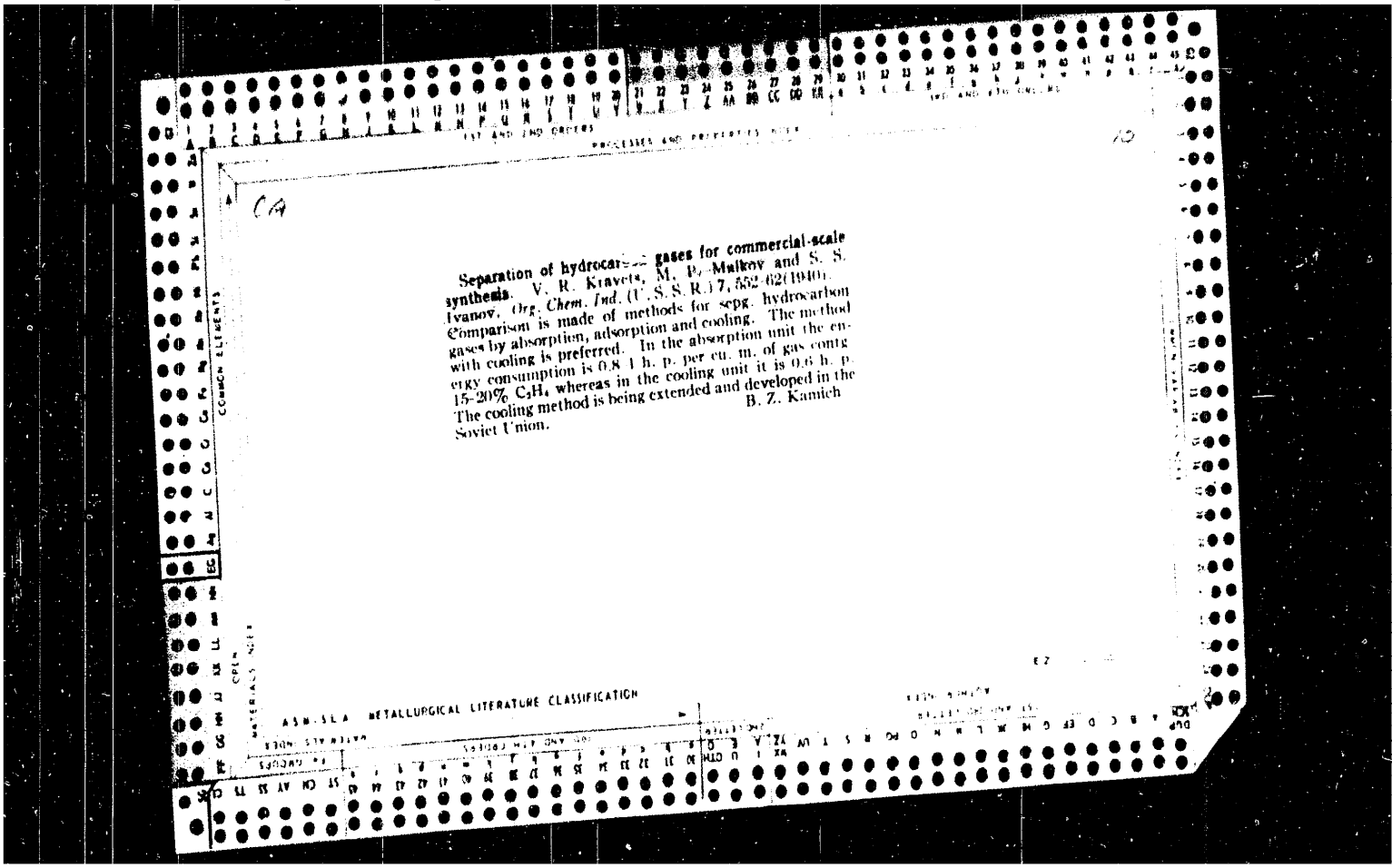
"Spravochnik po glubokomu okl[illegible]", Gostekhizdat 1947

CA

2

Bibliography [on physics of low temperatures]. M. P. Malkov. *Kislorod* (Oxygen) 3, No. 6, 1-27(1946); *Chem. Zentr.* 1947, II, 9.—About 1200 references are given to literature appearing from 1900 to 1946. In addn. to general questions of physics, topics covered include lab. techniques, general questions of low-temp. techniques, phys.-chem. consts. (for O_2, N_2, air, the inert gases, and certain compds.), phase equil. and rectification processes, tech. equipment, construction of app., explosions and their prevention, transportation and storage at low temps., properties of metals and of weld seams at low temps., and insulating materials.

