"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BRETZ, Gyula

More important research by the Ministry of Construction research institutions. Magy ep ipar 10 no.12:529-532 D '61.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BRETZ, Gyula

Work of the research institutes of the Ministry of Construction. Epites szemle 6 no.1:7-10 '62.

1. Epitoanyagipari Kozpont Kutato Intezetenek igazgatoja es "Epitesugyi Szemle" szerkeszto bizottsagi tagja.

(Hungary—Construction industry)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BRETZ, Gyula

The 1961 work of the Central Research Institute for Building Materials Industry. Epites szemle 6 no.3:80-85 '62.

1. Epitesugyi Miniszterium Epitoanyagipari Kozponti Kutato Intezet igazgatoja, es "Epitesugyi Szemle" szerkeszto bizottsagi tagja

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BRETZ, Gyula

10 years of the Central Research Institute of the Building Materials Industry. Epitoanyag 15 no.8:287-290 Ag '63.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BRETZ, K.

Bretz, K.
"Recent aspects of improving technology in weaving." p. 48.
(Magyar Textiltechnika. No. 2, Feb. 1953, Budapest.)

SO: Monthly List of East European Accessions, Vol. 2, No.9, Library of Congress, September 1953, Uncl.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BRETZ, K.

BRETZ, K. Relationship between variety of goods and reduction of prime cost in the wool industry. p. 393.

No. 10, Oct. 1955.
MAGYAR TEXTILTECHNIKA.
TECHNOLOGY
Budapest, Hungary

So: East European Accession, Vol. 5, No. 5, May 1956

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUER, E.; HORECNY, K.; WAGENHOFER, E.

Aldolase test in children. Cesk. pediat. 13 no.9:803-805 5 Oct 58.

1. II. detska klinika LFUK v Bratislave, prednosta doc. Dr. Jaroslava Michalickova.

(DESMOLASES

zymohexase test in child., diag. value (Cz))

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUER, E.

4

CSSR

HORECNY, K.
co-workers: SLKO M, BREUER E., JANOSKOVA M.

Second Pediatric Clinic of the Medical Faculty of Comenius University, (II. detska klinika Lek. fak. Univ. Komenskeho), Bratislava, director: J. Michalickova

Bratislava, Bratislavske Lekarske Listy, No 7, 1963, pp 423-430

"The Utilisation of Qualitatively Different Proteins in Extreme Nutrition of Toddlers"

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

HORECNY, K.; Spolupraca: SULKO, M.; BREUER, E.; JANOSKOVA, M.

Utilization of quantitatively different proteins in extreme infant nutrition. Bratisl. lek. listy 43 Pt. 1 no.7:423-430 '63.

1. II detska klinika Lek. fak. Univ. Komenskeho v Bratislave, veduca prof. MUDr. J. Michalickova.
(DIETARY PROTEINS) (INFANT NUTRITION)
(DAIRY PRODUCTS) (SOY BEANS) (MEAT)
(NUTRITION SURVEYS) (CHILD)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUER, Gyorgy

Repairing damages caused by shearing at the GANZ-MAVAG Foundry.
Magy ep ipar 11 no.7:321-324 '62.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUER, Gyorgy

Conference on statics. Magy ep ipar 10 no.5:193-200 '61.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUER, Gyorgy; ROZSA, Gyorgy

Prefabrication of multistoried industrial buildings. Magy ep ipar 10 no.6:278-283 '61.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUER, Janos

Zoltan Kodaly celebrates his 80th birthday. Hung TU 12:12-13 D '62.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

COUNTRY : HUNGARY G
CATEGORY : Organic Chemistry. Synthetic Organic Chemistry

ABS. JOUR. : RZKhim., No. 23 1959, No. 82328

AUTHOR : Lempert, K.; Breuer, J.; Lempert-Streter, M.
INST. : -
TITLE : Hydantoins, Thiohydantoins, Glycocyamidines. Report III. Orientation in the Monobenzylation of 5,5-diphenylglycocyamidine
ORIG. PUB. : Magyar kem. folyoirat, 1959, 65, No 4, 142-145
ABSTRACT : No abstract.
See RZhKhim., 1959, No 16, No 57136

CARD: 1/1

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

LEMPERT, Karoly; BREUER, Judit; LEMPERTNE SRETER, Magda; PATAKY, Istvan; PFEIFFER, Klara

Hydantoins, thiohydantoins, glycocyamidines. Pts. 1-2. Magy kem folyoir 65 no.3:107-113 Mr '59.

1. Magyar Tudomanyos Akademia Kiserleti Orvostudomanyi Kutato Intezete Korelettani Osztalya, Budapest, Eotvos Lorand Tudomanyegyetem Szerves-Kemiai Intezete, Budapest, Orvostudomanyi Egyetem Gyogyszertani Intezete, Budapest.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUER, J; LEMPERT, K.

Hydantoins, thiohydantoins, and glycocyamidines. IV. Orientation in the methylation of 5, 5, -diphenylglycocyamidine. p. 263.

MAGYAR KEMIAI FOLYOIRAT. (Magyar Kemikusok Egyesulete) Budapest, Hungary, Vol. 65, No. 7, July 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 9, no. 1, Jan. 1960.
UNCL

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

LEMPERT, Karoly; BREUER, Judit

Alkylation, realkylation and dealkylation of 2-amino-4-quinazolinol by amines and ammonia. Magy kem folyoir 68 no.10: 452-454 O '62.

1. Magyar Tudomanyos Akademia Kiserleti Orvostudomanyi Intezete Korelettani Osztalya.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

LEMPERT, K. (Budapest, XI., Gellert ter 4); LEMPERT-SRETER, M. (Budapest, XI., Gellert ter 4); BREUER, J. (Budapest, XI., Gellert ter 4)

Hydantoin, thiohydantoin, glycocyamidine. Pt. 13. Periodica polytechn chem 7 bo.1:7-19 '63.

1. Lehrstuhl fur Organische Chemie, Technische Universitat, Budapest (for K. Lempert). 2. Institut fur Organische Chemie der Eotvos-Lorand Universitat, Budapest (for Lempert-Sreter). 3. Institut fur Experimentelle Medizinische Forschung der Ungarischen Akademie der Wissenschaften, Abteilung fur Pathophysiologie, Budapest (for Breuer).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

LEMPERT, Karoly; BREUER, Judit; LEMPERT KAROLYNE SRETER, Magda

Hydantoins, thiohydantoins, glycocyamidines. Pt. 3. Magy kem folyoir 65 no.4:142-145 Ap '54.

1. Magyar Tudomanyos Akademia Kiserleti Orvostudomanyi Kutato Intezete Korelettani Osztalya, Budapest es Eotvos Lorand Tudomanyegyetem Szerves-Kemiai Intezet, Budapest.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

LEMPERT, Karoly; LEMPERTNE SRETER, Magda; BREUER, Judit; PATAKY, Istvan; PFEIFER, A.Klara

Hydantoins, thiohydantoins, glycocyamidines. Pt.11. Magy kem folyoir 69 no.4:143-149 Ap '63.

1. Magyar Tudomanyos Akademia Kiserleti Orvostudomanyi Kutato Intezete Korelettani Osztalya, Budapest; Eotvos Lorand Tudomanyegyetem Szerves-Kemiai Tanszeke es Budapesti Orvostudomanyi Egyetem Gyogyszertani Intezete.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

LEMPERT, Karoly: BREUER, Judit

Hydantoins, thiohydantoins, glycocyamidines.Pt.15. Magy kem folyoir 69 no.7:323-328 Jl '63.

