L 15471-63 EPA(b)/EWT(1)/BDS AFFTC/ASD Pd-4

ACCESSION NR: AP3005426 S/0020/63/ 151/005/1038/1041

AUTHOR: Barantsev, R. G.

58
56

TITLE: Method of integral kinetic equations for moments

SOURCE: AN SSSR. Doklady*, v. 151, no. 5, 1963, 1038-1041

TOPIC TAGS: moment integral kinetic equation, rarified gas, distribution function, integral kinetic equation, moment

ABSTRACT: This paper is an attempt to simplify the solution of kinetic problems. It is pointed out that in many cases the actual distribution functions do not have to be known. Instead of working in a 7-dimensional space (3 space, 3 velocity components, and time), it is more expedient to present the functions of many variables by a combination of functions of fewer variables. Authors describe a method in which the distribution function is represented by the coefficients of expansion of the generalized Hermite polynomials. Its first terms give the basic macrocharacteristics of the gas. The method is expected to be useful in numerical solutions of important aerodynamical

Card 1/2

L 15471-63

ACCESSION NR: AP3005426

2

problems of rarified gases., Orig. art. has: 20 formulas.

ASSOCIATION: Leningradskiy gosudarstvenny*y universitet im. A. A. Zhdanova (Leningrad State University)

SUBMITTED: 16Feb63 DATE ACQ: 06Sep63 ENCL: 00

SUB CODE: AS NO REF SOV: 008 OTHER: 003

Card 2/2

BARANTSEV, R.G. (Leningrad)

"On the moment method of solving kinetic problems for a rarefied gas"

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 January - 5 February 1964

BARANTSEV, R.G. (Leningrad); FILIPPOV, B.V. (Leningrad)

Simplified variant of an integral kinetic operator. PMTF no.2: 129-131 Mr-Ap '64. (MIRA 17:8)

L 15783-65 EWT(1)/EWP(m)/FCS(k)/EWA(1) Pd-1/Pi-4 ESD(t)/ESD(gs)/AEDC(a)/AFWL/
ACCESSION NR: AP4049009 ASD(f)-2/AFETR/AFTC(a) S/0043/64/000/004/0083/0085

AUTHORS: Barantsev, R. G.; Shlazha, Yu.

TITLE: Asymptotic structure of boundary layer for large M

SOURCE: Leningrad. Universitet. Vestnik. Seriya matematiki, mekhaniki i astronomii, no. 4, 1964, 83-85

TOPIC TAGS: rarefied gas flow, monatomic gas, mach number, asymptotic solution, boundary layer

ABSTRACT: The nonequilibrium, asymptotic behavior of the macroscopic parameters of particle flow, generated at the wall, is analyzed at high Mach numbers. The flow of a monatomic gas outside the boundary layer is described by a Maxwellian distribution function and particle flow to the wall in limit $M \to \infty$ is given by

$$N_0 = \int\int\int_{u_y<0} |u_y| f_0 d\bar{u} = \frac{1}{2\sqrt{\pi h}}$$

. For diffusely reflected molecules colliding only with molecules coming from outside the boundary layer, the distribution function takes the form

$$f_s(\bar{u}, y, h) = \left(\frac{h}{\pi}\right)^{\frac{3}{2}} \exp\left\{-hu^2 - \frac{y}{u_y}|\bar{u} - \bar{U}_0|\right\}.$$

Card 1/2

L 15783-65

ACCESSION NR: AP4049009

The asymptotic behavior of the macroscopic parameters of the flow described by this second equation is then analyzed for $M \to \infty$, $y \gtrsim 0$. For $\alpha = yM(5/6)^{\frac{1}{2}}$ this yields an expression for the number density

$$n_s \approx \begin{cases} \frac{1}{\sqrt{3}} \exp\left(-3\left(\frac{\alpha}{2}\right)^{\frac{2}{3}}\right)\left[1+O\left(\alpha^{-\frac{2}{3}}\right)\right], & \alpha \to \infty, \\ \frac{1}{2}+\frac{1}{\sqrt{\pi}}\alpha \ln \alpha + O(\alpha), & \alpha \to 0. \end{cases}$$

Similar nonequilibrium behavior is observed with other macroscopic parameters, such as the velocity. The thickness of the boundary layer for this situation is inversely proportional to M. Orig. art. has: 15 equations.