M. G. Moore

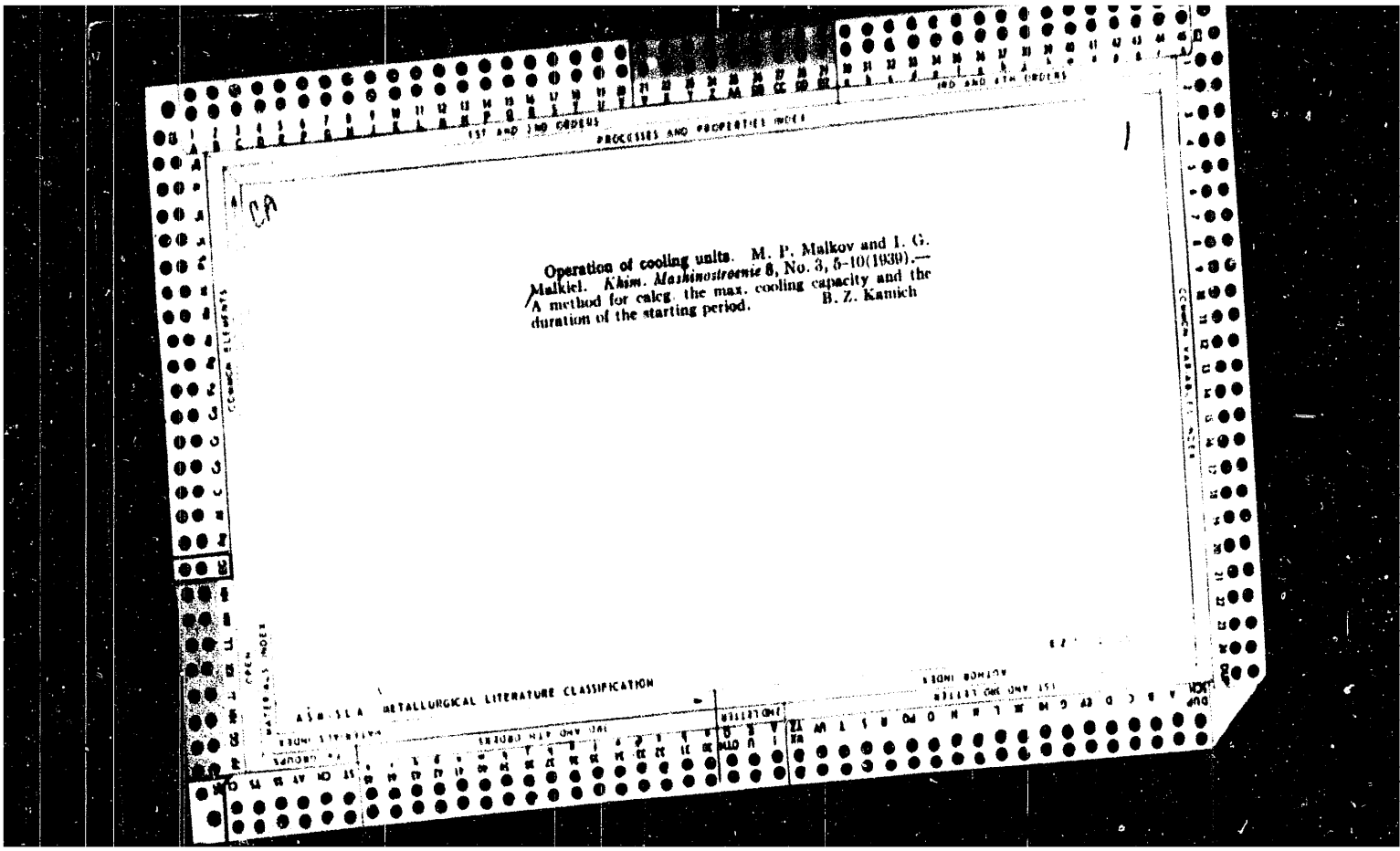


CA

Separation of hydrocarbon gases for commercial-scale synthesis. V. R. Kravets, M. P. Mulkov and S. S. Ivanov. *Org. Chem. Ind.* (U.S.S.R.) 7, 552-62 (1940). Comparison is made of methods for sepg. hydrocarbon gases by absorption, adsorption and cooling. The method with cooling is preferred. In the absorption unit the energy consumption is 0.8 l. h. p. per cu. m. of gas contg 15-20% C_2H_4 whereas in the cooling unit it is 0.6 h. p. The cooling method is being extended and developed in the Soviet Union.

B. Z. Kamich

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



CA

Operation of cooling units. M. P. Malkov and I. G. Malkiel. *Khim. Mashinostroenie* **8**, No. 3, 5-10(1939).—A method for calcg. the max. cooling capacity and the duration of the starting period. B. Z. Kanich

MAL'KOV, M.K., kapitan 1-go ranga

Concealment, a most important condition of successful operations of submarines. Mor. sbor. 47 no.4:27-33 Ap '64. (MIRA 18:7)

MAL'KOV, M.K., kapitan 2 ranga

Practical instruction for watch officers of submarines at sea. (MIRA 14:3)
Mor.sbor. 44 no.1:50-58 Ja'61.
(Russia--Navy--Watch duty) (Submarine boats)

S/020/63/148/004/007/025
B112/B101

Two-dimensional problem on the ...

SUBMITTED: August 7, 1962

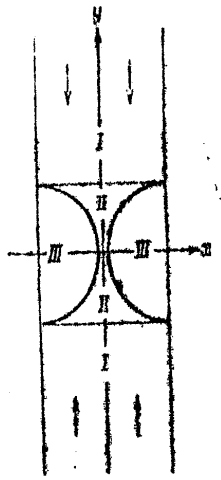


Fig. 1

Card 3/3

Two-dimensional problem on the ...

Domain I: $\Delta = \omega = 0$, $u_x = 0$, $u_y = -vt$ $(y > 0)$, $u_y = vt$ (< 0). Domain II: $\Delta = -v/a$, $\omega = 0$, $u_x = 0$, $u_y = -vy/a$. In domain III, polar conditions (ρ, φ) are introduced giving the solutions

$$\frac{\partial \Delta}{\partial z_1} = \frac{2iv(1-2\beta^2)(2\beta^2 z_1^2 - 1)}{\pi a\left[(2\beta^2 z_1^2-1)^4 - 4\beta^4 z_1^2 \sqrt{z_1^2-1}\sqrt{\beta^2 z_1^2-1}\right](z_1^2-1)},$$

$$\frac{\partial \omega}{\partial z_2} = \frac{-4iz_2(1-2\beta^2)}{\pi a\left[(2\beta^2 z_2^2-1)^4 - 4\beta^4 z_2^2 \sqrt{z_2^2-1}\sqrt{\beta^2 z_2^2-1}\right]\sqrt{z_2^2-1}},$$

$$z_1 = \frac{\sin\varphi}{r} + i\cos\varphi\sqrt{\frac{1}{r^2}-1}, \quad z_2 = \frac{\sin\varphi}{r} + i\cos\varphi\sqrt{\frac{1}{r^2}-\frac{1}{\beta^2}},$$

$\Delta(r,\varphi) = \mathrm{Re}\,\Delta(z_1)$ and $\omega(r,\varphi) = \mathrm{Re}\,\omega(z_2)$. From these solutions the deformations of the rods and the waves travelling along the side planes were calculated. There are 4 figures.

PRESENTED: August 13, 1962, by S. L. Sobolev, Academician

Card 2/3

45331

S/020/63/148/004/007/008
B112/B101

24,4200

AUTHOR: Malkov, M. A.

TITLE: Two-dimensional problem on the elastic collision of rods

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 148, no. 4, 1963, 782-785

TEXT: The end-to-end collision of two similar rods moving at equal velocities in opposite directions is described by the equations

$$\partial^2 u_x/\partial t^2 = a^2 \partial \Delta/\partial x - b^2 \partial\omega/\partial y,\ \partial^2 u_y/\partial t^2 = a^2 \partial\Delta/\partial y + b^2 \partial\omega/\partial x, \quad (1)$$

$$\Delta = \partial u_x/\partial x + \partial u_y/\partial y,\ \omega = \partial u_y/\partial x - \partial u_x/\partial y$$

with the initial conditions ($t = 0$):

$$u_x = 0,\ u_y = 0,\ \partial u_x/\partial t = 0,\ \partial u_y/\partial t = -v\ (y > 0),\ \partial u_y/\partial t = v\ (y < 0)$$

and the boundary conditions ($|x| = d/2$):

$$a^2 \partial u_x/\partial x + (a^2 - 2b^2)\partial u_y/\partial y = 0,\ \partial u_y/\partial x + \partial u_x/\partial y = 0$$

These equations are solved in the domains I, II, III as given in the figure.

Card 1/3

MALKOV, Mikhail Alekseyevich; MARYSHEV, A.N., red.; MEDNIKOVA, A.N., tekhn. red.

[Sighting devices and observation instruments for tanks; working principles] Tankovye pritsely i pribory nabliudeniia; osnovaniia ustroistva. Moskva, Voen.izd-vo M-va obor. SSSR, 1961. 239 p. (MIRA 15:2)
(Telescopic sights) (Tanks (Military science))

The Energy Spectrum of Cascade Photons in Light Substances.

energy for the substance in each individual case. The energy spectrum in the maximum of the curves agrees up to 10 and less % with the "equilibrium spectrum". Therefore the computed curves describe the real cascade process with a maximum error of 10 %.

The curves obtained in this manner were used for computing the dependence (on height) of the behavior of photons of different energies. These photons belong to that part of the weak component which is produced by neutral pions. The spectrum of the primary photons was obtained from the data obtained by A.G.CARLSON et al., Phil. Mag., 41, 701 (1950). The experimental and the computed spectrum differ considerably from each other as regards the height 45g/cm^2. This difference can apparently be explained by the fact that in the aforementioned work by A.G.CARLSON et al. a large number of weak photons was not taken into account.