1. Budapesti Muszaki Egyetem Szerves-Kemiai Tanszeke es a Magyar Tudomanyos Akademia Kiserleti Orvostudomanyi Intezete Korelettani Osztalya.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

LEMPERT, Karoly; BREUER, Judit

Hydantoins, Thiohydantoins, glycocyamidines. Pt. 4. Magy kem folyoir 65 no. 7: 263-264 Jl '59.

1. Magyar Tudomanyos Akademia Kiserleti Orvostudomanyi Intezete Korelattani Osztalya.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

LEMPERT, K. (Budapest, XI., Gellert ter 4); BREUER, J. (Budapest, VIII., Koranyi Sandor u.2/a)

Hydantoin, thiohydantoin, glycocyamidine. Pt. 15. Periodica polytechn chem 7 no.4:299-310 '63.

1. Lehrstuhl fur Organische Chemie, Technische Universitat, Budapest (for Lempert). 2. Abteilung fur Pathophysiologie des Instituts fur Experimentelle Medizinische Forschung der Ungarischen Akademie der Wissenschaften, Budapest (for Breuer).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUER, Jaromir, inz.

Mechanized supports. Uhli 7 no.4:145-147 '65.

1. Institute of Coal Mining Machinery, Opava.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

LEMPERT, Karoly, dr. (Budapest, XI., Gellert ter 4); ZAUER, Karoly (Budapest, XI., Gellert ter 4); BREUER, Judith (Budapest, VIII., Koranyi Sandor u.2/a)

Hydantoins, thiohydantoins, glycocyamidines. Pt. 17. Periodica polytechn chem 8 no.1:21-28 '64.

1. Department of Organic Chemistry, Polytechnical University, Budapest (for Lempert and Zauer). 2. Department of Pathophysiology, Institute of Experimental Medical Research of the Hungarian Academy of Sciences, Budapest (for Breuer).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUER, M.

[redacted]

Present concepts of pathology and therapy of surgical inflammatory diseases. Lek. listy, Brno 6 no.16:473-481 concl. 15 Aug 51.
(CIML 21:4)

1. Of the Surgical Clinic (Head--Prof. J. Podlaha, M.D.) of Masaryk University, Brno and of the Surgical Department (Head--M. Breuer, M.D.) of the District Hospital in Moravska Trebova. 2. Pavlov's concept of pathology and pathogenesis of inflammations.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUER, M.

Relation to cancerous cells to endocrine glands. Rozhl. chir. 31 no. 10-11:266-284 1952. (CLML 24:1)

1. Of the Surgical Clinic (Head--Prof. J. Podlaha, M.D.) and of the Institute of Pharmacology (Head--Prof. Stefl, M.D.), Masaryk University in Brno and of the State District Hospital in Moravska Trebova. (Head--Breuer, M.D.).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUER, M.

"Blood Pressure Fluctuations with Psychoton During and After the Operation." (Surgical Department of the OUNZin Moravska Trebova)

SO: Rozhl. v. chir., Prague, Vol. 32 (1953), No. 12, pp. 639-660.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUER, Miroslav, Dr; MACHANEK, Karel, Dr

Modifications of leukocyte count during operation. Lek. listy 9 no.14:322-325 Jl '54.

1. Z chirurgickeho oddeleni (primar Dr M.Breuer) a z oddeleni vnitrnich chorob luskove casti OUNZ v Mor. Trebove (primar Dr J. Spicka)

(LEUKOCYTE COUNT,
*in surg.)
(SURGERY, OPERATIVE, blood in,
*leukocyte count)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUNING, S.

Two "Lamiaires" from Sumatra and two new forms of Dorcadion of the Budapest Museum (Coleoptera, Cerambycidae). In Grench. p.403.
(Magyar Nemzeti Mezuem Termazettudomanyi Muzeum Evkonyve, Vol. 7, 1956, Budapest, Hungary)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, no. 9, Sept. 1957. Uncl.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUS, F.S., inzh.; DRUKMAN, R.B., inzh.

New design of hooks for climbing wooden poles. Energetik 8 no.9:1-2 S '60. (MIRA 14:9)
(Electric lines—Poles)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUS, F.S., inzh.; DRUKMAN, R.B., inzh.

Small-sized compound pulleys. Energetik 8 no.9:19-20 S '60. (MIRA 14:9)

(Pulleys)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUS, F.S., inzh.

New design of hooks for climbing wooden poles. Energetik 10 no.3:32-33 Mr '62. (MIRA 15:2)

(Electric lines—Poles)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

5(3) SOV/71-59-3-18/23

AUTHORS: Shoykhet, M.I., Zorov, V.P., Breus, I.Ye.

TITLE: Determination of Acidity During the Inspection of Alcohol Production (Opredeleniye kislotnosti v kontrole spirtovogo proizvodstva)

PERIODICAL: Spirtovaya promyshlennost', 1959, Nr 3, pp 41-42 (USSR)

ABSTRACT: Acidity is an important indicator of semi-products in the production of alcohol. In the determination of the titratable acidity methyl-red is usually employed as indicator. However, to obtain a more marked change of color, it is better to use a mixture of two indicators, viz. neutral red and methylene blue. Comparison of results obtained in determining the titrable acidity with methyl red and with mixed indicators are shown in a table. In each case two parallel analyses were performed by 2 chemists 3 times. As can be seen from the table, results obtained with the mixed indicator show a closer similarity of results than in the case of those obtained with methyl red; this shows that with the mixed indicator a more abrupt change from

Card 1/2

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

SOV/71-59-3-18/23

Determination of Acidity During the Inspection of Alcohol Production

one color to another is obtained, which change indicates the end of titration. Analyses were made of several semi-products including sweet mash, yeast, fermented (ripe) mash, molasses preparation.
There are: 1 table and one Soviet reference.

Card 2/2

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUS, F.S., inzh.

Motortruck for operations on electric lines. Energetik 9 no.8:19-23 Ag '61. (MIRA 14:8)
(Electric lines—Overhead) (Motortrucks)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUS, F.S., inzh.; BRUKMAN, R.B., inzh.

New safety belts for electricians. Energetik 9 no.10:25-28 O '61. (MIRA 14:10)

(Safety belts)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUS, K. A.

Breus, K. A. and D'yachenko, V. Ye. - "Hydrodynamic shock in a solid cylinder and in vessels filled with liquids", Sbornik trudov In-ta matematiki (Akad. nauk Ukr. SSR), No. 12, 1949, p. 127-43.

SO: U-411, 17 July 53, (Letopis 'Zhurnal 'nykh Statey, No. 20, 1949).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

Breus, K. A. The potential field of a charged sphere with two openings

Source: Mathematical Reviews, Vol 13 No.2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUS, K. , POLOZHIY, G.

Vadim Evgen'evich D'iachenko; obituary. Ukr.mat.zhur. 6 no.3: 367-368 '54. (MLRA 8:5)
(D'iachenko, Vadim Evgen'evich, 1896-1954)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUS, K.A.

On the asymptotic solution of linear differential equations having periodic coefficients. Dop. AN URSR no.5: 415-418 '55. (MLRA 9:3)

1. Institut matematiki AN URSR. Predstaviv akademik M.M. Bogolyubov.
(Differential equations, Linear)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUS, K.A.

124-11-13098

Translation from: Referativnyy Zhurnal, Mekhanika, 1957, Nr 11, p 117 (USSR)

AUTHOR: Breus, K. A.

TITLE: The Inertial Non-Stationary Motion of a Solid Cylinder. (Inertsionnoye neustanovivsheyesya dvizheniye sploshnogo tsilindra.)