ASSOCIATION: none

SUBMITTED: 20Jun63

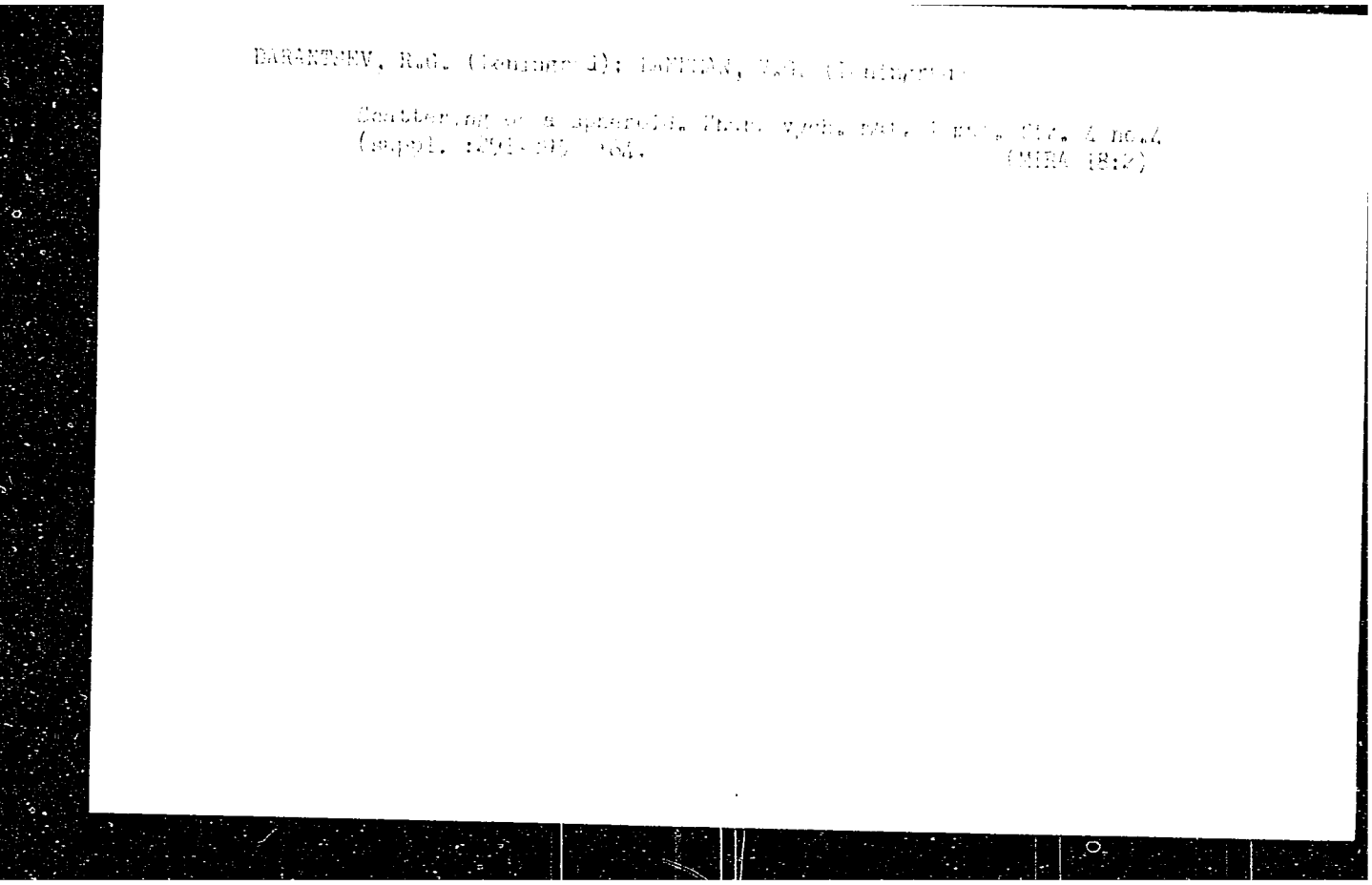
SUB CODE: ME

NO REF SOV: 001

ENCL: 00

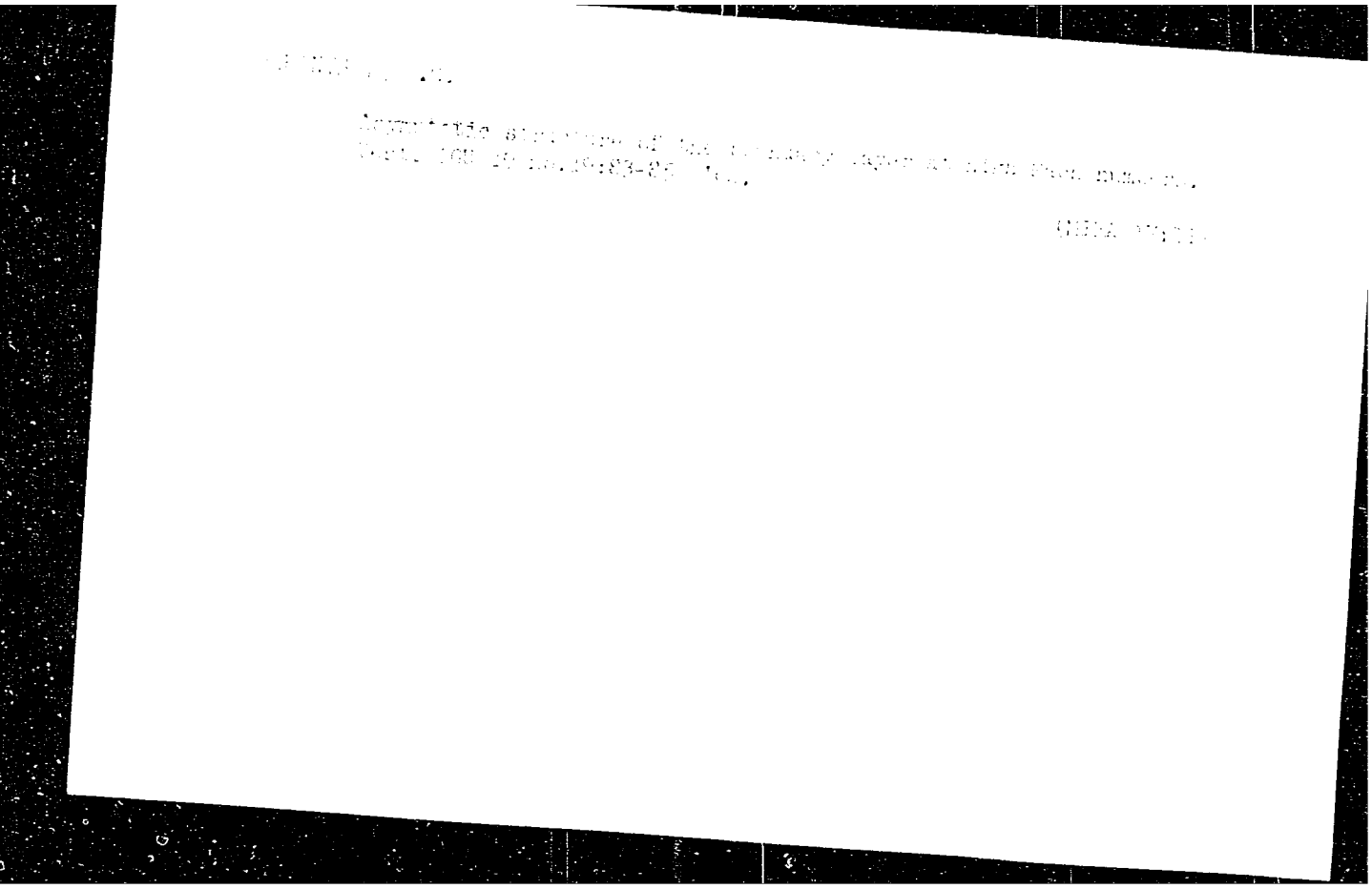
OTHER: 003

Card 2/2



BARANTSEV, R.G. (Leningrad); DAVIDOV, V.N. (Leningrad)

Deviation of a spheroid. Prikl. mat. i mekh. 27 no.4 (MIRA 18:2)
(1963): 639-647.



ACCESSION NR: AP4043831 S/0020/64/157/005/1080/1083

AUTHOR: Barantsev, R. G.

TITLE: Concerning the formulation of the problem of scattering at a finite distance

SOURCE: AN SSSR. Doklady*, v. 157, no. 5, 1964, 1080-1083

TOPIC TAGS: collision theory, particle scattering, approximation method, asymptotic solution, wave number, interference analysis

ABSTRACT: The higher order terms of the expansion of the radial flux are evaluated and analyzed for stationary elastic scattering by a potential that becomes radial at large distances. It is pointed out that in the existing collision theory the states before and after collisions are considered only in a limited sense, for infinite distances, but actually it is necessary to know the results at finite distances and to analyze whether the asymptotic expansions

Card 1/2

ACCESSION NR: AP4043831

are applicable at such distances. The analysis is made complicated by the fact that when the distance and wave number are finite, exact separation of the fluxes is made impossible by the presence of interference terms due to interaction between the fluxes. It is shown that more accurate results can be obtained either by so reformulating the problem so that the approximation is made not in the solution but in the formulation of the problem, or by evaluating the interference between the scattered and transmitted waves. This report was presented by N. N. Bogolyubov. Orig. art. has: 20 formulas.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova (Leningrad State University)

SUBMITTED: 05Apr64

SUB CODE: NP ENCL: 00

NR REF SOV: 007 OTHER: 001

Card 2/3

L 20337-66 EWT(d)/EWT(l)/EWP(m)/EWT(m)/EWP(w)/EWA(d)/T-2/EWP(k)/EWA(h)/ETC(m)-6
AM5023888 EWA(l) WW/EM BOOK EXPLOITATION UR/

Barantsev, Rem Georgiyevich

Lectures on transonic gas dynamics (Lektsii po transzvukovoy gazodinamike) [Leningrad] Izd-vo Leningr. univ., 1965. 215 p. illus., biblio., tables (At head of title: Leningradskiy ordena Lenina gosudarstvennyy universitet imeni A. A. Zhdanova) 3350 copies printed.

TOPIC TAGS: gas dynamics, transonic flow, thin wing theory, hodograph equation, Chaplygin function, boundary value problem, existence theorem, Tricomi equation, uniqueness theorem

PURPOSE AND COVERAGE: This book, which was developed from a lecture course given in the Department of Mathematics and Physics of the Leningrad State University, contains a systematic elucidation of the theory of transonic flows. The treatment of a number of problems is nonstandard. Some chapters, particularly I, IV, and VII, contain new material. The formulation and methods of solving boundary value problems in the hodograph plane are stressed. Tables of Chaplygin functions for the supersonic region compiled in the NIIMM

Card 1/3

(Scientific Research Institute of Mathematics and Mechanics) of the Leningrad University are presented in an appendix to the book. The book is intended as a textbook for students and teachers and may be of use to persons concerned with the problems of transonic gas dynamics. A large bibliography containing 268 Soviet and non-Soviet items is given.

TABLE OF CONTENTS (abridged)

L 20337-66
AM5023888

SUB CODE: AI, ME SUBMITTED: 12Mar65 NO REF SOV: 118

OTHER: 150

Card 3/3 ULR

L 29117-65 EWT(1)

ACCESSION NR: AP5005779 S/0043/65/000/001/0066/0076

AUTHOR: Barantsev, R. G.

TITLE: Separation of variables method in the wave problem with an arbitrary boundary

18
B

SOURCE: Leningrad. Universitet. Vestnik. Seriya matematiki, mekhaniki i astronomii, no. 1, 1965, 66-76

TOPIC TAGS: differential equation, wave propagation

ABSTRACT: A generalization of the separation of variables method to problems with arbitrary bounds was given by the author in four previous papers. In this work he further develops the method. He gives numerical computations for a sinusoidal surface in treating an example of the problem of reflection of a plane wave from a periodic surface of arbitrary form and shows that for practical purposes it is sufficient to solve a finite system of linear algebraic equations, whose number does not exceed the number of reflected waves by much, in order to determine the amplitudes of the reflected waves. Orig. art. has: 48 formulas.

ASSOCIATION: none

SUBMITTED: 15Jul63 ENCL: 00 SUB CODE: MA

NO REF SOV: 015 OTHER: 009

Card 1/1

L 42445-65 EWT(1)/EWP(m)/EPR/FCS(k)/EWA(1) Pd-1/Ps-4 WW

ACCESSION NR: AT5009605 UR/3034/65/000/002/0062/0078

AUTHOR: Barantsev, R. G.

17
B+1

TITLE: Method of integral kinetic moment equations

SOURCE: Leningrad. Universitet. Nauchno-issledovatel'skiy institut matematiki i mekhaniki. Aerodinamika razrezhennykh gazov, no. 2, 1965, 62-78

TOPIC TAGS: kinetic moment equation, velocity distribution expansion, kinetic method, monoatomic gas, gas aerodynamics, rarified gas, integral moment equation

ABSTRACT: This paper, representing an extension of a previously published communication (DAN SSSR, vol. 151, no. 5, 1963), discusses methods of solution in the kinetic theory which intermix the macroscopic and microscopic approach. A method for the solution of the kinetic equations in the aerodynamics of monatomic rarified gases is presented which is based on the representation of the distribution function through the Hermite polynomial velocity-space expansion coefficients. The resulting system of integral moment equations contains the initial and boundary conditions and is very convenient for numerical iteration solution. The structure of the pertinent standard integrals is also given. Further

Card 1/2

L 42445-65
ACCESSION NR: AT5009605

study will aim at 1) the simplification of certain aspects of the formulation; 2) the comparison of the present expansion with various weight functions; 3) the search for further representations, particularly the study of bimodal expansions; 4) the study of the convergence properties of various reduction and iteration process; and 5) the extension of the method to systems with internal degrees of freedom. Orig. art. has: 52 formulas.

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00 SUB CODE: ME, MA

NO REF SOV: 013 OTHER: 008

Card 2/2

L 42446-65 EWT(1)/EWP(m)/EWT(m)/EPR/FCS(k)/EWA(1) Pd-1/Ps-4 WW
ACCESSION NR: AT5009606 UR/3034/65/000/002/0079/0097

30
13+1

AUTHOR: Alekseyeva, Ye. V.; Barantsev, R. G.; Butov, V. F.; Zvorykin, L. L.

TITLE: The evaluation of standard integrals in kinetic moment equations

SOURCE: Leningrad. Universitet. Nauchno-issledovatel'skiy institut matematiki i mekhaniki. Aerodinamika razrezhennykh gazov, no. 2, 1965, 79-97

TOPIC TAGS: standard kinetic integral, kinetic moment equation, Hermite polynomial expansion, gas kinetics, aerodynamics

ABSTRACT: The method of kinetic moment equations (R. G. Barantsev, Aerodinamika razrezhennykh gazov, no. 2, 1965, 62-78, LGU) permits the evaluation of a significant number of quadratures using an analytic form which is identical for the entire class of problems covered by the integral kinetic operator of the aerodynamics of rarified gases (Aerodinamika razreshennykh gazov, Symp. 1, Edited by S. V. Vallander, LGU, 1963). Such quadratures represent a contribution to the solution of all kinetic problems since they refer to that part of the development which can be covered using general procedures. The physical content and universal character of such quadratures makes the study of their

Card 1/2

L 42446-65

ACCESSION NR: AT5009606

internal structure worthwhile. This paper presents the evaluation of these integrals appearing during Hermite polynomial expansions of the collision and generating functions within a monatomic gas. Orig. art. has: 30 formulas and 4 figures.