ASSOCIATION Moscow State University
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AUTHOR IVANENKO, I.P., MALKOV, M.A.

TITLE The Energy Spectrum of Cascade Photons in Light Substances. (Russian)

PERIODICAL Zhurnal Eksperimental'noi i Teoret.Fiziki, 1957, Vol 32, Nr 1, pp 150-151 (U.S.S.R.)

Received 3/1957 Revised 3/1957

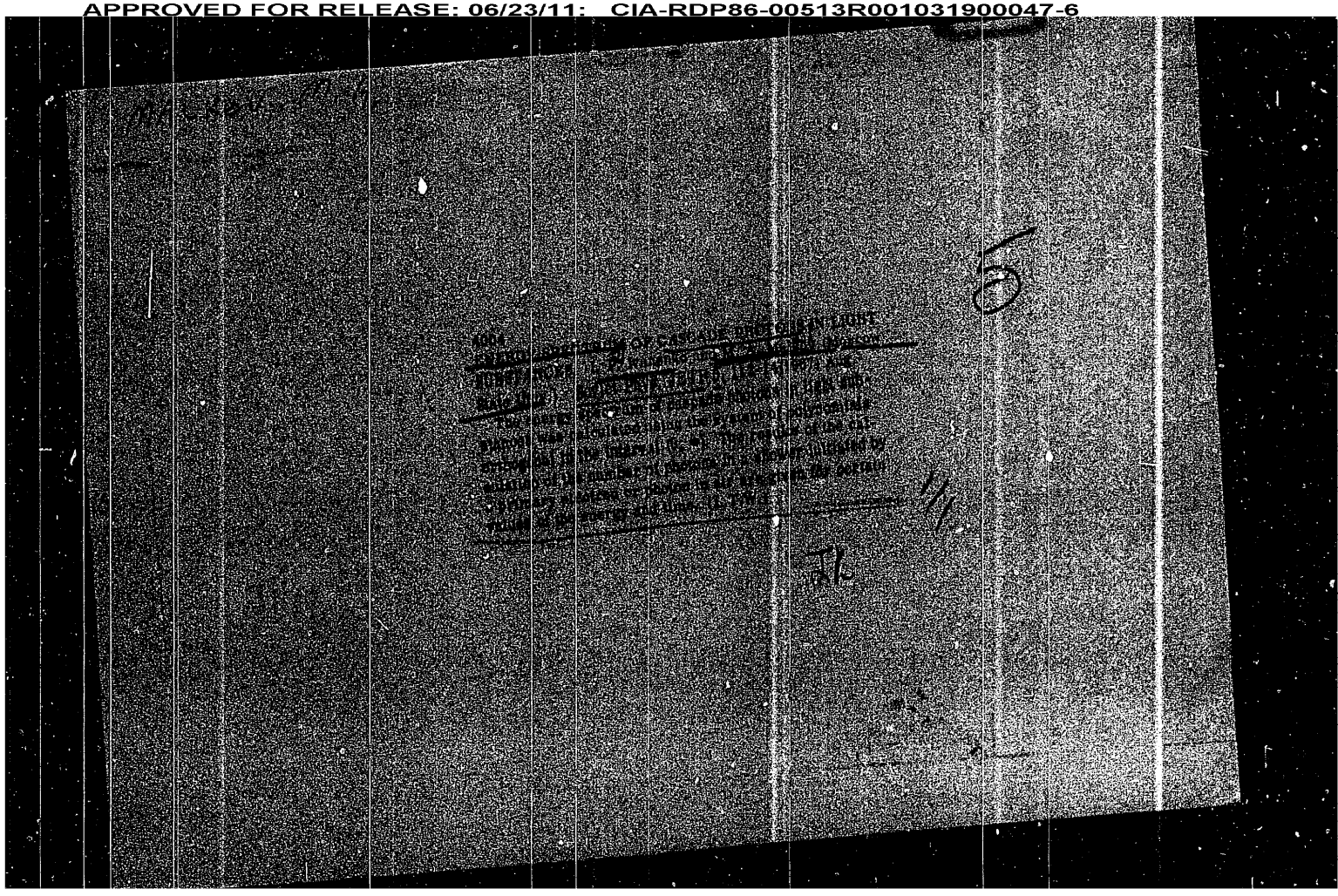
ABSTRACT

By the momentum method (pertinent works are cited) it was possible to furnish a nearly complete description of the one-dimensional development of electron-photon cascade showers in light as well as in heavy substances. The method is based on the computation (with the aid of recurrence formulae) of the momenta in the depth t from the function $N(E_o,E^o,t)$ of the distribution of the number of particles with an energy exceeding the value E in a shower which is produced by a primary particle with the energy E_o.

I.P.IVANENKO, Zhurn.Eksp.i Teoret.Fiz., Vol 32, Nr 2(in print), 1957, developed a method for the computation of the energy spectra of cascade electrons using a system of polynomials which are orthogonal (in the interval $0,\infty$). In the present work the energy spectrum of cascade photons in light substances is computed in a similar manner. The results of the computation of the number $\{N(E_o,E^o,t)\}$ P, Γ of the particles in the shower produced by a primary electron or photon in air are given for several values of E^o, E_o, and t in two tables.

The accuracy of the computation method employed here was examined by different works (cited here). Besides, the values of the approximated curves agree within a 10 % limit with the values computed by means of the exact formulae of the theory at $E_o/\beta \gg 1$. Here β denotes the critical