PERIODICAL: Dopovidi A. N UkrRSR, 1956, Nr 4, pp 321-324, Ukrainian.

ABSTRACT: Investigation of the problem of the inertial motion of a solid cylinder in response to the impact of a stiff plate upon its upper surface.

The problem is reduced to the solution of a Laplace equation with given boundary conditions. The equation is solved on an integrating computer. The author points out the good agreement between the solution thus obtained and test results.

Ye. Kh. Agababyan

Inst. Mathematics, AN, URSR.

Card 1/1

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

Breus, K. A. On the solution of [illegible]

[illegible]

Es sei [illegible] eine n-dimensional[illegible]
[illegible] eine reelle [illegible]
[illegible] Periode $T=2\pi/\omega$ und ω ein grosser
Parameter. Den Inhalt der Arbeit bildet [illegible]
dass die Fundamentalmatrix des Systems [illegible]
eine analytische [illegible] des [illegible]
[illegible] Konstruktion [illegible]

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

AUTHOR: Breus, K.A. (Kiyev)

TITLE: On Some Differential Equations in Banach Spaces (O nekotorykh differentsial'nykh uravneniyakh v banakhovom prostranstve)

SOV/41-10-2-1/13

PERIODICAL: Ukrainskiy matematicheskiy zhurnal, 1958, Vol 10, Nr 2, pp 115-120 (USSR)

ABSTRACT: The author considers linear differential equations

(1) $$\frac{dx}{dt} = A(\omega t)\, x \quad ,$$

where $A(\omega t)$ is a linear operator with the period $T = \frac{2\pi}{\omega}$ defined in a Banach space and ω is a "large" parameter. By the substitution $\tau = \omega t$ (1) becomes

(2) $$\frac{dx}{d\tau} = \varepsilon A(\tau)\, x \quad .$$

It is proved that there exists an operator function $U(\tau, \varepsilon)$ which is periodic in τ and analytic in ε and with the aid of which (2) can be brought into the form

Card 1/3

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

(3) $$\frac{dy}{d\tau} = \varepsilon \mathfrak{A}(\varepsilon) y$$

by the transformation $x = U(\tau, \varepsilon)y$, where $\mathfrak{A}(\varepsilon)$ is a constant operator. Here U satisfies the equation

(4) $$\frac{dU}{d\tau} = \varepsilon (AU - U\mathfrak{A})$$

and $U(\tau, \varepsilon)$ and $\mathfrak{A}(\varepsilon)$ are analytic functions of ε:

(5) $$U(\tau, \varepsilon) = E + \sum_{n=1}^{\infty} \varepsilon^n U_n(\tau) \quad , \quad \mathfrak{A}(\varepsilon) = \sum_{n=0}^{\infty} \varepsilon^n \mathfrak{A}_n \quad .$$

The coefficients $U_n(\tau)$ and $\mathfrak{A}_n$ are determined by substituting (5) into (4) and comparing the coefficients. There are 2 Soviet references.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

On Some Differential Equations in Banach Spaces SOV/41-10-2-1/13

SUBMITTED: May 15, 1957

1. Topography 2. Differential equations 3. Operators (Mathematics)
4. Transformations (Mathematics)

Card 3/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

AUTHOR: Breus, K.A.

SOV/20-123-1-4/56

TITLE: On the Reducibility of a Canonical System of Differential Equations With Periodic Coefficients (O privodimosti kanonicheskoy sistemy differentsial'nykh uravneniy s periodicheskimi koeffitsiyentami)

PERIODICAL: Doklady Akademii nauk, SSSR, 1958, Vol 123, Nr 1, pp 21-24 (USSR)

ABSTRACT: Given the system

$$\frac{dx}{dt} = JH(\omega t)x, \tag{1}$$

where $x = (q_1, q_2, \ldots, q_m, p_1, p_2, \ldots, p_m)$, $H(\omega t)$ is a real symmetric periodic matrix function and

$$J = \begin{pmatrix} 0 & E_m \\ -E_m & 0 \end{pmatrix},$$

where E_m denotes a unit matrix of the order m. Putting $\tau = \omega t$, then from (1) one obtains

$$\frac{dx}{d\tau} = \varepsilon JH(\tau)x, \qquad \varepsilon = \omega^{-1}. \tag{2}$$

Furthermore the author carries out a transformation $x = U(\tau, \varepsilon)y$, where $U(\tau, \varepsilon)$ is a 2π-periodic matrix function in τ and y has to

Card 1/2

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On the Reducibility of a Canonical System of Differential Equations With Periodic Coefficients SOV/20-123-1-4/56

satisfy the differential equation

$$\frac{dy}{d\tau} = \varepsilon \tilde{J}\tilde{H}y,$$

where $\tilde{H}$ is a matrix with constant elements. It is shown that H is symmetric; therefrom it follows that the Hamiltonian system (1) with periodic coefficients is reducible to a Hamiltonian system with constant coefficients. The author uses properties of $U(\tau, \varepsilon)$ of the preceding publication of the author [Ref 1]. The author thanks N.N.Bogolyubov for advices.
There is 1 Soviet reference.

ASSOCIATION. Institut matematiki Akademii nauk USSR (Mathematical Institute of the Academy of Sciences of the Ukrainian SSR)

PRESENTED: June 24, 1958, by N.N.Bogolyubov, Academician

SUBMITTED: June 20, 1958

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUS, K.A. (Kiyev)

One class of linear differential equations with periodic coefficients. Ukr. mat. zhurl 12 no.4:463-466 '60. (MIRA 14:3)
(Differential equations, Linear)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

MITROPOL'SKIY Yu.A., otv.red.; BEREZANSKIY, Yu.M., red.; KOROLYUK, V.S., red.; PARASYUK, O.S., red.; SOKOLOV, Yu.D., red.; FESHCHENKO, F.F., red.; FIL'CHAKOV, P.F., red.; BREUS, K.A., red.; MEL'NIK, T.S., red.; BEREZOVSKAYA, D.N., tekhn. red.

[Approximate methods of solution of differential equations] Priblizhennye metody resheniia differentsial'nykh uravnenii. Kiev, Izd-vo AN USSR, 1963. 153 p. (MIRA 17:3)

1. Akademiya nauk URSR, Kiev. Instytut matematyky.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

ACCESSION NR: AP4015117

S/0041/64/016/001/0072/0078

AUTHOR: Breus, K. A.

TITLE: Problems of steady-state inertial motion of an ideal fluid

SOURCE: Ukr. matem. zhurnal, v. 16, no. 1, 1964, 72-78

TOPIC TAGS: steady-state motion, inertial motion, ideal fluid, power impulse, inertial force, hollow cylinder, hollow sphere, impulse pressure

ABSTRACT: The author solves the problems of pressure on a hollow cylinder and a hollow sphere, subject to a suddenly applied impulse pressure directed perpendicularly to the external surface of these bodies. He assumes the material of their shells is an ideal incompressible fluid. The physical basis for this scheme is given by M. A. Lavrent'yev (Kumulyativnyy zaryad i printsipy ego raboty, UMN, t. XII, vyp. 4 (76), 1957). Orig. art. has: 31 formulas.

ASSOCIATION: none

SUBMITTED: 05Mar62

DATE ACQ: 16Mar64

SUB CODE: AI

NO REF SOV: 001

ENCL: 00

OTHER: 000

Card 1/1

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUS, K.A. (Kiyev)

Some problems of unsteady inertial motion of an ideal fluid.
Ukr. mat. zhur. 16 no.1:72-78 '64. (MIRA 17:5)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUS, K.