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00 SUB CODE: ME, MA

NO REF SOV: 002 OTHER: 001

Card 2/2

L 42447-65 EWT(d)/EWT(l)/EWP(m)/EPF(n)-2/EWA(d) Pd-1/Pg-4/Pu-4 IJP(c) WW

ACCESSION NR: AT5009607 UR/3034/65/000/002/0098/0113

AUTHOR: Barantsev, R. G.

35
B+1

TITLE: 56-moment system of differential kinetic equations

SOURCE: Leningrad. Universitet. Nauchno-issledovatel'skiy institut matematiki i mekhaniki. Aerodinamika razrezhennykh gazov, no. 2, 1965, 98-113

TOPIC TAGS: kinetic moment equation, rarified gas distribution, hydrodynamic equation approximation, differential kinetic equation, Hermite polynomial expansion, hydrodynamics, Navier Stokes approximation

ABSTRACT: A system of differential equations for the Hermite polynomial expansion coefficients of monatomic rarified gas distributions is presented containing moments up to and including the fifth order. These equations exhibit, via their structure, the general kinetic regularities; consequently, the author carried out the derivations in spite of their known insolvability (R. G. Barantsev, B. V. Filippov, PMTF, no. 2, 123-131, 1964). From all the collision cross sections and internal transforms characterizing the interatomic collision mechanism, the resulting system contains only four functionals. The system of equations may be used for the derivation of various approximate expressions.

Card 1/2

L 42447-65
ACCESSION NR: AT5009607

As an example, the author derives the hydrodynamic equations of a viscous heat-conducting liquid (the Navier-Stokes approximation). The well-known Barnet approximation does not go beyond the framework of a 13-moment system. Orig. art. has: 81 formulas.

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00 SUB CODE: ME, MA

NO REF SOV: 006 OTHER: 001

Card 2/2

L 42451-65 EWP(m)/EWT(l)/EWT(m)/FCS(k) Pd-l

ACCESSION NR: AT5009611 UR/3034/65/000/002/0215/0226 12 B+1

AUTHOR: Barantsev, R. G., Farzan, R. Kh.

TITLE: Integral moment equations for a gas with internal degrees of freedom

SOURCE: Leningrad. Universitet. Nauchno-issledovatel'skiy institut matematiki i mekhaniki. Aerodinamika razrezhennykh gazov, no. 2, 1965, 215-226

TOPIC TAGS: kinetic moment equation, internal freedom, rarefied gas equation, monatomic gas equation, internal transform, distribution function calculation, integral moment equation

ABSTRACT: The author previously proposed (R. G. Barantsev, Aerodinamika razrezhennykh gazov, no. 2, 1965, 62-78, LGU) a method for the solution of kinetic problems concerning monatomic rarefied gases by means of integral moment equations. The present paper extends the same method to a gas with internal (nonrotational) degrees of freedom. The gas consists of identical (unit-mass) atoms whose internal energy may take finite or denumerable values. It elucidates the structure of the internal transform and evaluates the standard integrals which are analogous to those discussed elsewhere (Ye. V. Alekseyeva, R. G. Barantsev, V. F. Butov, L. L. Zvorykin, Aerodinamika razrezhennykh gazov, no. 2, 1965, 79-97). Orig. art. has: 61 formulas.

Card 1/2

L 42451-65

ACCESSION NR: AT5009611 0

ASSOCIATION: None

SUBMITTED: 00/65 ENCL: 00 SUB CODE: ME

NO REF SOV: 005 OTHER: 000

Card 2/2 CC

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103520016-3"

L 4... EWP(m)/EWT(1)/EWT(m)/FCS(k) Pd-1
ACCESSION NR: AT5009614 UR/3034/65/000/002/0253/0271

12
B+1

AUTHOR: Barantsev, R. G.

TITLE: Theory of isolated reflection of gas atoms from hard surfaces

SOURCE: Leningrad. Universitet. Nauchno-issledovatel'skiy institut matematiki i mekhaniki. Aerodinamika razrezhennykh gazov, no. 2, 1965, 253-271

TOPIC TAGS: rarefied gas reflection, clean surface reflection, reflected velocity distribution, intermediate energy reflection, momentum transfer coefficient, energy transfer coefficient, gas kinetics

ABSTRACT: This work (the basic part of which was completed during the year 1959) investigates the reflection of gas atoms from hard surfaces when the energy of the incident atoms is on the order of 10 eV and their mass is less than the mass of the atoms constituting the reflecting surface. This problem is of importance for the aerodynamics of rarefied gases, and the existing theoretical and experimental findings are still far from satisfactory for energies ranging from the energy of chemisorption to that of lattice binding. As a matter of fact, there are no experimental data for the most interesting incident energy region around 10 eV. Consequently, the author proposes for a simple reflection scheme this energy range based on the

Card 1/2

L 42...

ACCESSION NR: AT5009614

assumed absence of the adsorbed layer and on paired interactions. He investigates the limits of simple reflections and estimates the multiple collision contribution. The velocity distribution of the reflected particles and the momentum and energy coefficients are derived as functions of the incident angle and of the two parameters representing, respectively, the ratio of the masses and of the radii of the gas and surface atoms. A brief discussion of the possible effects due to the surface temperature, surface roughness, collective interaction and adsorption is also given. Orig. art. has: 64 formulas, 4 figures, and 1 table.

ASSOCIATION: None

SUBMITTED: 00/65 ENCL: 00 SUB CODE: ME

NO REF SOV: 010 OTHER: 010

Card 2/2 cc

BARANTSEV, V.I.

Distillation of molasses-alcohol beer under vacuum with the preservation of the viability of yeasts. Trudy KTIPP no.21:73-77 '59. (MIRA 14:1)

(Distillation) (Yeast)

BARANTSEV, V.I.

Distillation molasses beer under vacuum. Izv.vys.ucheb.zav.;pishch. tekh. no.5:76-81 '60. (MIRA 13:12)

1. Stalinskiy tekhnikum pishchevoy promyshlennosti.
(Distilling industries--By-products)

ACCESSION NR: AP4033122 S/0120/64/000/002/0108/0109

AUTHOR: Barantsev, V. S.; Kalyatskiy, I. I.; Kleyn, R. E.

TITLE: Mobile 300-kv 10-cps pulse generator

SOURCE: Pribory* i tekhnika eksperimenta, no. 2, 1964, 108-109

TOPIC TAGS: surge generator, pulse generator, 300 kv pulse generator, 10 cps pulse generator, mobile 300 kv pulse generator

ABSTRACT: A 300-kv pulse generator with a 10^{-7} -sec front and a repetition frequency of 10 cps, intended for "special application," is briefly described. An LC charging circuit, charging choke coils, and separation inductances are used. "The generator satisfactorily passed a cycle of tests with a short-circuited load, at 15 cps and an amplitude of 300 kv." Data given: front duration, 0.2×10^{-6} sec; number of stages, 7; capacitor type, KBGP-10, 0,5; impact capacitance, 18 nf; charging choke, 65 h; separation inductance, 1.43 mh; pulse energy, 800 joules. Orig. art. has: 2 figures and 1 formula.

Card 1/2

ACCESSION NR: AP4033122

ASSOCIATION: Tomskiy politekhnicheskiy institut (Tomsk Polytechnic Institute)

SUBMITTED: 30May63 ATD PRESS: 3065 ENCL: 00

SUB CODE: EC NO REF SOV: 000 OTHER: 000

Card 2/2

NESHPOR, V. S.; BARANTSEVA, I. G.

Heat conductivity of molybdenum silicides. Inzh.-fiz. zhur. 6 no.1:109-113 Ja '63. (MIRA 16:1)

1. Institut metallokeramiki i spetsial'nykh splavov AN USSR, Kiyev.

(Molybdenum silicides—Thermal properties)

ACCESSION NR: AP4041075 S/0170/64/000/006/0120/0122

AUTHOR: Marchenko, V. I.; Barantseva, I. G.

TITLE: Determination of heat conductivity coefficient of sesquisulfides of some rare earth metals

SOURCE: Inzhenerno-fizicheskiy zhurnal, no. 6, 1964, 120-122

TOPIC TAGS: heat conductivity, rare earth metal, metal sesquisulfide, sesquisulfide heat conductivity

ABSTRACT: The heat conductivity of sesquisulfides La_3S_3, Ce_2S_3, Pr_2S_3, and Nd_2S_3 has been determined. Cylindrical specimens 6—8 mm in diameter and 10—15 mm long were obtained by cold pressing and sintering at 1400—1450K in dry H_2S. The heat conductivity was determined by the stationary method, based on the direct measurement of the temperature gradient in the specimen section through which the heat current of a certain capacity has been transmitted (see Table 1 of the Enclosure). For the determination of the electron component of heat conductivity coefficient λ_{el}, the equation

Card 1/3

ACCESSION NR: AP4041075

$$\lambda_{elec} = \sigma T \times 1.5 \times 10^{-8} \frac{W}{S \cdot deg^2}$$

was used, where σ is electrical conductivity and T is temperature. The electron component was found to be negligible in comparison to the phonon component. In the series $La_2S_3 \rightarrow Nd_2S_3$ some heat conductivity increase is observed, which can be attributed to the loss of crystal lattice rigidity. Orig. art. has: 1 formula and 2 tables.