Card 1/2



APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031900047-6

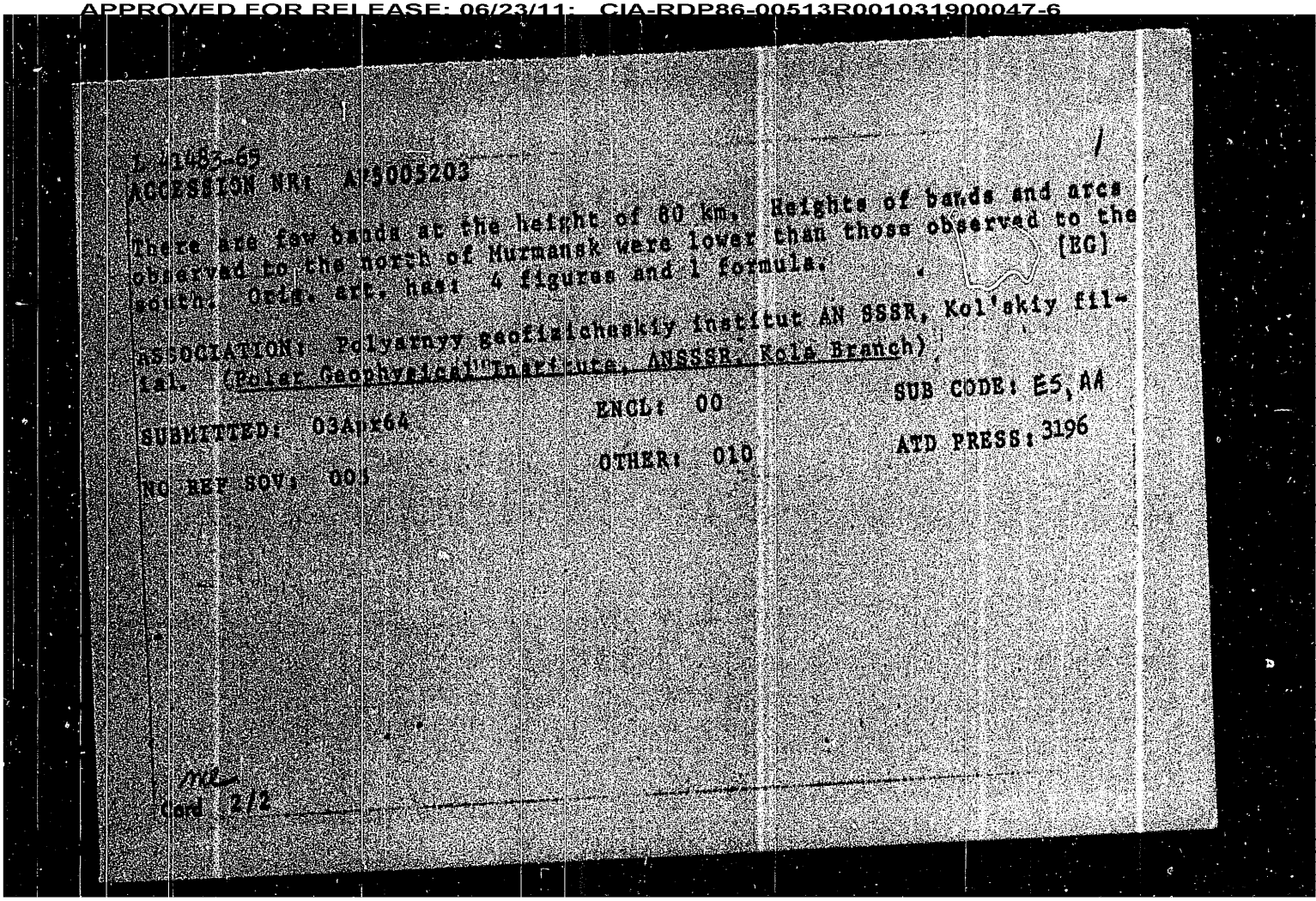
MAL'KOV, L. S.; GUYGO, E. I.

"Some investigation data on the operation of a sublimation condenser with a periodically renewed cooled surface."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12 May 1964.

Leningrad Technological Inst of Refrigeration Industry.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031900047-6



L 43483-65
ACCESSION NR: AP5005203

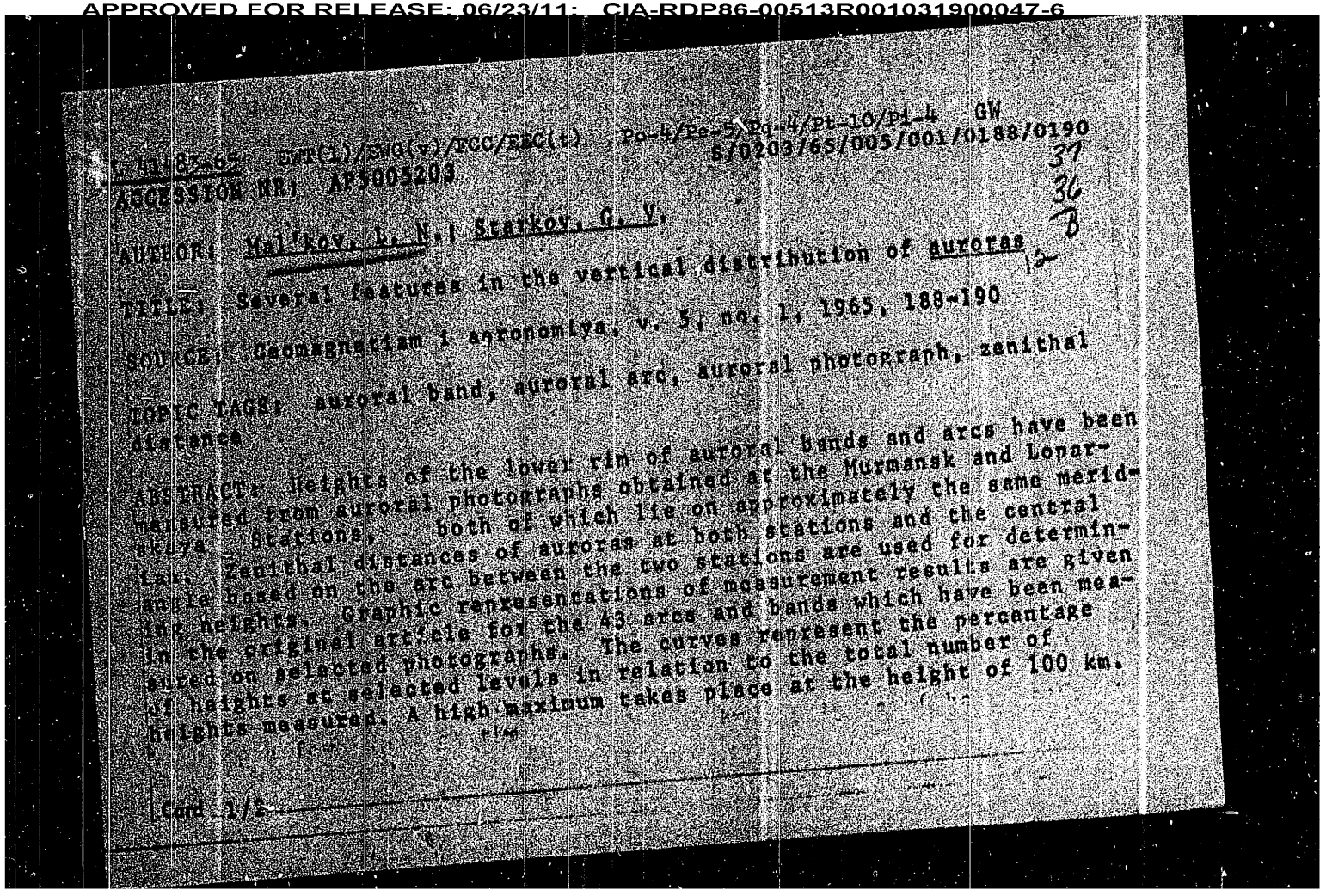
There are few bands at the height of 80 km. Heights of bands and arcs observed to the north of Murmansk were lower than those observed to the south. Orig. art. has: 4 figures and 1 formula. [EG]

ASSOCIATION: Polyarnyy geofizicheskiy institut AN SSSR, Kol'skiy filial. (Polar Geophysical Institute, ANSSSR, Kola Branch)

SUBMITTED: 03Apr64 ENCL: 00 SUB CODE: ES, AA

NO REF SOV: 003 OTHER: 010 ATD PRESS: 3196

mkw
Card 2/2



L 7118-66 EWT(l)/EWA(v)/FCC/EEC(t) Pc-4/Pe-5/Pq-4/Pt-10/Pi-4 GW
ACCESSION NR: AP5005203 S/0203/65/005/001/0188/0190

AUTHOR: Mal'kov, I. N.; Starkov, G. V.