"On the theory of almost periodic solutions to ordinary differential equations" (doctor's dissertation of V.Kh. Kharasakhala). Ukr. mat. zhur. 17 no.2:137-138 '65. (MIRA 18:5)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

MITROPOL'SKIY, Yu.A., otv. red.; BEREZANSKIY, Yu.M., red.; ~~BREUS, K.A.,~~ red.; ZMOROVICH, V.A., red.; LYASHKO, I.I., red.; MARCHENKO, V.A., red.; PARASYUK, O.S., red.; POLOZHIY, G.N., red.; FIL'CHAKOV, P.F., red.; KULAKOVSKAYA, N.S., red.

[Mathematical physics] Matematicheskaia fizika. Kiev, Naukova dumka, 1965. 156 p. (MIRA 18:8)

1. Akademiya nauk URSR, Kiev.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUS, K.A.

Session of mathematicians of the Academies of Sciences of the U.S.S.R. and the Ukrainian S.S.R. Ukr. mat. zhur. 17 no.6: 135-137 '65. (MIRA 19:1)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

L 44335-66 EWT(d) IJP(c)

ACC NR: AP6019054 SOURCE CODE: UR/0041/66/018/001/0003/0010

32
B

AUTHOR: Breus, K. A. (Kiev)

ORG: none

TITLE: Canonical systems of differential equations with rapidly variable parameters

SOURCE: Ukrainskiy matematicheskiy zhurnal, v. 18, no. 1, 1966, 3-10

TOPIC TAGS: mechanics, Hamilton equation, partial differential equation, MATRIX FUNCTION, CONSTANT COEFFICIENT

ABSTRACT: Numerous problems of physics and technology are reduced to a study of canonical systems of differential equations which may be written in the form

16

$$\frac{dx}{dt} = JH(\omega t)x, \tag{1}$$

where x is a vector whose components are all the canonical coordinates and momenta describing the system, $H(\omega t)$ is a real symmetric matrix function whose elements are coefficients of the Hamiltonian describing the system (these coefficients are periodic functions of t with a $2\pi/\omega$ period), and J is

$$J = \begin{pmatrix} 0 & I_m \\ -I_m & 0 \end{pmatrix} \tag{2}$$

(0 and I_m are zero and unit matrix of order m, respectively). The author establishes a transformation $x \to y$ such that the original canonical system (1) with variable coefficients is replaced by a canonical system

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$$\frac{dy}{d\tau} = \varepsilon J \bar{H} y, \tag{3}$$

with constant coefficients ($\bar{H} = \bar{H}(\varepsilon)$ is a symmetric matrix with constant coefficients and is analytical with respect to the small parameter ε). Orig. art. has: 66 formulas.

SUB CODE: 12/ SUBM DATE: 09Sep65/ ORIG REF: 002

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APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUS, K.A.

Dmitrii Aleksandrovich Grave; on the 100th anniversary of his birth. Ukr. mat. zhur. 15 no.3:235-239 '63. (MIRA 16:12)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

L 26582-66 EWT(d) IJP(c)

ACC NR: AP6001089 SOURCE CODE: UR/0041/65/017/006/0135/0137

AUTHOR: Breus, K. Ye.

ORG: none

50
40
B

TITLE: Session of mathematicians of the academies of sciences of the USSR and the Ukrainian SSR

SOURCE: Ukrainskiy matematicheskiy zhurnal, v. 17, no. 6, 1965, 135-137

TOPIC TAGS: ordinary differential equation, asymptotic method, mathematic conference, boundary value problem, differential equation, celestial mechanics, nonlinear equation

ABSTRACT: A joint meeting of the Department of Mathematics of the Academy of Sciences USSR and the Department of Mathematics, Mechanics, and Cybernetics of the Ukrainian Academy of Sciences was held in Kiev, 14-15 October 1965. Academicians and corresponding members working in the most important mathematical centers of the USSR took part in this meeting. The meeting was dedicated to evaluating the present status and the basic trends of studies for the last few years in the field of ordinary differential equations. A survey paper evaluating the progress made in ordinary differential equations was presented by Yu. A. Mitropol'skiy, an academician of the Ukrainian

Card 1/6

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Academy of Sciences. He stressed that the needs of modern physics and engineering have brought about increased study of ordinary differential equations in various scientific centers of the USSR.

Essentially new results were obtained in the field of systems of ordinary differential equations with a small parameter multiplying the highest order derivative. An entirely new approach for studying such equations was proposed by L. S. Pontryagin on the basis of studies of fast motions. A very important role in developing the general theory of ordinary differential equations was played by a cycle of studies on the mathematical theory of optimum processes. Of particular interest are studies of nonlinear systems with a small parameter multiplying the derivatives.

A new method was developed in the theory of stability of perturbed Hamiltonian systems which makes it possible to prove the existence of a large class of stable solutions in the classical three-body problem. This method is applicable to the study of both classical and modern problems.

An important place in the theory of differential equations is occupied by the asymptotic methods of nonlinear mechanics. In a series of studies by N. N. Bogolyubov, sound mathematical foundations were laid for the method of averaging which has been applied for a long time in problems of celestial mechanics. A new approach to the qualitative theory of differen-

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tial equations based on the ideas of the theory of integral manifolds made it possible to establish a mathematically better grounded relation between the solutions of exact and approximate equations obtained by the averaging method. The method of integral manifolds made it possible to lay rigorous mathematical foundations for the single-frequency method of nonlinear mechanics and to extend considerably the domain of its applicability.

In the last few years, considerably greater attention has been paid to the study of differential equations with random parameters and random functions. These studies dealt not only with the existence and uniqueness of solutions of stochastic differential equations, but also with their stability, boundedness on the infinite interval of time, and asymptotic expansions.

The application of modern methods of functional analysis to the study of ordinary differential equations in functional spaces appeared to be very fruitful in the development of the theory of such equations.

Very important and extensive studies were carried out in the theory of differential equations with a delayed argument. Particular attention was paid to the study of those equations which describe the processes with after-effects that are connected with numerous urgent problems in engineering and physics.

Card 3/6

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ACC NR: AP6001089

The present development of the theory of ordinary differential equations is characterized by the introduction of new ideas and new methods—topological methods, methods of functional analysis, and numerical methods.

At the end of his survey paper, Yu. A. Mitropolskiy indicated the following trends whose development in the next years appeared to him to be the most promising:

1) The theory of ordinary differential equations in functional spaces. Here he expects the further development of asymptotic methods in nonlinear mechanics in connection with the studies of infinite systems, of the theory of differential manifolds of the averaging method, of the theory of boundary-value problems for ordinary differential equations, and others.

2) Qualitative methods in the study of the structure of a phase space of many-dimensional dynamic systems.

3) Studies in the ergodic theory of ordinary differential equations.

4) The study of solutions of ordinary differential equations in the presence of random disturbances.

Card 4/6

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5) Studies of the stability and of the asymptotic behavior of solutions of nonautonomous linear systems and of nonlinear systems with a non-autonomous principal part and with a delay.

6) Application of modern methods of the theory of ordinary differential equations to the problems of celestial mechanics.

7) Development of new methods of the theory of differential equations which more completely utilize the possibility of applying computers and of entirely new procedures for studying various phenomena encountered in the natural sciences.

In a paper entitled "Certain trends and results in the qualitative theory of differential equations," V. V. Nemytskiy presented the latest results of studies of systems

$$\frac{dx}{dt} = A(t)x + f(t, x)$$

by the method of generalized Lyapunov functions obtained by the author and his co-workers.