ASSOCIATION: Institut metallokeramiki i spetsialny*ch splavov AN USSR, Kiev (Institute of Powder Metallurgy and Special Alloys)

SUBMITTED: 11May63 ATD PRESS: 3075 ENCL: 01

SUB CODE: MM, TD NO REF SOV: 003 OTHER: 000

Card 2/3

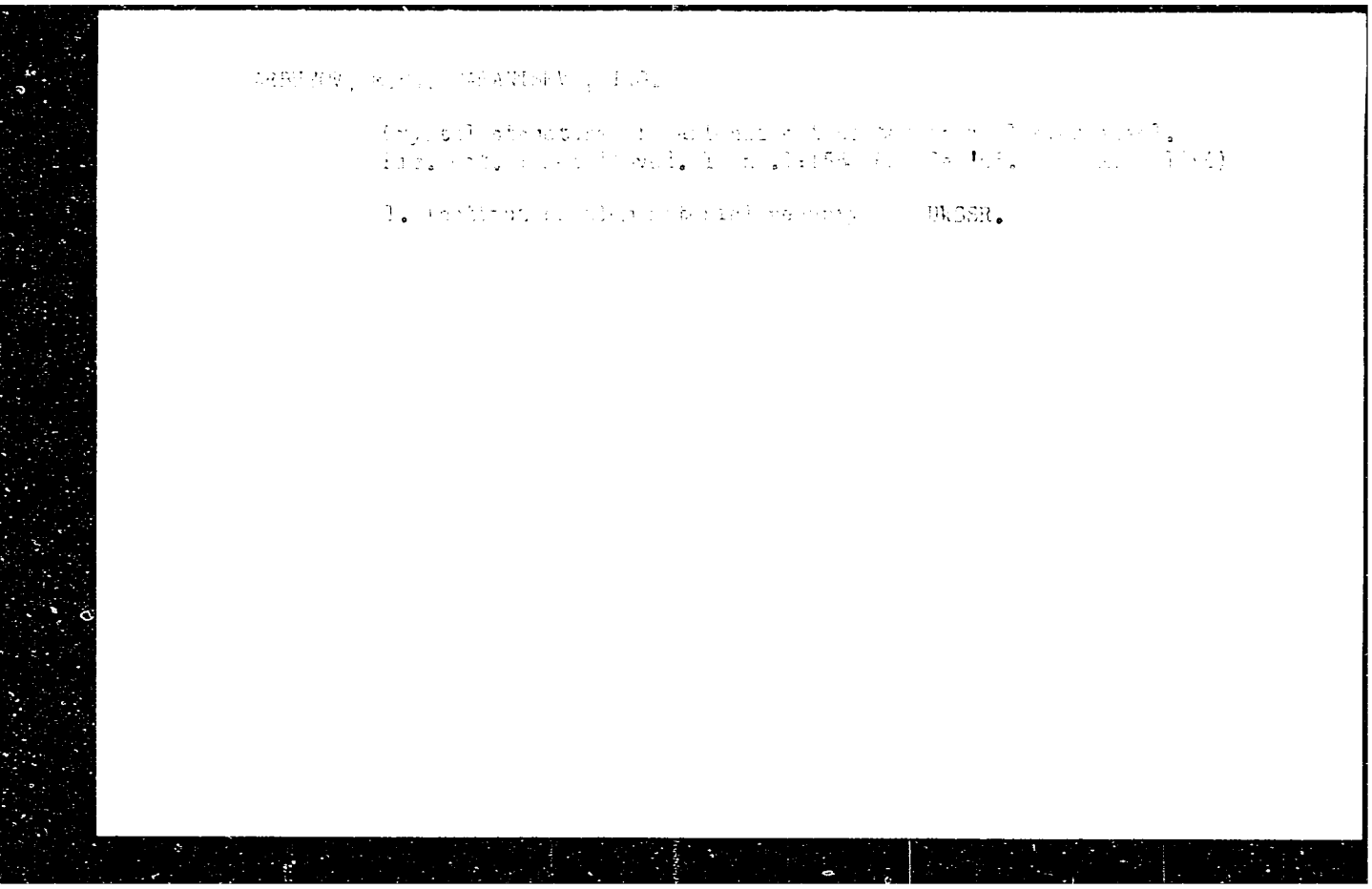
ACCESSION NR: AP4041075

ENCLOSURE: 01

Table 1. Coefficients of heat conductivity λ and electron component of heat conductivity λ_{el}, and electric conductivity σ of some rare earth metal sesquisulfides

Sulfide	Porosity %	λ W/m·deg	$\sigma \cdot 10^5$ S/m	$\lambda_{el} \cdot 10^{10}$ W/m.deg
La_2S_3	13	2.3 ±0.1	5.8	2.6
Ce_2S_3	16	3.5 ±0.1	8.4	3.8
Pr_2S_3	25	2.7 ±0.2	9.1	4.1
Nd_2S_3	18	3.4 ±0.1	14.3	6.4

Card 1 3/3



L 31877-66 EWT(1)/EWT(m)/ETC(f)/EWP(e)/EWP(t)/ETI IJP(c) WW/JD/JG/GD/AT/WH
ACC NR: AT6013558 SOURCE CODE: UR/0000/65/000/000/0199/0204

AUTHOR: Paderno, Yu. B.; Barantseva, I. G.; Yupko, V. L.

ORG: Institute of Materials Science Problems, AN UkrSSR (Institut problem materialovedeniya AN UkrSSR)

TITLE: Determination of thermal conductivity and electrical resistance of ZrC, HfC, NbC, and TaC at high temperatures

SOURCE: AN UkrSSR. Institut problem materialovedeniya. Vysokotemperaturnyye neorganicheskiye soydeineniya (High temperature inorganic compounds). Kiev, Naukova dumka, 1965, 199-204

TOPIC TAGS: zirconium, hafnium, niobium, tantalum, carbide

ABSTRACT: The thermal conductivity and the electrical resistance of ZrC, HfC, NbC, and TaC were determined in the 1370°-3270°K range. The measurements were made with an apparatus shown in figure 1. The samples were 8 mm in diameter and 15-18 mm in length. The hole depths were 3.5-3.7 and 1.8-2.0 ohm, their diameter was 0.9 mm, the distance separating them was approximately 5 mm, and the distance between the potential zones was 7-7.5 mm. The coefficient of thermal conductivity (λ) was calculated from the formula

$$\lambda = \frac{IU}{4\pi\Delta T l} \cdot \frac{r_a^2 - r_b^2}{R^2},$$

Card 1/2

where I is the current in the sample, U is the potential difference on the sample portion of l in length, R is the sample radius, l is distance between potential zones used in potential difference determination, r_a and r_b are radii, $\Delta T=T_b-T_a$ is the temperature difference. The electrical resistance ρ was calculated from the formula

$$\rho = \frac{U}{I} \cdot \frac{\pi R^2}{l}.$$

The carbide samples composition is shown in a table. Orig. art. has: 4 figures, 2 tables, 2 formulas.

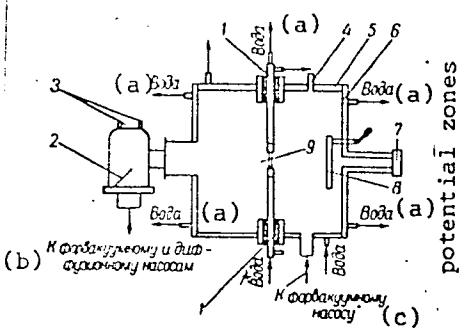


Fig. 1. 1--electrical lead; 2--vacuum valve; 3--vacuum tubes; 4--leak; 5--chamber housing; 6--front cap-flange; 7--visier; 8--visier glass protection plate; 9--sample.

a--water; b--to prevacuum and diffusion pump; c--to prevacuum line

SUB CODE: 11, 07/ SUBM DATE: 03Jul65/ ORIG REF: 008/ OTH REF: 007

Card 2/2

L 32675-66 EWT(l)/EWT(m)/EWP(t)/ETI IJP(c) JD/WW/JG/GD

ACC NR: AT6013567 (A) SOURCE CODE: UR/0000/65/000/000/0293/0296

AUTHOR: Paderno, Yu. B.; Dudnik, Ye. M.; Andreyeva, T. V.; Barantseva, I. G.; Yupko, V. L.

ORG: Institute of Material Science Problems, AN UkrSSR (Institut problem materialovedeniya AN UkrSSR)

TITLE: Measurement of the thermal expansion coefficients of ZrC, HfC, NbC, and TaC at high temperatures

SOURCE: AN UkrSSR. Institut problem materialovedeniya. Vysokotemperaturnyye neorganicheskiye soyedineniya (High temperature inorganic compounds). Kiev, Naukova dumka, 1965, 293-296

TOPIC TAGS: zirconium carbide, hafnium compound, tantalum compound, niobium compound, heat expansion, ~~OPM-19 micropyrometer~~ CARBIDE

ABSTRACT: The thermal expansion of zirconium, hafnium, niobium, and tantalum carbides was studied in the 1370°-3170°K range. The object of the work was to fill a gap in the literature. The thermal expansion was measured in a vacuum chamber (10^{-2} mm Hg) in which carbide samples (8 mm in diameter and 15-18 mm in length) were heated electrically. The carbide samples were prepared by hot-pressing technique and the temperature was measured with an OPM-19 micropyrometer. The individual carbide samples had the

Card 1/2

L 32675-66

ACC NR: AT6013567

following porosities: ZrC--19 to 24%, HfC--22 to 28%, NbC--13 to 18%, and TaC--27%. The dependence of the relative thermal expansion ($\Delta l/l$) of the carbide samples upon temperature is graphed. A table gives the average values of the thermal expansion coefficients (α) for various carbides. Orig. art. has: 2 figures, 2 tables.