TITLE: Several features in the vertical distribution of auroras

SOURCE: Geomagnetizm i aeronomiya, v. 5, no. 1, 1965, 188-190

TOPIC TAGS: auroral band, auroral arc, auroral photograph, zenithal distance

ABSTRACT: Heights of the lower rim of auroral bands and arcs have been measured from auroral photographs obtained at the Murmansk and Lopar-skoya stations, both of which lie on approximately the same meridian. Zenithal distances of auroras at both stations and the central angle based on the arc between the two stations are used for determining heights. Graphic representations of measurement results are given in the original article for the 43 arcs and bands which have been measured on selected photographs. The curves represent the percentage of heights at selected levels in relation to the total number of heights measured. A high maximum takes place at the height of 100 km.

Card 1/2

MALKOV, L.M., kand.tekhn. nauk; CHURAYEVA, A.I.

Investigating the drying of shredded peat in thin layers. Trudy VNIITP no.21:96-178 '63. (MIRA 17:3)

L. M. Malkov (USSR) ,S. A. Funikov and V. V. Pokamestov

" Complex mechanization of peat fields preparations "

Report submitted for the 2nd International Peat Congress, Leningrad, 15-22 Aug 63.

PANKRATOV, N.S., kand. tekhn. nauk; POKAMESTOV, V.V.; LUK'YANOV, A.D.; GAVRILOV, Yu.M.; IVANOV, Yu.I.; KONDRASHOV, A.S.; MAYEVSKAYA, K.T.; MALKOV, L.M.; FOMIN, V.K.; KOLOTUSHKIN, V.I., red.; LARIONOV, G.Ye., tekhn. red.

[New equipment and technology of peat-bog preparation and the winning of granulated peat] Novaia tekhnika i tekhnologiia bolotno-podgotovitel'nykh rabot i dobychi granulirovannogo torfa. Moskva, Gos. energ. izd-vo, 1961. 86 p. (MIRA 15:2)

1. Leningrad. Vsesoyuznyy nauchno-issledovatel'skiy institut torfyanoy promyshlennosti. Direktor filiala Vsesoyuznogo nauchno-issledovatel'skogo instituta torfyanoy promyshlennosti (for Pankratov).

(Peat bogs) (Peat machinery)

PANKRATOV, N.S., kand.tekhn.nauk, MALKOV, L.M., inzh.

Conditions of the formation of cracks in the process of drying. Torf.prom. 37 no.1:15-18 '60. (MIRA 13:6)

1. Vsesoyuznogo nauchno-issledovatel'skogo instituta torfyanoy promyshlennosti.
(Peat--Drying)

MALKOV, L. M., Cand Tech Sci -- (diss) "Research into processes and method of calculating the duration of radiation drying of granulated turf." Moscow, 1960. 23 pp; (Ministry of Higher Education RSFSR, Kalininskiy ~~Turf~~ Peat Inst); 200 copies; price not given; (KL, 17-60, 156)

KONTSEVOY, N.S., kand.tekhn.nauk; MALKOV, L.M., inzh.

Some results of the investigation of the winning of granular peat in 1958. Torf.prom. 36 no.4:9-10 '59. (MIRA 12:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut torfyanoy promyshlennosti.

(Peat)

MALKOV, L.M., inzh.; KOLOTUSHKIN, V.I., red.; BORUNOV, N.I., tekhn. red.

[Instructions for the operation of VMF-6 peat agitators] Instruktsiia po ekspluatatsii voroshilok VMF-6. Moskva, Gos. energ.izd-vo, 1959. 13 p. (MIRA 15:2)

1. Leningrad. Vsesoyuznyy nauchno-issledovatel'skiy institut torfyanoy promyshlennosti.
(Peat machinery)

MALKOV, L.M.

Studying the drying of pelletized peat. Torf.prom. 35 no.2:31 '58. (MIRA 11:5)

1. Rukovoditel' gruppy filiala Vsesoyuznogo nauchno-issledovatel'skogo instituta torfyanoy promyshlennosti.
(Peat--Drying)

MALKOV, L.M.

Testing the MGT machine for the winning of pelletized peat.
Torf.prom. 35 no.2:30-31 '58. (MIRA 11:5)

1. Rukovoditel' gruppy filiala Vsesoyuznogo nauchno-issledovatel'skogo instituta torfyanoy promyshlennosti.
(Peat machinery--Testing)

MALKOV, L.M.

New design for peat turner. Torf.prom. 35 no.2:25-26 '58.
(MIRA 11:5)

1. Rukovoditel' gruppy laboratorii tekhnologii filiala Vsesoyuznogo nauchno-issledovatel'skogo instituta torfyanoy promyshlennosti.
(Peat machinery)

MALKOV, L.M., inzh.

Investigation of the process of drying peat pellets. Torf.prom. 34 no.8:3-7 '57. (MIRA 11:1)

1.Filial Vsesoyuznogo nauchno-issledovatel'skogo instituta torfyanoy promyshlennosti.
(Peat--Drying)

MAL'KOV, K.M., starshiy inzh.

Use of welding technology in the repair of locomotives.
Elek. i tepl. tiaga no.6:27-28 Je '62. (MIRA 15:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta Ministerstva putey soobshcheniya.
(Locomotives--Maintenance and repair)
(Locomotives--Welding)

YEMEL'YANOV, N.P., kand.tekhn.nauk; MAL'KOV, K.M., inzh.

Investigation of hard facing in a water vapor atmosphere. Svar. proizv. no.3:16-29 Mr '62. (MIRA 15:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta Ministerstva putey soobshcheniya.
(Hard facing) (Protective atmospheres)

YEMEL'YANOV, N.P., kand.tekhn.nauk; KLEMENTOV, V.I., kand.tekhn.nauk; MAL'KOV, K.M., inzh.; TKACHENKO, F.S., inzh.; POLYAKOV, S.P.; VEL'MIN, A.A., red.; ORLOVA, I.A., red.; MEDVEDEVA, M.A., tekhn.red.

[Multielectrode automatic built-up welding under flux] Mnogoelektrodnaia avtomaticheskaia naplavka pod fliusom. Moskva, Vses. Izdatel'sko-poligr. ob"edinenie M-va putei soobshcheniia. 1962. 134 p. (Moscow, Vsesoiuznyi nauchno-issledovatel'skii institut zheleznodorozhnogo transporta. Trudy, no.239). (MIRA 15:11)
(Railroads--Maintenance and repair)
(Electric welding)

66170

A New Method for the Synthesis of Bismuth-aromatic Compounds by Oxidation of the Mixture Arylhydrazine and Bismuth Trichloride With Oxygen of the Air in the Presence of Cupric Chloride

SOV/20-128-5-23/67

matic compounds on account of diazo- and hydrazine reactions was suggested in previous papers (Ref 11) (see Diagrams).The transition of substance I to substance II is catalyzed by the presence of copper (and other metals) which yields one electron to nitrogen and receives it from the metal. The formation of triphenyl bismuth is similar to the formation of arsenic- and antimony-aromatic compounds. In both cases arylhydrazine is oxidized by oxygen of the air up to phenyl diazonium chloride. The latter interacts with bismuth trichloride and forms double compounds which are reduced by arylhydrazine. Thus bismuth-aromatic compounds are formed. There is a difference insofar as phenyl diazonium chloride does not yield double compounds of the type $ArN_2X.BiX_3$ under these conditions. Thus it is possible to separate primary or secondary bismuth-aromatic compounds. The double compound $(ArN_2X)_3.BiCl_3$ formed in this case forms triphenyl bismuth with phenylhydrazine. A. B. Bruker and F. L. Maklyayev (Ref 6) are mentioned in the paper. There are 12 references, 6 of which are Soviet.