Card 5/6

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ACC NR: AP6001089

In a paper by N. P. Yerugin and A. I. Yablonskiy entitled "Studies in the analytic theory of differential equations," the latest results were presented in the theory of moving singular points of a system of two ordinary differential equations and of one second-order equation of the Painlevé type.

A paper by Yu. D. Sokolov and A. Yu. Luchka entitled "On the development of the method of averaging of functional corrections," cited a large number of studies on the approximate solution of ordinary differential equations carried out at the Institute of Mathematics of the Ukrainian Academy of Sciences.

I. I. Gikhman presented a paper entitled "On certain problems in the theory of differential equations in the presence of random disturbances," in which the problem of the existence and stability of solutions of a stochastic differential equation which describes the disturbed motion of a dynamic system was analyzed. Conditions under which solutions exist and are stable were established.

Finally, V. M. Millionshchikov presented a paper entitled "New stability criterion for nonlinear equations with periodic coefficients." Orig. art. has: 2 formulas. [ATD PRESS: 4240-F]

SUB CODE: 12, 03 / SUBM DATE: none

Card 6/6 BLG

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUS, N.

K voprosu o planirovanii perevozok. [On the question of planning freight traffic]. (Planovoe khoz-vo, 1934, no. 8-9, p. 79-89). DLC: HC331.P52

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUS, N. and SHLEIFMAN, A.

Podvizhnoi sostav zheleznodorozhnogo transporta i ego ispol'zovanie. [The rolling stock of railroad transportation system and its utilization]. (Planovoe khoz-vo, 1935, no. 8, p. 72-92).

"Discusses Kaganovich's forced measures."

DLC: HC331.P52

SO: SOVIET TRANSPORTATION AND COMMUNICATIONS, A BIBLIOGRAPHY, Library of Congress Reference Department, Washington, 1952, Unclassified.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUS, O.M., inzh.; TILLES, S.A., kand.tekhn.nauk; ORINICHEV, K.P., inzh.

"Economic control of the operation of a machinery plant" by A.P. Aleksandrovskii. Reviewed by O.M.Breus, S.A.Tilles. Vest.mash. 41 no.7:89-90 Jl '61. (MIRA 14:6)

(Industrial management) (Aleksandrovskii, A.P.)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

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S/057/60/030/009/004/021
B019/B054

AUTHOR: Breus, S. N.

TITLE: The Stability of a Liquid Current-carrying Cylinder of Finite Conductivity

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1960, Vol. 30, No. 9, pp. 1030-1034

TEXT: In the introduction, the author discusses some theoretical considerations on the experimentally proved deterioration in stability of a mercury jet by an external field. He mentions papers by V. D. Shafranov (Refs. 4, 5), who investigated the stability of a plasma column of finite conductivity on a model taking account of the penetration of the longitudinal magnetic field into the column. The author points to the shortcomings of this model, and in his investigation proceeds from the magnetohydrodynamic equations for an incompressible liquid. The magnetic field components inside and outside the plasma column are discussed along with the correction of the internal magnetic field, rendered necessary by the finite conductivity of the plasma. Therefrom, a dispersion equation is obtained in an extensive expansion. From the study of this

Card 1/2

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The Stability of a Liquid Current-carrying Cylinder of Finite Conductivity

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B019/B054

expression, the author concludes that the stability of a plasma of finite conductivity deteriorates as compared to that of a plasma of ideal conductivity. In particular, he studies long- and short-wave disturbances, and shows that the results obtained here are in qualitative agreement with the experimental results. Finally, he shows for the case of good conductivity that an additional surface current is induced by the shift of the plasma boundaries. The instability of the plasma column develops within this layer, and it is thought possible that these instabilities do not appear with a smooth distribution of the undisturbed current if the plasma column has no sharp boundaries. The author thanks V. D. Shafranov, Doctor of Physical and Mathematical Sciences, for advice and assistance. There are 6 references: 3 Soviet.

SUBMITTED: February 29, 1960

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

SVENTITSKIY, Nikolay Semenovich; KORITSKIY, V.G., retsenzent; BREUS, T.K., red.; KOZLOV, V.D., red.; BRUDNO, K.F., tekhn. red.

[Visual methods of emission spectrum analysis] Vizual'nye metody emissionnogo spektral'nogo analiza. Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1961. 314 p. (MIRA 14:12)

(Spectrum analysis)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

ZISMAN, Girsh Abramovich, dots.; TODES, Oskar Movshevich, prof.; BREUS, T.K., red.; VERES, L.F., red.; KRYUCHKOVA, V.N., tekhn. red.

[General physics course] Kurs obshchei fiziki. Moskva, Gos. izd-vo fiziko-matematicheskoi lit-ry. Vol.3. [Optics, atomic and molecular physics, physics of atomic nuclei and elementary particles] Optika, fizika atomov i molekul, fizika atomnogo iadra i elementarnykh chastits. 1961. 444 p. (MIRA 14:10)

(Physics)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

SAVEL'YEV, Igor' Vladimirovich; BREUS, T.K., red.; KUZNETSOVA, Ye.B., red.; MURASHOVA, N.Ya., tekhn. red.

[General physics course]Kurs obshchei fiziki. Moskva, Fizmatgiz. Vol.1.[Mechanics, vibrations and waves, molecular physics]Mekhanika, kolebaniia i volny, molekuliarnaia fizika. 1962. 403 p. (MIRA 15:9)

(Physics)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

ZEL'DOVICH, Yakov Borisovich; RAYZER, Yuriy Petrovich; BREUS, T.K., red.; BRUDNO, K.F., tekhn. red.

[Physics of shock waves and high-temperature hydrodynamic phenomena] Fizika udarnykh voln i vysokotemperaturnykh gidrodinamicheskikh iavlenii. Moskva, Fizmatgiz, 1963. 632 p. (MIRA 17:2)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

FABELINSKI. Immanuil Lazarevich; BREUS, T.K., red.; RAYSKAYA, N.A., red.

[Molecular scattering of light] Molekuliarnoe rasseianie sveta. Moskva, Nauka, 1965. 511 p. (MIRA 18:12)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

L 1540-66 FSS-2/EWT(1)/EWT(m)/FS(v)-3/EPF(c)/FCC/EWA(h) RPL TT/WW/GS/GW

ACCESSION NR: AT5023577 UR/0000/65/000/000/0151/0167

AUTHOR: Afonin, V. V.; Breus, T. K.; Gdalevich, G. L.; Gorozhankin, B. N.; Rybchinskiy, R. Ye.; Gringauz, K. I.