SUB CODE: 07,11/ SUBM DATE: 03Jul65/ OTH REF: 003

Card 2/2

L 16904-65 EWP(e)/EWT(m)/EPF(n)-2/EPR/EWP(t)/EWP(b) Ps-4/Pu-4 IJP(c)/
AFMD(t)/AEDC(b)/AFWL/AS(mp)-2/SSD/ASD(a)-5/ESD(dp)/ESD(gs)/ESD(t) JD/JG/
AT/WH
ACCESSION NR: AP4047387 S/0294/64/002/005/0829/0831

AUTHORS: Andreyeva, T. V.; Barantseva, I. G.; Dudnik, Ye. M.; Yupko, V. L.

TITLE: Study of some physical properties of aluminum nitride

SOURCE: Teplofizika vy*sokikh temperatur, v. 2, no. 5, 1964, 829-831

TOPIC TAGS: aluminum nitride, specific electrical resistance, thermal conductivity, thermal expansion coefficient, dielectric constant, dielectric loss, thermocouple, dilatometer/ OMP 019 pyrometer, MOM 4 resistance measuring apparatus

ABSTRACT: The temperature dependence of specific electrical resistance, coefficient of thermal conductivity, coefficient of thermal expansion, frequency dependence of the dielectric constant, and the dielectric loss angle of aluminum nitride have been investigated. The measurements were made on compact specimens with porosity of 10-20%, obtained by cold pressing and subsequent caking in an atmosphere of nitrogen at 217.3K. The specific electrical resistance measurements were made in a temperature range of 300-1873K on specimens 8 mm in diameter and 12-15 mm high, using an MOM-4 apparatus. The temperatures were measured by platinum—platinum-rhodium thermocouples. The specific resistance was found to decrease monotonically from 2.25×10^{11} at 673K to 9×10^{3} ohm-cm at 1473K.

Card 1/2

L 16904-65
ACCESSION NR: AP4047387

2

The thermal conductivity was measured in the range of 300-1473K. For room temperature the method described by V. S. Neshpor and I. G. Barantseva (Inzh-Fiz. Zh. No. 1, 1963) was used, and for high temperatures the method of V. V. Pustovalov (Zavodskaya laboratoriya; No. 9, 1093, 1957). High temperatures were measured by a pyrometer of the type OMP-019. A monotonic decrease in the thermal conductivity was observed in this regime. The frequency dependence of the dielectric constant and the dielectric loss angle were measured in the range of 73 kilocycles to 26 megacycles. The dielectric constant dropped up to a frequency of about 300 kilocycles, and thereafter increased very slowly. The coefficient of thermal expansion was measured in the range of 300-1373K, using an optical quartz dilatometer. The mean value of this coefficient was found to be 4.8 x 10^{-6}/C. The specimens were prepared by Yu. D. Repkin. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: Institut problem materialovedeniya, Akademii nauk SSSR (Institute of Materials Research Problems, Academy of Sciences SSSR)

SUBMITTED: 15May64 ENCL: 00

SUB CODE: MM NO REF SOV: 012 OTHER: 004

Card 2/2

BARANTSEVA, Klavdiya Petrovna, zasl. mekhanizator RSFSR; VISHNYAKOVA, Ye., red.; POKHLEBKINA, M., tekhn.red.

[I like my occupation] Liubliu svoiu professiiu. Moskva, Mosk. rabochii, 1963. 34 p. (MIRA 16:8)

1. Kolkhoz "Zavet Il'icha" Moskovskaya oblast' (for Barantseva).
(Farm mechanization)

ACC NR: AP6034764 SOURCE CODE: UR/0407/66/000/001/0043/0050

AUTHOR: Barantseva, O. D. (Taganrog); Malyshev, V. A. (Taganrog)

ORG: ncne

TITLE: Study of the surface ionization of dielectrics by determination of the conditions for ignition of the discharge

SOURCE: Elektronnaya obrabotka materialov, no. 1, 1966, 43-50

TOPIC TAGS: dielectric property, surface ionization, ignition point, electric discharge

ABSTRACT: The article presents an approximate calculation of the conditions for ignition of a discharge and an experimental application of the theory of ignition in the presence and in the absence of an external ionizer. According to Townsend, the breakdown condition is described by the equality

$$\gamma\left(e^{\alpha d}-1\right)=1, \qquad (1)$$

where α and γ are the first and third Townsend coefficients, determined by the relationships:

$$\alpha=\frac{p}{\lambda_i}e^{-\frac{V(p\,pd}{U_i\lambda_i}}, \qquad (2)$$

$$\gamma=k_i\frac{U_i}{pd}, \qquad (3)$$

Card 1/2

ACC NR: AT6034704

in which ℓ is the charge on an electron; k is a coefficient depending on the material and the condition of the surface layer of electrons and on the nature of the ions coming from the electrode; V_i is the ionization potential of the gas; λ_i is the length of the free flight path of a molecule of the gas; U_{ig} is the ignition potential of the discharge; d is the distance between electrodes; p is the pressure of the gas. Experimental data on surface ionization are compared satisfactorily with values claculated on the bases of the above theoretical considerations. Orig. art. has: 23 formulas and 5 figures.

SUB CODE: 09,20/ SUBM DATE: none/ ORIG REF: 010

Card 2/2

ACC NR: AP7005393 (A) SOURCE CODE: UR/0148/67/000/001/0066/0068

AUTHOR: Polisadov, V. N.; Sidorenko, M. F.; Gladkov, M. I.; Barantseva, Z. V.; Galunenko, I. P.

ORG: Moscow Evening Metallurgical Institute (Moskovskiy vecherniy metallurgicheskiy institut)

TITLE: Effect of rare earth metals on the properties of steel in the liquid and solid states

SOURCE: IVUZ. Chernaya metallurgiya, no. 1, 1967, 66-68

TOPIC TAGS: alloy steel, ferroalloy, rare earth metal, impact strength

ABSTRACT: The authors study the effect which ferrocerium (60% Ce, 25% La, the remainder--other rare earth metals) and an alloy of rare earth metals with a high lanthanum concentration (60% La, 25% Ce, the remainder--other rare earth metals) have on the properties of 40KhL and 35GL acid steels in the liquid and solid states. It was found that the kinematic viscosity of 40KhL steel containing ferrocerium admixtures increases with the concentration of nonmetallic inclusions, sharp-angled alumina inclusions having the strongest effect. Metal treated with ferrolanthanum admixtures has a somewhat lower kinematic viscosity, especially at high temperatures. The overall concentration of nonmetallic inclusions, and especially alumina, is also lower in steel

Card 1/2 UDC: 669.15-194:669.26:669.74:669.85/.86

ACC NR: AP7005393

with ferrolanthanum impurities. This is due to the higher deoxidizing capacity of lanthanum in comparison with cerium which reduces the concentration of oxygen dissolved in the molten metal and also improves conditions for elimination of oxide inclusions. Lanthanum is more effective than cerium in increasing the impact strength of 35GL steel. The introduction of rare earth metals into steel in quantities exceeding the optimum values has a detrimental effect on the mechanical properties of the metal. Orig. art. has: 5 figures.

SUB CODE: 11/ SUBM DATE: 10May66/ ORIG REF: 03/ OTH REF: 01

Card 2/2

ACC NR: AP7002545 (A,N) SOURCE CODE: UR/0413/66/000/023/0027/0027

INVENTORS: Polisadov, V. N.; Karavayev, A. G.; Barantseva, Z. V.; Svidnitskiy, T. V.; Zalavskiy, N. A.; Polisadov, V. V.

ORG: none

TITLE: Synthetic slag. Class 18, No. 189002

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 23, 1966, 27

TOPIC TAGS: synthetic slag, rare earth metal, CALCIUM OXIDE, ALUMINA, FLUORITE

ABSTRACT: This Author Certificate presents synthetic slag containing calcium oxide, alumina, and fluorspar. To desulfurize acid steel, the slag contains 58--62% - calcium oxide, 30--40% - alumina, and 5--10% - fluorspar. The slag contains 0.18--0.25% rare-earth metals. These rare-earth metals are taken in the following proportions (in terms of 100 parts by weight): cerium - 60, lanthanum - 20, neodymium and prasoodymium - 10, and iron - remainder.

SUB CODE: 11/ SUBM DATE: 230ct65

Card 1/1 UDC: 669.046.587

BARANTSEVICH, Ye.V.; TARUSHKIN, O.V.

Comparative evaluation of the results of treating muscles on the lower extremities weakened following trauma by labile and stabile impulse galvanization of varying frequency. Trudy Len.gos.nauch.-issl.inst.travm.i ortop. no.8:123-129 '61. (MIRA 15:9)
(ELECTROTHERAPEUTICS) (MUSCLES--WOUNDS AND INJURIES)

BARANULKO, V. A.

1054

551.510.535 : 551.524

Temperature of the Upper Layers of the Atmosphere. — V. A. Baranulko. (*Pravda*, May 1948, No. 5, pp. 11-15. In Russian.) [illegible] & Bulatov suggested the possibility of a relationship between the temperature [illegible] and that of the [illegible] This was confirmed by [illegible] high temperatures are probable [illegible] showed that at noon [illegible] km) and that much [illegible] layer [illegible] probable in the F_1 and F_2 layers [illegible] and [illegible] km) [illegible] between the temperature and the ionization density [illegible] between the temperature [illegible] conclusion is of great practical [illegible] the reflecting layer [illegible] optimum wavelengths [illegible] in particular directions.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103520016-3"

PA 47/49T95

USSR/Meteorology
Ionosphere
Geomagnetism

Jan 49

"New Data on the Sporadic Layer E," V. A. Baranul'ko, 1 p

"Priroda" No 1

Sporadic layer E often appears during periods of disturbances in the earth's magnetic field when the normal state of the ionosphere is disturbed. Zevakina introduced data from 32 ionospheric stations showing that sporadic layer E has a definite daily and seasonal behavior depending on geographic latitude. Gnevyshev and Ferrell have submitted data

47/49T95

USSR/Meteorology (Contd) Jan 49

on speed and direction of sporadic formation. Dr. Eteriy first discovered magnetic-ionic fission in the sporadic layer.