PRESENTED: June 1, 1959, by I. L. Knunyants, Academician

SUBMITTED: May 28, 1959

Card 2/2

66170

SOV/20-128-5-23/67

~~5(2,3)~~ 5.3700(B)

AUTHORS: Braker, A. B., Malkov, K. M.

TITLE: A New Method for the Synthesis of Bismuth-aromatic Compounds by Oxidation of the Mixture Arylhydrazine and Bismuth Trichloride With Oxygen of the Air in the Presence of Cupric Chloride

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 5, pp 948 - 950 (USSR)

ABSTRACT: In the beginning the authors give a chronological survey of the publications concerning the preparation of compounds from the group of substances mentioned in the title (Refs 1-6). The attempts to obtain antimony - or bismuth-aromatic compounds were not successful. In previous papers (Refs 7-10) the authors described a new method for the preparation of elemental-aromatic compounds; especially one similar to the method mentioned in the title but with arsenic- and antimony derivatives. The preparation of triphenyl bismuth due to interaction of phenylhydrazine combined with hydrochloric acid and bismuth trichloride (see title) is described in the paper under review. A regulation is mentioned. A formation mechanism of arsenic- and antimony-aro-

Card 1/2

Synthesis of the Alkaloid Arecoline and its Homologues 79-11-53/56

ASSOCIATION:

Moscow Institute of Fine Chemical Technology.

Experimental Plant of the All-Union Chemical Pharmaceutical Scientific Research Institute

(Moskovskiy Institut tonkoy khimicheskoy tekhnologii. Opytnyy zavod vsesoyuznogo nauchno-issledovatel'skogo khimiko-farmatsevticheskogo instituta).

SUBMITTED: October 20, 1956

AVAILABLE: Library of Congress

1. Arecoline - Synthesis 2. Alkaloids - Syrthesis
3. Areca Catechu Palm 4. Alkaloids - Sources

Card 3/3

Synthesis of the Alkaloid Arecoline and its Homologues 79-11-53/56

oxypiperidine. By dehydration with the aid of dehydrating agents the la' ter is converted to the methyl ester of N-alkyl- $-\Delta^3-$ tetrahydronicotinic acid which latter with hydrogen bromide forms the salt. The following homologues of arecoline were synthesized according to one and the same method: The methyl esters of N-ethyl-, N-n.-propyl-, N-n.-butyl- and N-benzyl- Δ^3- -tetrahydronicotinic acid. The physiological investigations in the pertinent Moscow institutes showed that the produced hydrobromide of arecoline completely corresponds with the same salt of the natural alkaloid. Of the arecoline homologues only the n-propyl derivative exerts a weak physiological action. There are 9 references, 5 of which are Slavic.

Card 2/3

MALKOV, K.M.

79-11-53/56

AUTHORS: Preobrazhenskiy, N. A., Malkov, K. M., Maurit, M. Ye., Vorob'yev, M. A. Vlasov, A. S.

TITLE: Synthesis of the Alkaloid Arecoline and Its Homologues (Sintez alkaloida arekolina i yego gomologov).

PERIODICAL: Zhurnal Obshchey Khimii, 1957, Vol. 27, Nr 11, pp. 3162-3170 (USSR)

ABSTRACT: The alkaloid of the Aroca Catechu palm recognized as N-methyl-1,2,5,6-tetrahydronicotinic acid ester (see its hydrogen bromide salt in formula VI) was hitherto synthesized in different manners. The authors carried out a synthesis of this alkaloid and its homologues of special practical importance with different substituents on nitrogen, starting from the methyl ester of acrylic acid (see series of formulae I-VI). The reaction of the methylacrylic acid ester upon alkylamines leads to the formation of β,β'-dicarbometoxydiethylalkylamines. The cyclization to N-alkyl-3-carbometoxy-4-piperidone takes place in alcoholate by heating of the diester of one of these amines. This piperidine is reduced to N-alkyl-3-carbometoxy-4-

Card 1/3

MAL'KOV, K.M., inzh.

Preventing rim fracture in wheel pairs. Elek. i tepl. tiaga no.1:22 '57. (MIRA 12:3)
(Car wheels--Welding)

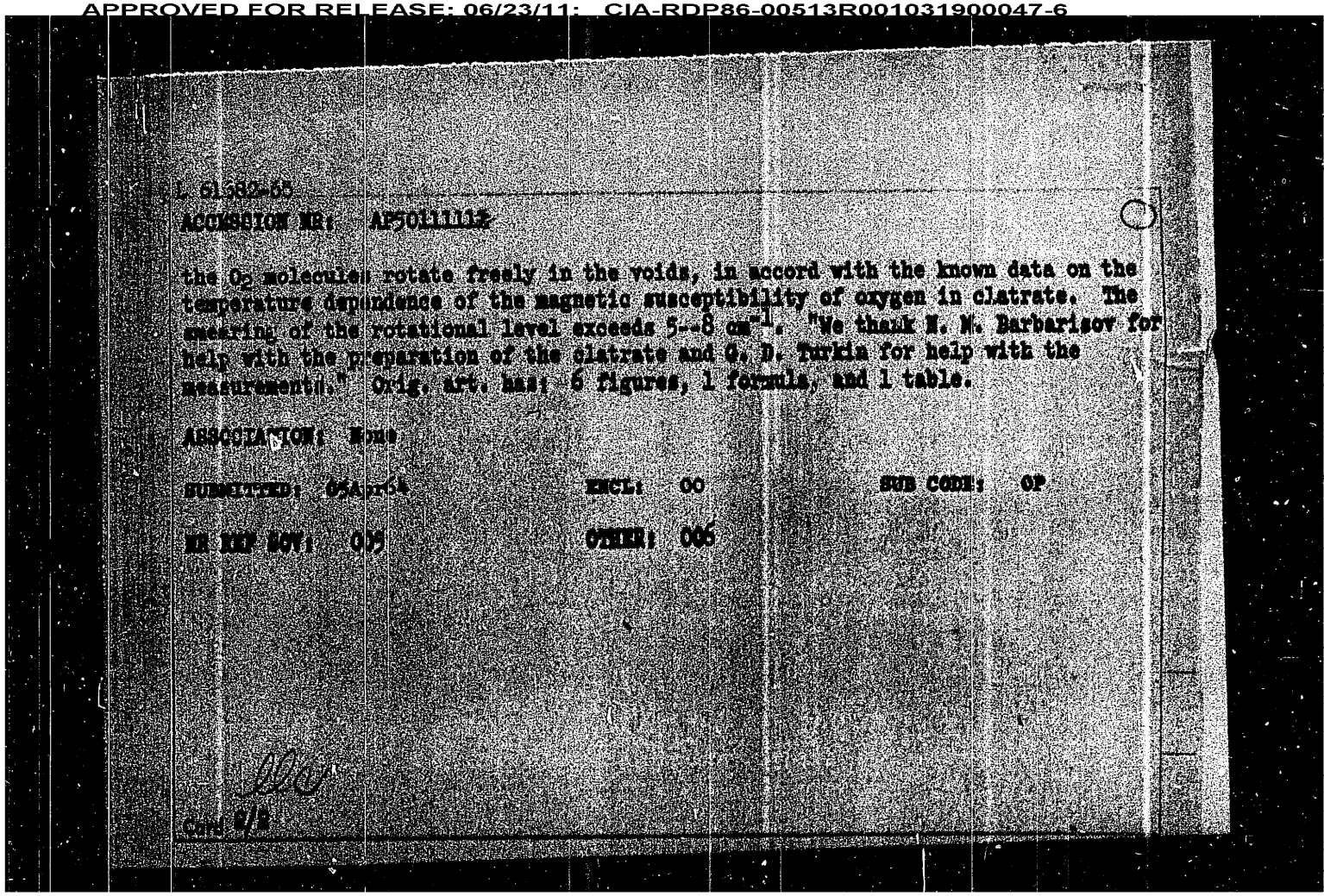
KURAKIN, Anatoliy Fedorovich; LUPYNIN, Leonid Aleksandrovich; MALKOV, Il'ya Yefimovich; YEL'KOV, P., red.; ZHDANOVA, G., tekhn. red.