TITLE: Kosmos-2 ionosphere experiments

SOURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Moscow, 1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii. Moscow, Izd-vo Nauka, 1965, 151-167

TOPIC TAGS: artificial earth satellite, ionosphere, ionosphere composition, ionospheric plasma, ion temperature, electron temperature, ion trap, honeycomb trap, metal photoemission, F region, Kosmos 2

ABSTRACT: The Kosmos-2 artificial earth satellite, launched on 6 April 1962 into an orbit from 49°N to 49°S (perigee ~212 km and apogee ~1546 km), was intended for the structural study of the ionosphere and the attendant characteristic processes therein. In addition to a direct telemetering system, information storage equipment was installed on board the satellite. The principal tasks of the satellite were: 1) to remeasure the ion concentration and the chemical composition of the ionospheric region from 500 to 1000 km (first done in 1958 by the third Soviet Sputnik) during

Card 1/4

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ACCESSION NR: AT5023577

a period of decreased solar activity; 2) to investigate the ionospheric regions above 1000 km under nocturnal and twilight conditions; 3) to measure the positive ion temperature by means of a new method using honeycomb-type ion traps with a very narrow directivity pattern; 4) to sound both the ion and electron components of the ionospheric plasma in order to measure the electron temperature and concentration (from ∿212 to 600 km) by means of cylindrical Langmuir probes; and 5) to use a system of plane ion-traps for determining the satellite attitude with respect to its velocity vector. A honeycomb-type ion trap is shown in Fig. 1 of Enclosure. It consists of three electrodes (collector, antiphotoelectron grid for suppressing photocurrent on collector surface, and an external honeycomb cap, connected to the satellite). The maximum current in such a trap is achieved when the velocity vector of the incident ion beam is normal to the collector. In addition to the above experiments, measurements of the variation in photoemission from metals (due to the short-wave solar radiation in the frequency region near the ionization maximum of the F-region) were made to determine the total ultraviolet absorption in the F-region. It is stated that the experimental results from the Kosmos-2 mission will be helpful in preparing new ionospheric studies. Orig. art. has: 1 table, 6 formulas, and 15 figures. [YK]

ASSOCIATION: none

Card 2/4

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ACCESSION NR: AT5023577

SUBMITTED: 02Sep65

ENCL: 01

SUB CODE: ES, SV

NO REF SOV: 007

OTHER: 014

ATD PRESS: 4094

Card 3/4

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

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ACCESSION NR: AT5023577

ENCLOSURE: 01

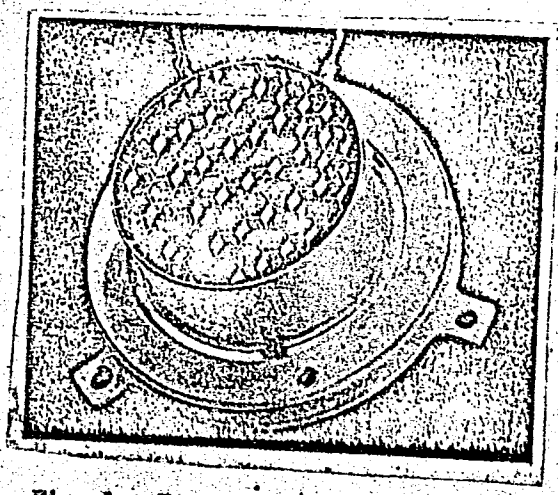

Fig. 1. Honeycomb-type ion trap

Card 4/4

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L 1274-66 EWA(h)/EWT(m)/FCC GW/GS

ACCESSION NR: AT5023581 UR/0000/65/000/000/0189/0192

AUTHOR: Breus, T. K.; Gdalevich, G. L.

61
B+1

TITLE: Electron and ion temperatures in the ionosphere

SOURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Moscow, 1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii. Moscow, Izd-vo Nauka, 1965, 189-192

TOPIC TAGS: ion temperature, electron temperature, ionosphere, artificial earth satellite, satellite data analysis

ABSTRACT: The authors analyze data from direct measurements of T_e and T_i made by "Explorer-8," "Explorer-17," "Allouette-1," "Ariel-1," "Kosmos-1" and by American and Japanese rockets. The results of the analysis show daily variations in the electron temperature up to ∿1200 km as a function of latitude and altitude. Since the ion temperature was measured in only three experiments, one of which has not yet been published, there was no basis for conclusive results. A maximum in the electron temperature is usually observed in the morning hours immediately after sunrise. The T_e/T_i ratio is considerable in the maximum region of the F layer and may reach

Card 1/2

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ACCESSION NR: AT5023581

values of more than 2 in the middle latitudes (where most of the experiments were conducted). These results are confirmed by incoherent scattering data. There is a considerable gradient with altitude in temperatures up to 400 km. Measurements above 400 km are contradictory for various reasons, so that no conclusions can be made about the high-altitude behavior of the temperature. Experimental data on incoherent scattering and measurements made by "Ariel-1" and "Explorer-17" indicate that the electron temperature increases with an increase in latitude. Orig. art. has: 2 figures. [14]

ASSOCIATION: none

SUBMITTED: 02Sep65 ENCL: 00 SUB CODE: ES, NP

NO REF SOV: 004 OTHER: 015 ATD PRESS: 4102

Card 2/2

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

L 10588-66 EWT(1)/FCC GW

ACC NR: AP6000305

SOURCE CODE: UR/0293/65/003/006/0877/0889

AUTHORS: Breus, T. K.; Gdalevich, G. L.

ORG: none

56
54
B

TITLE: Electron and ion temperatures in the ionosphere

SOURCE: Kosmicheskiye issledovaniya, v. 3, no. 6, 1965, 877-889

TOPIC TAGS: ionosphere, temperature distribution, temperature, temperature measurement, ion temperature, electron temperature

ABSTRACT: Modern theoretical propositions and experimental data on the temperature of electrons T_e and the temperature of ions T_i in the ionosphere are presented. The distribution of charged particles is given in first approximation by the formula

$$\frac{1}{n_e}\frac{dn_e}{dz} = -\frac{m_+ g}{k(T_e + T_i)},$$

$$\frac{1}{n_j}\frac{dn_j}{dz} = -\left[m_j - \frac{m_+ T_e}{T_e + T_i}\right]\frac{g}{kT_i},$$

where n_j and n_e are the concentrations of ions and electrons and

$$m_+ = \frac{\Sigma m_j n_j}{\Sigma n_j}$$

Card 1/2

UDC: 551.510.535(047)

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L 10588-66

ACC NR: AP6000305

2

is the mean mass of the ions. Furthermore, the relationship between the electron and ion temperatures also characterizes the heat balance in the ionosphere. The study is performed using satellite and rocket probe data and other indirect means of measuring particle and temperature distributions in the ionosphere. Prior research and data collecting missions are reviewed, including the flights of Explorer-8, Explorer-17, and others. Plots of the variation of electron temperature with height and time of day are presented along with a plot of the simultaneous values of electron temperature and the temperature of the neutral gas. The authors conclude that there is no temperature equilibrium in the ionosphere and under certain conditions the ratio T_e/T_i can be as high as 2 or 3. At high altitudes in the daytime T_e/T_i is about 1.1--1.3 in the lower latitudes. The nighttime ion and electron temperatures are about equal at the equator, with increasing electron temperature at greater latitudes. T_e varies rapidly with height up to 400 km, after which a negative gradient sets in. The data for beyond 400 km are insufficient to allow any generalization of results, and, in general, the data on T_i are less abundant than those for T_e. The authors thank K. I. Gringauz for his constructive criticism. Orig. art. has: 5 figures and 4 equations.

SUB CODE: 04/ SUBM DATE: 01Jul65/ ORIG REF: 012/ OTH REF: 043

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUSENKO, D.

Correlation between economic thought and economics. Vop. ekon. no.8:125-129 Ag '61. (MIRA 14:7)

(Economics)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUSENKO, D.P.; ORESHKIN, V.V.; SHUKHOV, N.S.; MALININ, P.V., otv. red.; PROTOPOPOVA, N.V., red.; VALUYEVA, I.V., tekhn.red.