47/49T95

BARANUL'KO, V. A.

USSR/Radiophysics - Ionospheric studues

BARANUL'KO, V.A.

Card 1/1 : Pub. 90-9/14

Author : V. A. Baranul'ko, Active Member of VNORiE

Title : Radio engineering method for investigating winds in the ionosphere (letter to the editor)

Periodical : Radiotekhnika 9, 54-55, Sep/Oct 1954

Abstract : The Soviet method for observing winds in the ionosphere is more highly perfected than methods described by N. S. Gerson ("Continental sporadic E activity," Trans Amer Geoph Union, Vol 23, No 1, pp 26-30, 1951) and V. Aono and T. Minaguchi ("On the movement of the sporadic E region," Report of Ionosphere Research in Japan, No 2, 1950). The Soviet method uses a number of radio stations (most suitable frequencies are 40-70 Mc) spaced 600-2,300 km apart. Movement of electron-ion clouds is determined from the precise instants when communications are established and disrupted among a network of stations. In recent years radar has been used and has verified the northwesterly and southerly movement of clouds in the sporadic E layer. Several observations made in the Moscow area in June and July 1952 are cited.

Institution : All-Union Scientific and Technical Society of Radio Engineering and Electric Communications imeni A. S. Popov (VNORiE)

Submitted :

BARANUL'KO, V. A.

USSR/Electronics - Ionosphere

Card 1/1

Author : Baranul'ko, V. A.

Title : Winds in the ionosphere

Periodical : Radiotekhnika 9, 73, Jan-Feb 1954

Abstract : The author presents further evidence to support his view that the electron-ion E_s clouds in the European part of the USSR, for the most part, move in northwesterly or southerly directions at 150-300 km/hr. Experiments were conducted with a network of radio stations around Moscow. The operating frequencies chosen depended on the ionization density of the sporadic E layer. Seven references: 4 USSR; 3 in English.

BARANUL'KO, V.A.

Remarks on the collected works "Problems in modern physics; radio-emission of the Sun and Galaxies," 3rd series, no.15, 1951. Usp. fiz.nauk 53 no.1:157-158 My '54. (MLRA 7:7)
(Radio astronomy)

BARANUL'KO, V. A

BARANUL'KO, V. Radio disturbances caused by the sun. p.16.

Vol. 4, no. 10, 1955
RADIO.
TECHNOLOGY
Sofiya, Bulgaria

So: East European Accessions, Vol. 5, no. 5, May 1956

BARANULKO, V.

Solar Radio Noises. "RADIO" Ministry of Communications, #10:16:Oct. 55

3005

621.396.11 : 551.594.221

3171. RADIO REFLECTION FROM LIGHTNING.
V.A.Baramul'ko and I.V.Fedotov.
Radiotekhnika, Vol. 10, No. 11, 80 (1955). In Russian.

Very intense reflections of short duration (about 1 s) from lightning discharges distant 5 to 150 km were observed, during the summer 1954, by means of a 1.5 m radar equipment having a range of 160 km. The reflections are attributed to the column of ionized particles, which is formed during an atmospheric discharge.

R.S.Sidorowicz

BARANUL'KO, V.A.

New investigations of magnetic disturbances in the ionosphere.
Elektrosviaz' 10 no.12:38-41 D '56. (MLRA 9:12)
(Ionospheric radio wave propagation)
(Magnetic storms)

BARANULKO, V.A

В. Л. Гершман,
В. М. Михайлов

О применении спектральной теории турбулентности к задачам рассеяния от неровностей поверхности моря при волнении

В. Г. Конфер,
М. Ф. Бахарев,
Т. Г. Тумасова

Функция распределения уровня сигнала (медленные замирания)

10 июня
(с 10 до 16 часов)

Б. Н. Гершман,
В. П. Докучаев

К теории образования ионосферных неоднородностей в слое

В. Д. Гусев,
Ю. В. Кушнеревский,
С. Ф. Миркотан

Сопоставление результатов наблюдения за крупными и мелкими неоднородностями в слое F_2

В. Д. Гусев,
С. Ф. Миркотан,

84

Ю. В. Березин,
М. П. Ковинский

О разрешающей способности систем, измеряющих горизонтальные размеры ионосферных неоднородностей

В. Д. Гусев,
М. Б. Виноградова,
Т. А. Гайлит

Статистические свойства фазы волны, отраженной от ионосферы

В. Д. Гусев,
Т. А. Гайлит

Об автоматизации обработки экспериментальных данных при исследовании нерегулярной ионосферы

10 июня
(с 18 до 22 часов)

В. А. Баранулько

Расчет надежности связи высокоширотных радиотрасс

Ю. Г. Шамовский

Графо-аналитический способ расчета линий радиосвязи для различных условий работы

85

report submitted for the Centennial Meeting of the Scientific Technological Society of Radio Engineering and Electrical Communications im. A. S. Popov (VNORIE), Moscow, 8-12 June. 1959

"Calculation of the reliability of high latitude radio network communications."

S/108/60/015/06/02/006
B007/B014

AUTHOR: Baranul'ko, V. A., Member of the Society (VNORIE)

TITLE: Transmission of Signals During a Thunderstorm

PERIODICAL: Radiotekhnika, 1960, Vol. 15, No. 6, p. 18

TEXT: The author of the article under review gives a brief description of experiments carried out in the USSR at a frequency of 200 Mc/s, referring to experiments made abroad (Ref. 3). The Soviet experimenters worked at two radio-bearing stations, a stationary and a portable one. The frequencies of the two stations were carefully controlled. During the thunderstorm the pulses transmitted by the portable station were received by the stationary one. The distance between the two stations was 140-300 km. Thus, it is possible to establish a connection during a thunderstorm, due to the reflection of radio waves from the ionized air column. The wave range to be used in these cases covers 1.5-6 m. The shortest range of the station is 600 km. It is pointed out that with the aid of radio-bearing stations it is always possible to determine over what distance and in which section radio signals can be transmitted.

Card 1/2

Transmission of Signals During a Thunderstorm

S/108/60/015/06/02/006
B007/B014

Finally, it is noted that observations of the radio echoes of lightnings are very important for aviation and the operation of high-voltage networks. There are 3 references: 2 Soviet and 1 British.

SUBMITTED: May 20, 1959 (initially)
December 8, 1959 (after revision)

Card 2/2

S/187/62/000/007/003/003
D053/D113

9.9103

AUTHORS: Osetrov, B.I., and Baranul'ko, V.A.

TITLE: The Kabanov effect and its significance as regards television

PERIODICAL: Tekhnika kino i televideniya, no. 7, 1962, 46-49

TEXT: The reflection of meter radio waves from the sporadic E_s layer is examined, and the potential use of the Kabanov effect for ultralong distance TV transmission is shown. The Kabanov effect consists in the fact that radio waves reflected from the ionosphere, upon returning to Earth, are partly scattered by the Earth's surface; as a result, a certain part of the scattered energy returns to the radiation source and can be registered as echo signals. The sporadic E_s layer has a nebulous structure consisting of clouds up to hundreds of thousands of square kilometers in size. The clouds appear at the height of the E layer and have a considerably higher electron-ion density than the E and F layers. They reflect radio waves up to 3 m in length. The reflection of radio waves from the E_s layer permits a TV transmission to be conducted at a distance of 600 - 2,500 km. The transmission range depends mainly

Card 1/2

The Kabanov effect .....

on the density of the E_s layer, the horizontal speed of the E_s cloud, and the incidence angle of the radio waves. When using the Kabanov effect, the possible TV transmission range can be forecast by sending out a pulse signal and recording its echo reflected by the Earth's surface in the reception zone. By varying the incidence angle of the pulses used in oblique sounding, the size of the reception zone and the horizontal speed of the E_s cloud can be determined. Consequently, the duration of a possible TV program for a given reception zone can be calculated. There are 6 figures. The English language reference is: E.V. Appleton, Proc. Phys. Soc., London, 1933, 45, p. 673.

Card 2/2

L 41873-65 EWT(d)/FSS-2/EWT(1)/EEC(k)-2/EWG(v)/FCC/EEC-4/EEC(t)/EEC(b)-2/EWA(h) Pn-4/Po-4/Pp-4/Pe-5/Pq-4/Psc-4/Pg-4/Pae-2/Pt-7/Peb/Pi-4/Pl-4 AST/RB/GW/WS-4 S/

ACCESSION NR AM5004506 BOOK EXPLOITATION

92
B+1

Baranul'ko, Viktor Andreyevich (Candidate of Technical Sciences)

Characteristics of the propagation of radio waves (Osobennosti rasprostraneniya radiovoln), Moscow, Voyenizdat M-va obor. SSSR, 1964, 190 p. illus., biblio. 11,000 copies printed.

TOPIC TAGS: radio wave propagation, ionosphere, short-wave communication, radio astronomy, meteorology, space communication, ultrashortwave communication

PURPOSE AND COVERAGE: This book, on the basis of data published in the open Soviet and foreign press, presents certain features of the propagation of short and ultrashort waves which, when used in radio communications, permit an

for students in military radio schools and communications officers trained in military schools. It is also of interest to short-wave radio enthusiasts and students in communications higher educational institutions.

Card 2/3

L 41873-65

ACCESSION NR AM5004506

O

SUBMITTED: 09Jun64

SUB CODE: EC, ES

NO REF SOV: 065

OTHER: 024

Card 3/3

SOV/124-58-10-11110

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 10, p 70 (USSR)

AUTHOR: Barantsev, V.I.