[Development of the chemical industry of the Altai] Razvitie khimicheskoi promyshlennosti na Altae. Barnaul, Altaiskoe knizhnoe izd-vo, 1962. 83 p. (MIRA 16:12)
(Altai Territory--Chemical industries)

MALKOV, I. Ye.

"Use of a Pneumatic Three-Jaw Chuck for Mechanical Clamping of Parts," Stanki I Instrument 17, No. 4, 1946, (A Report on Experience at the Machine Building Plant imeni S. Ordzhonikidze)

DR-52059019



L 01382-65
ACCESSION NR: AP5011112

the O_2 molecules rotate freely in the voids, in accord with the known data on the temperature dependence of the magnetic susceptibility of oxygen in clatrate. The smearing of the rotational level exceeds 5--8 cm^{-1}. "We thank N. M. Barbarisov for help with the preparation of the clatrate and G. D. Turkin for help with the measurement." Orig. art. has: 6 figures, 1 formula, and 1 table.

ASSOCIATION: None

SUBMITTED: 05Apr64 ENCL: 00 SUB CODE: GP

NR REF SOV: 005 OTHER: 006

Card 2/2

L 61482-65

ACCESSION NR: AP5011111 UR/0051/65/018/004/0579/0586
535.34 : 546.2

AUTHOR: Dianov-Klokov, V. I.; Malkov, I. P.; Rozenberg, G. V. 19

TITLE: On the absorption spectrum of oxygen in clatrate B

SOURCE: Optika i spektroskopiya, v. 18, no. 4, 1965, 579-586

TOPIC TAGS: clatrate, absorption spectrum, oxygen molecule rotation, magnetic susceptibility

ABSTRACT: The absorption spectra of powders of oxygen-containing and nitrogen-containing clatrates were obtained. The clatrate was obtained by the method of D. F. Evans and R. E. Richards (J. Chem. Soc. no. 6, 3295, 1952). Powder was used because the absorption of the oxygen was too weak to permit the use of individual clatrate crystals. The equipment and procedure are described. The results show that the absorption band of the 7650 Å $^3\Sigma_g^- - {}^1\Sigma_g^+$ transition of the O_2 molecules included in the clatrate voids is shifted by 50 cm^{-1} towards lower frequencies, compared with the "atmospheric" band. Its shape practically coincides with the envelopes of the rotational branches of the "atmospheric" band, thus indicating that

Card 1/2

L 34957-65
ACCESSION NR: AP5007600

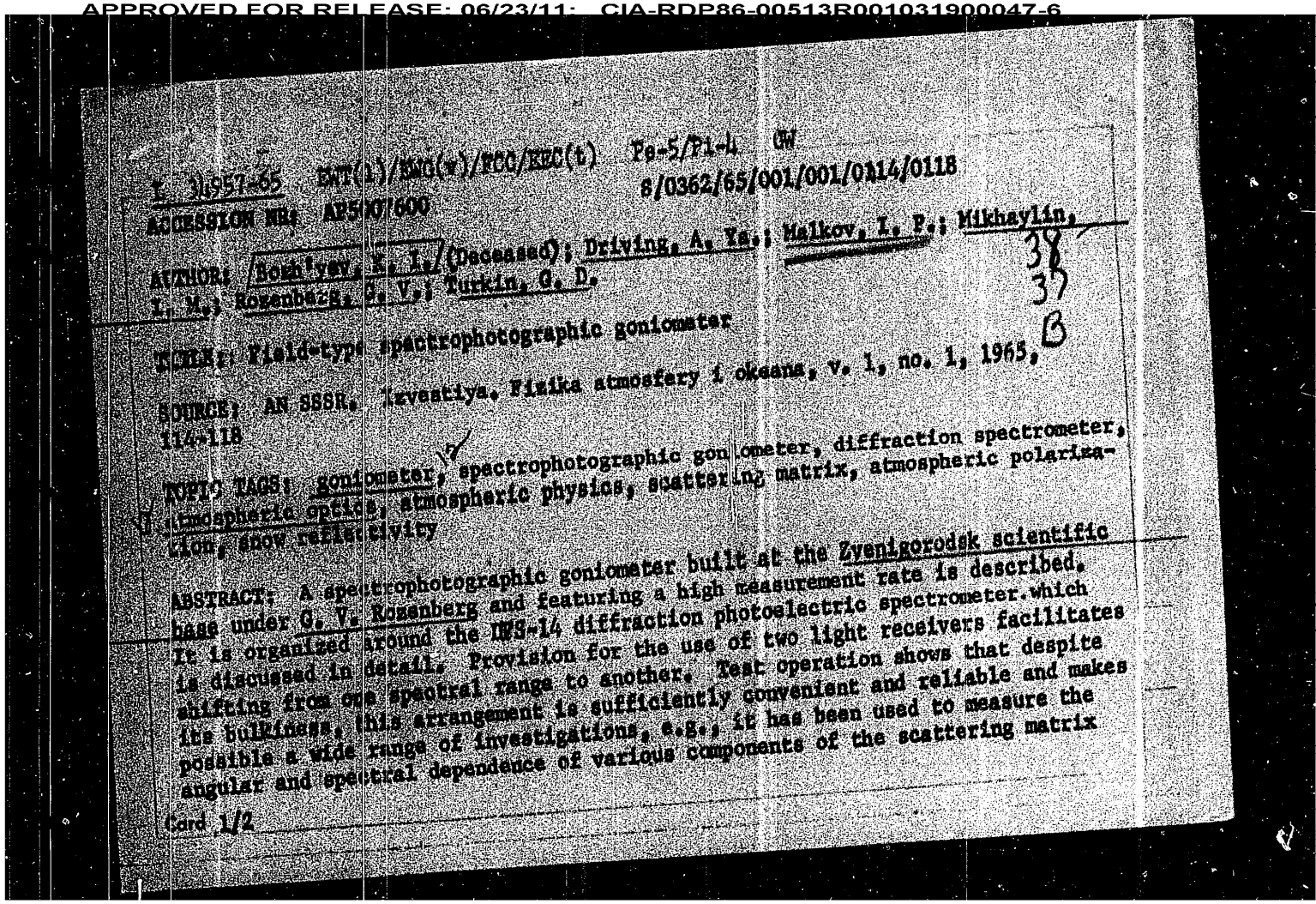
of atmospheric air under various meteorological conditions, to measure the spectra and polarization of the daytime and twilight sky, and to study the spectral and angular dependence of the reflective power of snow. Orig. art. has: 5 figures.