[Methodology problems of the history of economic thought] Nekotorye voprosy metodologii istorii ekonomicheskoi mysli. Moskva, Mosk. in-t inzhenerov geodezii, aerofotos"emki i kartografii, 1963. 71 p. (MIRA 16:3)
(Economics)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

BREUSOV, O.N., Cand Čhem Sci—(diss) "Study of beryllium fluoride and certain fluo-beryllates." Mos, 1958. 12 pp (Mos State U im M.V.Lomonosov. Chair of Inorganic Čhemistry), 100 copies. Printed on ~~[illegible]~~ rotopress (KL, 47-58 130)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

AUTHORS: Kuvyrkin, O. N., Breusov, O. N., Novoselova, A. V.

SOV/156-58-4-12/49

TITLE: Thermal Analysis of the System $BeCl_2$-BeF_2 (Termicheskiy analiz sistemy $BeCl_2$-BeF_2)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 4, pp 660-663 (USSR)

ABSTRACT: In the present paper the thermal investigation of the system $BeCl_2$-BeF_2 was carried out and the phase diagram was plotted. Purest beryllium hydroxide was used as initial material for the chlorides and fluorides. Beryllium hydroxide was converted into beryllium oxide by annealing at 1000° C, and was then converted into beryllium chloride by chlorination with carbon tetrachloride at 1000°. Beryllium fluoride is obtained by thermal decomposition of $(NH_4)_2BeF_4$ in vacuum. The thermal analysis of the system $BeCl_2$-BeF_2 was carried out by means of Kurnakov PK-52 pyrometer with platinum-platinum-rhodanid. The fluorides and chlorides of beryllium form a simple eutectic with the composition 72.5 mol% BeF_2, and a melting point at 306°C.

Card 1/2

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Thermal Analysis of the System $BeCl_2$-BeF_2

SOV/156-58-4-12/49

The thermal analysis shows a weak endothermal effect at 110° C, which indicates the transformation of unstable beryllium fluoride into a highly stable form. The melting point of beryllium fluoride was determined to be 421°C. The heating curves of the samples show effects at temperatures higher than the liquidus temperature, which indicates the boiling of the BeCl -BeF_2 melt. In the case of a higher beryllium chloride content no solid solutions were found by means of X-ray analysis. There are 1 figure, 1 table, and 8 references, 4 of which are Soviet.

ASSOCIATION: Kafedra neorganicheskoy khimii Moskovskogo gosudarstvennogo universiteta im. M. V. Lomonosova (Chair of Inorganic Chemistry at the Moscow State University imeni M. V. Lomonosov)

SUBMITTED: June 20, 1958

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

AUTHORS: Brousov, O. N., Novoselova, A. V., Corresponding Member of the AS USSR, Simanov, Yu. P.

20-118-5-24/59

TITLE: Thermal and Roentgenophasic Analysis of the $CsF-BeF_2$ System and Its Interrelations With the $Me^{I}F-BeF_2$ Systems (Termicheskiy i rentgenofazovyy analizy sistemy $CsF-BeF_2$ i yeye vzaimootnosheniya s sistemami tipa $Me^{I}F-BeF_2$)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 118, Nr 5, pp. 935-937 (USSR)

ABSTRACT: The $Me^{+}F-BeF_2$ systems can be regarded as weakened fluoride "models" of $Me^{2+}O-SiO_2$ systems with Me^{2} representing Li, Na, K and Rb (references 2-11). The first system mentioned in the title above was to be investigated from the aspect of the changes of stability of different fluoroberyllates. In this system four compounds were found: Cs_3BeF_5, Cs_2BeF_3, $CsBeF_3$ and $CsBe_2F_5$. They all could

Card 1/5

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

Thermal and Roentgenophasic Analysis of the $CsF-BeF_2$ System and Its Interrelations With the M^IF-BeF_2 Systems

20-118-5-24/59

easily be produced by fusing together the component mixture in stoichiometrical proportions. The investigation of the system in the 0 - 33 % BeF_2 range is rendered difficult by the extreme hygroscopic properties and other disturbances. Thus a part of the diagram (figure 1) is only based on the cooling curves. The other part is based on the heating curves. For CsF the the melting point was determined to 688°C (similar to reference 13). With 14% BeF_2 and at 598°C Csf formed a eutectic with Cs_3BeF_5. This melts incongruently at 659°C. At 617°C this compound suffers a polymorphous transformation. For Cs_2BeF_4 the melting point was determined to 793°C.
Its polymorphous transformation took place at 404°C. $CsBeF_3$ melts congruently at 475° C and shows two polymorphous transformations. The eutectic of Cs_2BeF_4 + $CsBeF_3$ is at 449°C and with 48% BeF_2. $CsBe_2F_5$ shows its polymorphous transformation at 450°C, melts congruently at 480°C and

Card 2/5

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Thermal and Roentgenophasic Analysis of the $CsF-BeF_2$ System and Its Interrelations With the M^IF-BeF_2 System

20-118-5-24/59

forms eutectics with $CsBeF_3$ and BeF_2. The great similarity between the phase diagrams of the $CsF-BeF_2$ system and of the $CsF-ZnF_2$ system is striking (reference 14). The individuality of the ceasium-fluoreberyllates was confirmed by roentgenophasic analysis. It was found that the quartzous BeF_2 exists only up to 580°C and melts at higher temperatures. The cristobalite-like form occured only up to 535°C and slowly changed into the quartzons form (from 150°C up). It could not be determined, whether the disappearance of the cristobalite-like form of BeF_2 above this temperature is caused by its melting. The polymorphous transformations of $CsBe_2F_5$ and $CsBeF_3$ were confirmed by X-ray analysis at high temperatures. Moreover the absence of polymorphism with CsF up to 400°C was proved. For Cs_2BeF_4 and $CsBeF_3$ the values of the axis parameters of the lattice were determined, which proved to be rhomboid. The pycnometrical density was measured. With regard to the axes Cs_2BeF_4 is a better crystallochemical analog of B_2SiO_4

Card 3/5

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

Thermal and Roentgenophasic Analysis of the $CsF-BeF_2$ System and Its Interrelations With the M^IF-BeF_2 Systems

20-118-5-24/59

than Rb_2BeF_4 (reference 11) in spite of the difference of the radii. Figure 2 shows the dependence of the destruction temperatures of the crystalline lattices of the fluoroberyllates (congruent melting, incongruent melting, decomposition in solid state) on the cationic radii. The diagram shows that the compounds of the $Me^I_2BeF_4$ are most stable. This stability is increased from Li to Rb, and is decreased insignificantly from Rb to Cs. For $MeBe_2F_5$ compounds there is hardly any change of the decomposition temperature from Li to K. Compounds of this Rb and Cs combination are considerably more stable and melt congruently. There are 2 figures, 1 table, and 15 references 7 of which are Slavic

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. N. V. Lomonosova (State University imeni M. V. Lomonosov, Moscow)

SUBMITTED: October 8, 1957

Card 4/5

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

Thermal and Roentgenophasic Analysis of the $CeF-BeF_2$ System and Its Interrelations With the M^IF-BeF_2 Systems

20-118-5-24/59

Card 5/5

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

5(4)

AUTHORS: ~~Breusov, O. N.,~~ Trapp, G., Novoselova, A. V., Simanov, Yu. P.