TITLE Hydrodynamic Characteristics of Rudders During Motion Astern of Ships (Gidrodinamicheskiye kharakteristiki ruley v sluchaye zadnego khoda sudna)

PERIODICAL: Tr. Leningr. korablestroit. in-ta, 1956, Nr 18, pp 199-210

ABSTRACT A description of an experimental investigation of the hydrodynamic characteristics of isolated rudders and of rudders located next to the bottom of a ship is given for the case of motion astern of a ship. The investigations were conducted in a wind tunnel. The Reynolds number was approximately 3.3×10^5. The ship bottom was simulated by a flat plate. Values of the normal-force coefficients, the center of pressure, and the moment coefficient relative to the profile nose were obtained by calculation from the measurements of the moments of the hydrodynamic forces in relation to two parallel axes at one and the same angle of attack. A nomogram has been plotted on the basis of the results obtained for a rectangular-planform rudder having a relative thickness ratio $\bar{c} = 12$ to 20% and

Card 1/2

Hydrodynamic Characteristics of Rudders During Motion Astern of Ships

an aspect ratio $\lambda = 0.75$ to 1.25. This nomogram affords a solution to two basic problems. 1) To determine for a specified value of the rudder travel angle (and its basic parameters including the clearance gap between the end of the rudder and the bottom) the moment due to the velocity astern of the ship, and 2) to determine, for specified values of the power of the rudder installation, the basic characteristics of the steering gear, and the velocity astern of the ship, the maximum travel angle of the rudder.

A.S. Ginevskiy

Card 2/2

BARANTSEV, V.I.

Distillation of molasses beer under vacuum. Spirt.prom. 27 no.3: 19-20 '61. (MIRA 14:4)
(Lokhvitsa--Alcohol) (Plate towers)

STABNIKOV, Vsevolod Nikolayevich; BARANTSEV, Vasiliy Ivanovich; MAL'SKIY, A.N., prof., retsenzent; LAZAREV, I.A., inzh., retsenzent; KHMEL'NITSKAYA, A.Z., red.

[Processes and apparatus of food processing industries] Protsessy i apparaty pishchevykh proizvodstv. Moskva, Pishchevaia promyshlennost', 1965. 390 p. (MIRA 18:8)

BARANY E.

EXCERPTA MEDICA Sec.12 Vol.11/7 Ophthalmology July 57

1073. BÁRÁNY E., BERGGREN L. and VRABEC F. Pharmacol. Inst., Univ. of Uppsala; First Eye Clin., Univ. of Prague. *The mucinous layer covering the corneal endothelium on the owl strix aluco BRIT. J. OPHTHAL. 1957, 11/1 (25-30) Illus. 5

Observations on the properties of the aqueous in five tawny owls serve as the basis for this report. The authors found a thick, viscous substance in the anterior portion of the anterior chamber. The substance could be depolymerized by bacterial hyaluronidase. Its viscosity decreases with the distance from the cornea. It is postulated that this mucinous substance is produced by the endothelial cells of the cornea, and that a similar substance is produced by the endothelial cells of the trabecula. This substance might account for the hyaluronidase-sensitivity of the outflow resistance of the chamber angle.

Frayer - Philadelphia, Pa. (XII, 1)

BARANY, Istvan

Some unsolved questions of production organization in foundries. Koh lap 95 no.9:Suppl.: Ontode 13 no.9:208-211 S '62.

1. Ganz-Mavag.

BARANY, Istvan

Mechanization of the foundry production schedule.
Koh lap 95 no.10:Suppl.: Ontode. 13 no.10:237-239 O '62.

1. Ganz-Mavag Ontodegyar.

BARANY, Istvan

Technical survey, comparison of plants in the hosiery industry. Magy textil 14 no.11:503-506 N '62.

1. Kotszovoipari Igazgatosag fomernoke.

BARANY, Istvan

The organization and cooperative tasks of the foundry production management. Koh lap 96 no.4: Suppl: Ontode 14 no.4:88-92 Ap '63.

1. Kohasztechnikus, Ganz-Mavag Ontode.

BARANY, J.

608. Bárány, J. The classification and influence of the crown gear of bevel gears on technology and on dimensioning in respect to shape and strength, especially of spiral gearing (in Hungarian). *Gép* 5, 6, 281-286, 15 figs., 1 tab., 1953.

Crown gears are related in the same way to bevel gears as racks are to spur gears. The pitch cone angle of crown gears is 90°; the "pitch line plane" of "ideal" crown gears coincides with their "base plane," and the vertex of the generating lines of the teeth coincides with the point of intersection of the "base plane" and the axis of the gear in this type of crown gear. In "approximate" crown gears the pitch line plane and base plane do not coincide.

Either type crown gear can be of the "central" or "corrected" design. Each can have a "whole number" or a "decimal fraction" (imaginary) number of teeth. Straight profile generating tools can be considered as a tooth of a crown gear. The Reinecker-Bilgram straight and helical bevel gear generator operates on the ideal crown gear principle, while other types (Heidenreich-Harbeck, etc.) are based on the approximate crown gear. Klingelnberg, Oerlikon, and Fiat spiral bevel gear generators work on the ideal crown gear principle and Gleason spiral bevel generators on the approximate crown gear. The calculation of gears differs according to the type of the crown gear; the generally valid deduction as well as an example for computing a straight and a spiral bevel gear are presented in the article.

Courtesy of Hungarian Technical Abstracts R.E.

BARANY, J.

Lajos Szeniczei's A fogaskerekgyartas kezikonyve (Handbook for Manufacturing Cogwheels); a book review. p. 358. Vol. 9, No. 9 Sept. 1956. GEP. Budapest, Hungary.

SOURCE: East European List, (EEAL) Library of C ngress Vol. 6, No. 1 January 1956.

BARANYI, Janos, dr.

The measurement of distortion on roentgenogram. Magy. radiol. 6 no.4:175-181 Oct 54.

1. A Veszprem megyei korhaz rontgenosztalyanak kozlemenye. Foorvos: Baranyi Janos dr. az orvostudomanyok kandidatusa.
(ROENTGENOGRAMS
measurement of distortion in)

BARANY, Janos, dr.

Problems of grid radiation. Magy. radiol. 8 no.1:42-48 Feb 56.

1. Az Orvostudomanyok kandidatusa, foorvos.
(RADIOTHERAPY, appar. & instruments
grids, eff. & value. (Hun))

1484. *Problems of the grid-therapy. II. Comparison of grids of different form* A rácsos sugárzás kérdései. II. A rácsok összehasonlítása. BÁRÁNY J. *Mag. Radiol.* 1957, 9/1 (26–34) Graphs 1 Tables 2 Illus. 4

Comparison of grids with orifices of different form (equilateral triangular, quadrangular (square or oblong), hexagonal, or round), concerning the percentage of the volume dose. The regeneration quotient expressed by the theoretical grade of efficiency shows that the greatest efficiency is afforded by grids with equilateral triangular orifices. Irradiation by grids with small orifices is more efficacious than with larger ones, and the increase of the non-irradiated areas furnishes a reduced irradiation output.

György – Budapest

BARANY, Janos

Mechanism of the biological action of roentgen rays. Magy. radiol. 9 no.4:232-243 Dec 57.

1. Irta: Barany Janos az orvostudomanyok kandidatusa, korhazi foorvos.
(ROENTGEN RAYS, inj. eff.
on body cells, mechanism of action (Hun))
(CELLS, eff. of radiations on
mechanism of x-ray actions (Hun))

EXCERPTA MEDICA Sec 14 Vol 13/11 Radiology Nov 59

2077. CSÁSZAR'S ERGOMETER - A Császar-féle ergometer - Bárány J. - MAG. RADIOL. 1958, 10/2 (100-105) Tables 1 Illus. 3

This apparatus, constructed in 1935, is suitable for direct measurement of the energy of X-rays. It consists of an absorbing cone 4 mm. in thickness of an alloy of lead and tungsten in which the temperature rise caused by incident and absorbed radiation is registered by a thermoelectric pile of silver and tellurium. The intensity of the electric current as shown by a galvanometer is proportional to the energy of the absorbed radiation. The dose rate may be expressed in erg/min. and r./min. by the use of a suitable table.

Györgyi - Budapest

BARANY, Janos, dr., kandidatus, korhazi rontgenes foorvos

Radiation protection in childhood. Gyermekgyogyaszat 11 no.2:45-50 F '60.

1. Kozlemeny a Veszpremi Megyei Tanacs korhazabol.
(RADIATION PROTECTION)
(PEDIATRICS)

BARANY, Janos, dr., kandidatus, rontgenes foorvos

Radiation protection in radiographic lung examination. Tuberkulozis 14 no.7:211-215 Jl '61.

1. A Veszpremi Megyei Korhaz kozlemenye.

(LUNG radiog) (RADIATION PROTECTION)

BARANY, Janos, dr.

Roentgenopolypragmasia and medical regulations. Orv. hetil. 102 no.23: 1084-1086 4 Je '61.

(RADIOLOGY)

BARANY, Janos, dr.

The hit theory. Magy radiol. 14 no.1:51-57 Ja '62.

1. Kozlemeny a Veszprem megyei korhazbol.

(RADIOLOGY)

H/021/62/000/006/002/002
D296/D307

AUTHOR: Barány, János, Doctor

TITLE: Quantum chemical explanation of the biochemical effect of radiation

PERIODICAL: Magyar radiologia, no. 6, 1962, 360-368

TEXT: The present paper is a theoretical discussion in which the author tries to give, on the basis of known facts, a new explanation for the biological effects of ionizing radiation. The author criticizes the so-called 'target theory' hitherto invoked to explain these effects, saying that this theory applies a purely physical phenomenon to biological processes such as cell death or mutation of genes, completely disregarding the intervening biological changes. The target theory tries to fill the gaps existing in our biological knowledge with mathematical formulas. A new explanation is proposed for the biological effect of radiation, the 'quantum chemical theory'. According to the quantum theory every chemical

transformation takes place in the outermost electronic shell. When an electron is removed from a valency shell forming a covalent bond, this will not only lead to ionization but also to the breakdown of the bond so that the molecule is split into a radical and an ion. These two parts can rapidly combine with other radicals or ions, forming completely new molecules. The author tries to show graphically and by schematical illustrations that in the biological environment consisting of multiphase solutions in continuous transformation, the breakdown of a single molecule can lead to the formation of at least 6 different new molecules and tries to calculate the energies involved. The abnormal molecules can disturb metabolism and cause the death of the cell. Intramolecular and peripheral breakdown of proteins may alter their structure and thus influence enzymatic processes. The same applies to changes in the physicochemical state caused by disintegration of the water molecules in the solvent. There are 3 figures.