ASSOCIATION: Institut fiziki atmosfery, Akademiya nauk SSSR (Atmospheric physics Institute, Academy of sciences, SSSR)

SUBMITTED: 27Apr64 ENCL: 00 SUB CODE: OP, ES

NO REF SOV: 003 OTHER: 000

Card 2/2



L 31957-65 EWT(1)/EWG(v)/FCC/EEC(t) Pe-5/Pi-4 GW
ACCESSION NR: AP5007600 S/0362/65/001/001/0114/0118

AUTHOR: Bokhvey, K. I. (Deceased); Driving, A. Ya.; Malkov, I. P.; Mikhaylin, I. M.; Rosenberg, G. V.; Turkin, G. D. 38 37 B

TITLE: Field-type spectrophotographic goniometer

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 1, no. 1, 1965, 114-118

TOPIC TAGS: goniometer, spectrophotographic goniometer, diffraction spectrometer, atmospheric optics, atmospheric physics, scattering matrix, atmospheric polarization, snow reflectivity

ABSTRACT: A spectrophotographic goniometer built at the Zvenigorodsk scientific base under G. V. Rosenberg and featuring a high measurement rate is described. It is organized around the DFS-14 diffraction photoelectric spectrometer which is discussed in detail. Provision for the use of two light receivers facilitates shifting from one spectral range to another. Test operation shows that despite its bulkiness, this arrangement is sufficiently convenient and reliable and makes possible a wide range of investigations, e.g., it has been used to measure the angular and spectral dependence of various components of the scattering matrix

Card 1/2

KATULIN, V.A.; MALKEVICH, M.S.; MALKOV, I.P.; ROZENBERG, G.V.; YURKO[illegible], L.I.

Air-borne device for measuring the radiation balance and some results of microwave sounding. Trudy GGO no.166:282-294 '64. (MIRA 17:11)

ACCESSION NR: AP4034796

gation of the statistical characteristics of radiation fluxes, considered as random functions, makes it possible to take into account fluctuations of the radiant flux of heat under conditions of arbitrary cloudiness. In this case spectral density makes it possible to obtain the distribution of radiant energy by frequencies and determine those scales of nonhomogeneities which make the principal contribution to the flux of radiation heat. 4. The spectrum of fluctuations is similar to comparable spectra of fluctuations of wind velocity and temperature obtained in investigations of turbulence in the surface layer of the air. The spectrum was displaced into the region of somewhat lower frequencies, evidence of an increase in the scales of the eddies responsible for the nonhomogeneity of cloud formations. Orig. art. has: 10 formulas, 6 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 23Dec63 DATE ACQ: 20May64 ENCL: 00

SUB CODE: ES NO REF SOV: 009 OTHER: 003

Cdrd 2/2

ACCESSION NR: AP4034796 S/0293/64/002/002/0257/0265

AUTHOR: Malkevich, M. S.; Malkov, I. P.; Pakhomova, L. A.; Rozenberg, G. V.; Faraponova, G. P.

TITLE: Determination of the statistical characteristics of radiation fields over clouds

SOURCE: Kosmicheskiye issledovaniya, v. 2, no. 2, 1964, 257-265

TOPIC TAGS: meteorology, cloud, atmospheric radiation, radiation field

ABSTRACT: A study has been made of the possibility of applying statistical analysis to fields of outgoing radiation for determining the structure of cloud formations. Computation of the structural parameters of the cloud cover is accomplished using aircraft measurements of radiation with narrow- and wide-angle instruments. The following conclusions are drawn from this preliminary investigation: 1. Statistical characteristics of the intensity of reflected radiation can be used for an objective analysis of clouds of various types and a reliable identification can be made on the basis of the full set of statistical parameters. 2. The most informative parameter is the spectral density of fluctuations of brightness, which is quite sensitive to a difference in the character of nonhomogeneities of different cloud types and at the same time is statistically stable. 3. An investi-

Card 1/2

where E's are the energies of excitation of the corresponding levels, g's are the statistical weights of the excited states, A's are probabilities of transitions and $I_{1\lambda}$'s are the intensities of the spectral lines measured by luminescence photometry. The subscripts 1 and 2 denote the two lines of which a particular pair is composed. The following values of the spark temperature were obtained: 45000°K from the lines 1862 and 1605 Å, and 47000°K from the lines 1854 and 1605 Å. These values are interpreted as the temperature at the moment of excitation of Al III ions. Acknowledgments are made to A.R. Striganov for his advice. There are 1 figure and 6 references, 2 of which are Soviet, 2 English, 1 German and 1 translation.

SUBMITTED: April 26, 1958

SOV/51-6-1-16/30

AUTHORS: Akimov, Ye.M. (Deceased) and Malkov, I.P.

TITLE: Determination of the Temperature of a Spark in Vacuum (Opredeleniye temperatury vakuumnoy iskry)

PERIODICAL: Optika i Spektroskopiya, 1959, Vol 6, Nr 1, pp 96-98 (USSR)

ABSTRACT: The paper reports determination of the temperature of a spark in vacuum from the relative intensities of lines in the spectrum of Al III. The discharge circuit is shown in a figure on p 97. This circuit contains a capacitor C (0.25 μF) which was charged via a limiting resistance R (4 MΩ) from a rectifier B. The spectra were recorded by means of a vacuum spectrograph with DFS-6 with a concave diffraction grating. The following pairs of lines were used for determination of the spark temperature: 1862.90 Å ($3S_{1/2}$-$3P_{1/2}$) and 1605.7 Å ($3P_{1/2}$-$3D_{3/2}$), 1854.67 Å ($3S_{1/2}$-$3P_{3/2}$) and 1605.7 Å ($3P_{1/2}$-$3D_{3/2}$). The probabilities of the transitions for these Al III lines were calculated by means of the method described by Bates (Ref 4). Intensities were derived from blackening of the photographic plates by means of luminescence photometry. The spark temperature was calculated from

$$T = (E_1 - E_2)/k \ln[(I_1\lambda_2 g_1 A_1)/(I_2\lambda_1 g_2 A_2)]$$

Card 1/2

MALKOV, I.I.; GLEBOV, N.A.

Determination of small amounts of mercury in mineral raw materials using the method of grinding samples into powder. Soob. DVFAN SSSR no.17:43-45 '63. (MIRA 17:9)

1. Primorskoye geologicheskoye upravleniye i Dal'nevostochnyy geologicheskiy institut Dal'nevostochnogo filiala Sibirskogo otdeleniya AN SSSR.