SOV/78-4-3-27/34

TITLE: Thermal and X-ray Phase Analysis of the System SrF_2 - BeF_2 (Termicheskiy i rentgenofazovyy analiz sistemy SrF_2 - BeF_2)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 3, pp 671-677 (USSR)

ABSTRACT: The system SrF_2-BeF_2 was investigated by the method of differential-thermal and X-ray phase analysis. Beryllium fluoride was produced by thermal decomposition of ammonium beryllium fluoride and strontium fluoride from strontium carbonate and hydrofluoric acid. For the production of melts with a content of 0-50 mole % BeF_2 SrF_2 and strontium beryllium fluoride were used. For alloys with 50-97 mole % BeF_2 melts from strontium chloride and ammonium beryllium fluoride were used. Melts with more than 50 mole % BeF_2 are hygroscopic. The phase diagram of the system SrF_2-BeF_2 was

Card 1/3

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plotted. At 883±18° beryllium strontium fluoride forms a eutectic with strontium fluoride. Strontium beryllium fluoride melts congruently at 954±10°, and at 923±3° a polymorphic transformation occurs. $SrBeF_4$ forms with beryllium fluoride a eutectic at 582±27°. On the thermogram of the melt with 65 % BeF_2 effects occur at 384±13° and 334±5°, the nature of which could not be found by X-ray analyses. The compound $SrBeF_4$ was determined by X-ray analysis. This compound occurs in three modifications: α, β, and γ. From an aqueous solution the β form of $SrBeF_4$ precipitates with impurities of the γ form. Thermal and X-ray investigations of strontium beryllium fluoride were carried out and two schemes were given for the formation of the modification;

$$\text{melt} \xrightleftharpoons{954^\circ} \alpha\text{-}SrBeF_4 \xrightleftharpoons{923^\circ} \beta_B\text{-}SrBeF_4 \xrightleftharpoons{664^\circ} \gamma\text{-}SrBeF_4$$

Card 2/3

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

Thermal and X-ray Phase Analysis of the System SrF_2 - BeF_2

SOV/78-4-3-27/34

and the transformation:

$$\text{melt} \underset{}{\overset{954^\circ}{\rightleftharpoons}} \alpha \underset{}{\overset{923^\circ}{\rightleftharpoons}} \beta_b \overset{\sim 120^\circ}{\rightleftharpoons} \beta_n$$

$$\alpha \xrightarrow{378^\circ} \gamma \rightleftarrows \beta_b$$

There are 1 figure, 3 tables, and 10 references, 5 of which are Soviet.

SUBMITTED: March 1, 1958

Card 3/3

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

5(2)

SOV/78-4-10-7/40

AUTHORS: Breusov, O. N., Vagurtova, N. M., Novoselova, A. V., Simanov, Yu. P.

TITLE: On the Thermal Decomposition of Ammonium-fluoro-beryllate $(NH_4)_2BeF_4$

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 10, pp 2213-2219 (USSR)

ABSTRACT: Since the reaction under review represents the principal method for the production of crystalline beryllium fluoride, the course of this process was investigated. The authors mention in brief the publications available so far on this problem and especially point out the paper by A. V. Novoselova and M. Ya. Averkova (Ref 14) who first obtained the ammonium-meta-fluoro-beryllate NH_4BeF_3 in addition to the ammonium-ortho-fluoro-beryllate $(NH_4)_2BeF_4$. The thermal decomposition of the ortho-compound in the inert gas current gives only low yields, wherefore this reaction was investigated under decreased pressure. Figure 1 shows the decomposition curve at continuous increase in temperature where no breaks can be seen. On gradual heating

Card 1/2

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up to 165, 180, 205, 220 and 240° (Figs 2 and 3) it becomes evident that the decomposition takes place in three stages: $(NH_4)_2BeF_4 \rightarrow NH_4BeF_3 \rightarrow NH_4Be_2F_5 \rightarrow BeF_2$. Table 1 presents the analysis of $(NH_4)_2BeF_4$, table 2 that of $NH_4Be_2F_5$. The lattice constants of $NH_4Be_2F_5$ were calculated on the basis of a radiogram obtained by means of the RKU-86 chamber and found to belong to the hexagonal syngony (Table 3). In the same way the corresponding lattice constants were calculated from the radiograms of KBe_2F_5 (Table 4) and α-$CsBe_2F_5$ (Table 5). The radiograms are shown in figure 4. Table 6 presents the data for the compounds of the $Me^{I}Be_2F_5$ type, table 7 compares the lattice constants of $NH_4Be_2F_5$, KBe_2F_5 and α-$CsBe_2F_5$. There are 4 figures, 7 tables, and 12 references, 8 of which are Soviet.

SUBMITTED: June 19, 1958

Card 2/2

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000306910011-0

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SOV/78-4-11-33/50

5(2)

AUTHORS: Breusov, O. N., Simanov, Yu. P.

TITLE: X-Ray Investigation of the System CsF - BeF_2

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 11, pp 2582 - 2590 (USSR)

ABSTRACT: In reference 1, the authors analyzed the system CsF - BeF_2 thermally. The compounds Cs_3BeF_5, Cs_2BeF_4, $CsBeF_3$ and $CsBe_2F_5$ were determined which undergo the following polymorphous transformations:

$$\alpha\text{-}Cs_3BeF_5 \overset{617^\circ}{\rightleftharpoons} \beta\text{-}Cs_3BeF_5;\quad \alpha\text{-}Cs_2BeF_4 \overset{404^\circ}{\rightleftharpoons} \beta\text{-}Cs_2BeF_4;$$

$$\alpha\text{-}CsBeF_3 \overset{360^\circ}{\rightleftharpoons} \beta\text{-}CsBeF_3 \overset{141^\circ}{\rightleftharpoons} \gamma\text{-}CsBeF_3;\quad \alpha\text{-}CsBe_2F_5 \overset{450^\circ}{\rightleftharpoons} \beta\text{-}CsBe_2F_5.$$

Here it is reported on the investigation carried out by means of the X-ray apparatus of type URS-70 and the cameras of type RKD and RKU-86, as well as the cameras "Unicum" (Ref 2) for high temperatures; the results of this investigation are

Card 1/2

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KUBYRKIN, O.N.; BREUSOV, O.N.; NOVOSELOVA, A.V.; SEMENENKO, K.N.

Polymorphism of beryllium chloride. Zhur. fiz. khim. 34 no.2:343-348 F '60. (MIRA 14:7)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova. (Beryllium chloride)

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L 12658-65 EWT(m)/EWA(d)/EWP(t)/EWP(b) ASD(m)-3/ASD(d)/AFWL/ESD(gs) RDW/
MJW/JD/MLK

ACCESSION NR: AT4046118 S/0000/63/000/002/0054/0060

AUTHOR: Breusov, O. N.; Revzin, G. Ye.; Leshchenko, V. V.; Zelentsov, D. P.; Derbin, M. M.; Vernedubov, N. P.; Nakarov, G. I.

TITLE: Preparation of high-purity tellurium by zone melting and the conversion of metal waste to tellurium compounds of reagent purity

SOURCE: USSR. Gosudarstvenny*y komitet khimicheskoy i neftyanoy promy*shlennosti. Promy*shlennost' khimicheskikh reaktivov i osobo chisty*kh veshchestv (Industry of chemical reagents and extra pure substances); Informatsionny*y byulleten', no. 2. Moscow, IREA, 1963, 54-60

TOPIC TAGS: tellurium, zone melting, selenium, iron, aluminum, sodium, silicon, zone refining, tellurium refining

ABSTRACT: The apparatus designed and constructed for preparing high-purity tellurium by zone melting in an argon atmosphere is illustrated and described in detail, along with the mechanical drive of the melting pot which makes possible a complete automation of the reciprocating movement of the pot during refining. It was established that, in principle, high-purity tellurium can be produced directly from a technical-grade tellurium by zone melting. The content of impurities in the end product is less than 10^{-3}-10^{-4}%, except for selenium, the content of which

Card 1/2

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