Card 2/2

HUNGARY

[illegible], Janos, Dr; Veszprem Megye Council Hospital (director-[illegible] physician: HORVATH, Karoly, Dr), Rontgenological Dept (chief physician: [illegible], Janos, Dr, candidate) (Veszprem Megyei Tanacs Korhaza, Rontgenosztaly,.

"The Practical Organization of Radiation Protection."

Budapest, Magyar Radiologia, Vol XV, No 4, Aug 1963, pages 209-214.

Abstract: [Author's Hungarian summary] The practical organization of radiation protection is a manifold and extensive problem. The article presents a brief survey of the problem. Deficiencies and the steps required for their correction are discussed by the author. No references.

1/1

BARANY, J.

Comments on Dr. Gyula Kockas' article: "On changes in the concept of radiotherapy dosage". Magy. radiol. 15 no.6:375-376 N '63.

(RADIOTHERAPY DOSAGE)

HUNGARY

BARANY, Janos, Dr; [affiliation not given].

"Radiation Protection in the Course of the Examination of the Hip Joint of Children."

Budapest, Orvosi Hetilap, Vol 104, No 45, 10 Nov 63, pages 2123-2124.

Abstract: One of the lectures, delivered at the round table conference on "The Diagnosis of Congenital Dysplasia of the Hip Joint", is reported in the article. The conference, held 9 Feb 1963, was attended by representatives of pediatrics, orthopedics, the National Radiation Biological Onstitute and radiologists. In the present article, the requirements of radiation protection are given as follows: 1. the rational evaluation of the necessity of X-ray, 2. the modernization of the X-ray laboratories. The need for the best equipment and specialists in the X-ray diagnosis of dysplasia of the hip joint makes it necessary that the test be carried out in clinics which are specially equipped for the technique. The problems of shielding are discussed in detail. An evaluation is given on the need of control X-rays during treatment. No references.

1/1

BARANY, J.; WIRTH, Ferenc, dr.

On the importance of medical documentation. Orv. Hetil. 105 no.10:949-951 My 17 '64.

BARANY,J. HOFFLER,J.; ORBAN,T.; KATONA,G.

Some problems of orthography in Hungarian medical terminology.
Orv. hetil. 105 no.15:713-715 12 Ap'64.

*

BARANY, J. BISZTRAY-MIKO, S.

Picture-[illegible] and gamma radiation protection.
Orv. hetil. 105 no.33:1815-1816 20 S '64

BARANY, M.; BARANY, K.; GUBA, F.; KOTELES, Gy.; NAGY, E.

Preparation of actin without previous extraction of myosin. Acta physiol. hung. 11(Suppl):33-34 1957.

1. Biochemisches Institut der Medizinischen Universitat und Elektroenmikroskopische abteilung des Instituts fur Messungstechnik und Instrumentenkunde der ungarischen Akademie der Wissenschaften, Budapest.
(MUSCLE PROTEINS
Actin isolation without previous extraction of myosin (Ger))

BARANY, M.; BARANY, K.; GUBA, F.; KOTELES, Gy.; NAGY, E.

State of actin in muscles. Acta physiol. hung. 11 no.2:145-164 1957.

1. Biochemisches Institut der Medizinischen Universitat, Budapest und Elektronenmikroskopische abteilung des Instituts fur Messtechnik und Instrumentenwesen der Ungarischen Akademie der Wissenschaften, Budapest.
(PROTEIN MUSCLES, determ.
actin (Ger))

BARÁNY, KATALIN

Molecular weight determination of lignosulfonic acid. Katalin Bárány, Ferenc Guba (Hungarian Acad. Sci., Budapest), and Géza Tamásovits. *Papierforsch. u. Textiltech.* 2, 27–9(1957).—In order to utilize sulfite spent liquor (I) as tanning material, the detn. of the mol. wt. of the lignosulfonic acid (II) components is required. By means of diffusion, pycnometer, and viscosity measurements a method has been devised by which the mol. wt. of a dialyzed I and that of 2 fractions obtained in 40 and 60% yield by pptn. of the dialyzed liquor with EtOH have been detd. From the results a mol. wt. of 3400 ± 400 is calcd. for II and 6000 ± 800 for the EtOH-insol. and 800 ± 100 for the EtOH-sol. fraction.

F. E. Brauns

BARANY, Lajos, okleveles kozepiskolai tanar; PAPAI, Bela, okleveles kozepiskolai tanar

Commutation traffic in the vicinity of Budapest. Kozl tud sz 14 no.3:97-107 Mr '64.

1. Group Head, Budapest City Directorate, Central Statistical Office, Budapest (for Barany). 2. Deputy Director, Budapest City Directorate, Central Statistical Office, Budapest (for Papai).

VUKOV, Konstantin, dr.; BARANY, Laszlone

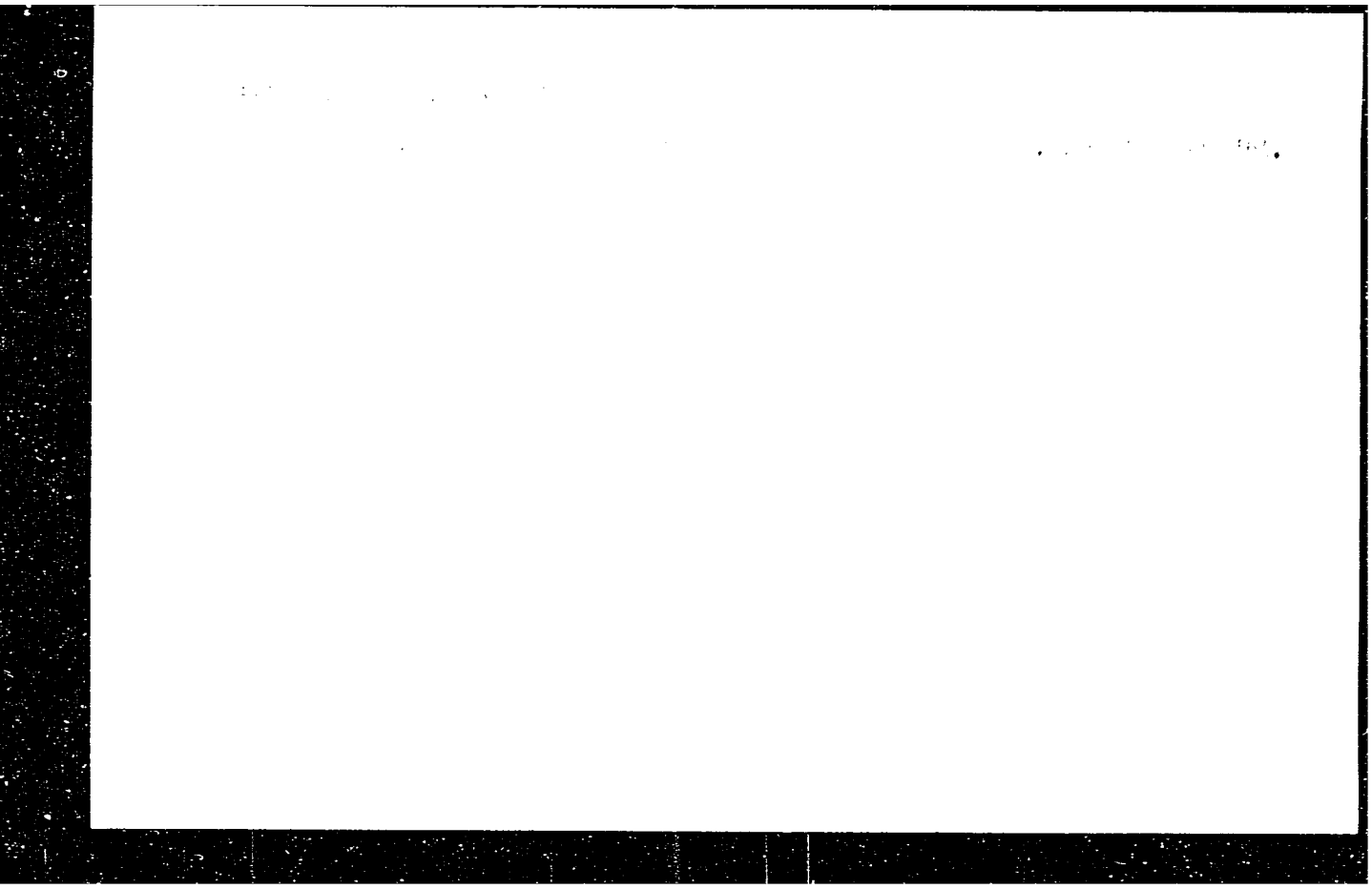
Changes in the technological quality of sugar beets as affected by storage. Cukor 17 no. 1: 19-22 Ja '64.

1. Cukoripari Kutatointezet.
2. "Cukoripar" szerkeszto bizottsagi tagja (for Vukov).

VUKOV, Konstantin, dr.; BARANY, Laszlone

Determination of white sugar and molasses sugar obtainable from sugar beets. Cukor 16 no.8:217-219 Ag '63.

1. Cukoripari Kutatointezet. 2. "Cukoripar" szerkeszto bizottsagi tagja (for Vukov).



APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103520016-3"