"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

described, the temperature of the source may be determined from the voltage ratio and the efficiency factor, from this temperature. The results obtained are in fair agreement with experimental data and with data in the literature. The same method can be used for determination of such other characteristics of the lamp as 1) the portion of energy focused on the sample and 2) the ratio of energy absorbed by the sample to that emitted by the lamp. It was determined that the former does not depend on voltage; its value for a small ruby, with an imperfect lighting system, was found to be 0.2%. The second parameter was slightly dependent on the voltage, and its value varied between 0.074 and 0.092%. The paper was presented by Academician B. I. Stepanov. Orig. art. has: 1 figure and 15 formulas.

ASSOCIATION: Institut fiziki AN BSSR (Institute of Physics, AN BSSR)

SUBMITTED: 15May63 DATE ACQ: 11Sep63 ENCL: 00

SUB CODE: PH NO REF SOV: 002 OTHER: 000

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

IVANOV, A.P.

Nonlinear optical phenomena in dispersing media. Opt. i spektr. 14 no.2:275-284 F '63. (MIRA 16:5)
(Dielectrics--Optical properties) (Light--Scattering)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

STEPANOV, B.I.; GONCHARENKO, A.M.; IVANOV, A.P.; SAMSON, A.M.;
SOTSKIY, B.A.; KHAPALYUK, A.P.

Generation of radiation from an infinite plane-parallel layer.
Izv.AN SSSR.Ser.fiz. 27 no.4:460-465 Ap '63. (MIRA 16:4)
(Masers) (Electric resonators)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

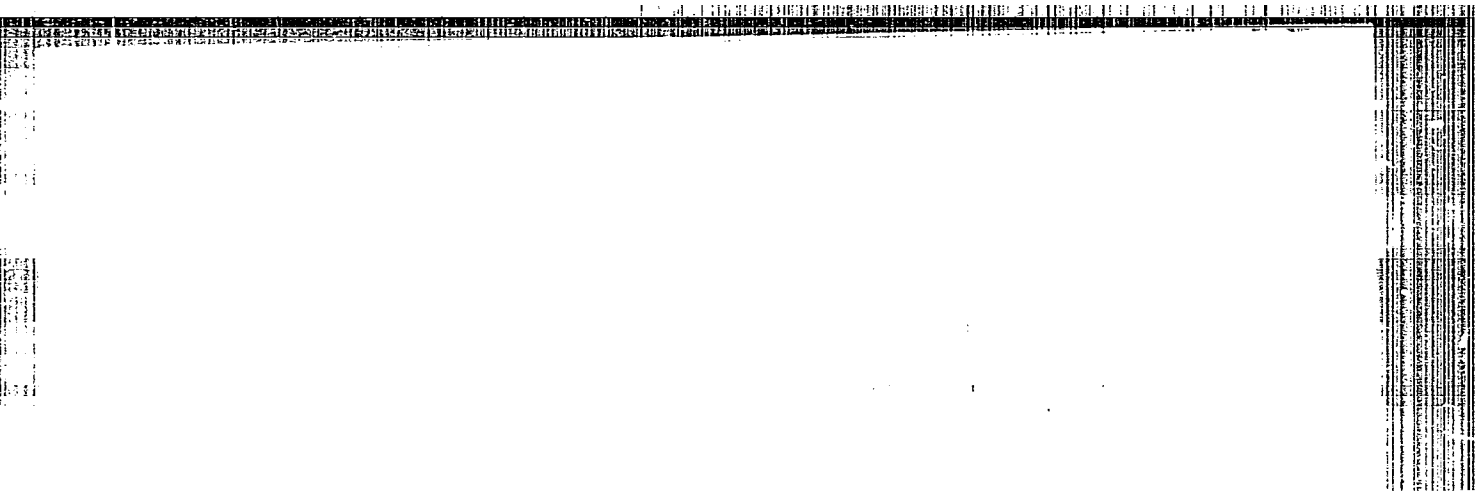
IVANOV, A.P.; SHERBAF, I.D.

Angular distribution of radiation in a medium illuminated by a narrow pencil of rays. Dokl. AN BSSR 7 no.10:673-676 O '63. (MIRA 16:11)

1. Institut fiziki AN BSSR. Predstavleno akademikom AN BSSR B.I. Stepanovym.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8



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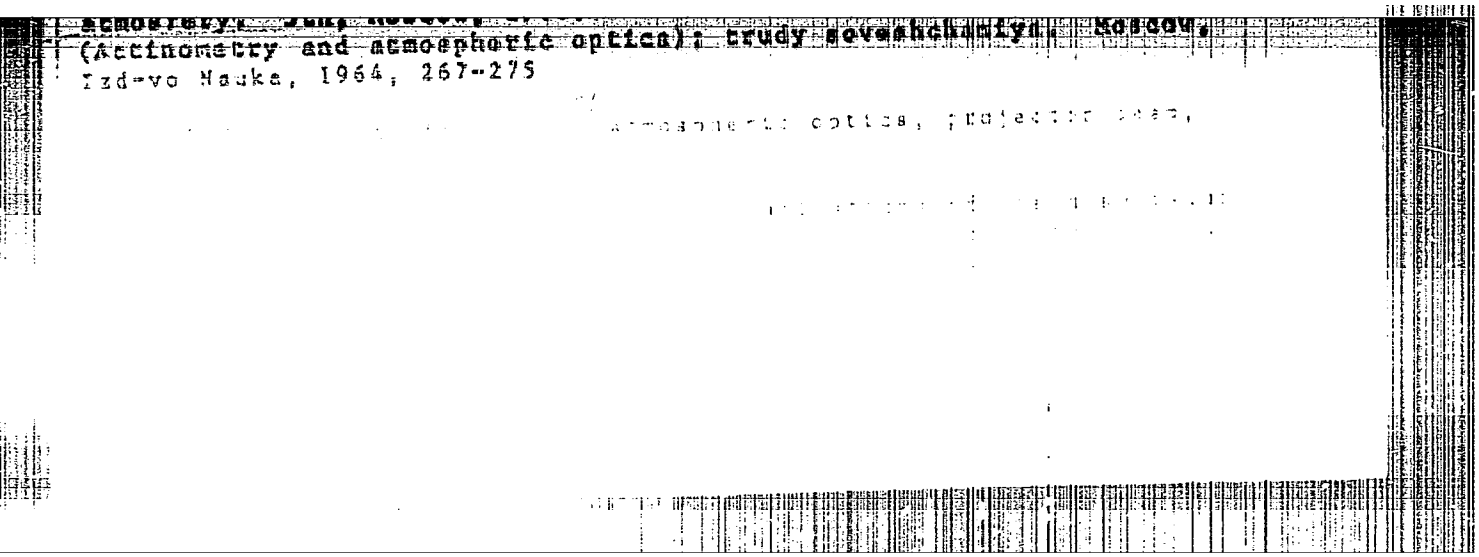

atmosfery. Sun, Moscow, ... (Actinometry and atmospheric optics); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1964, 267-275

atmospheric optics, projector beam,

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

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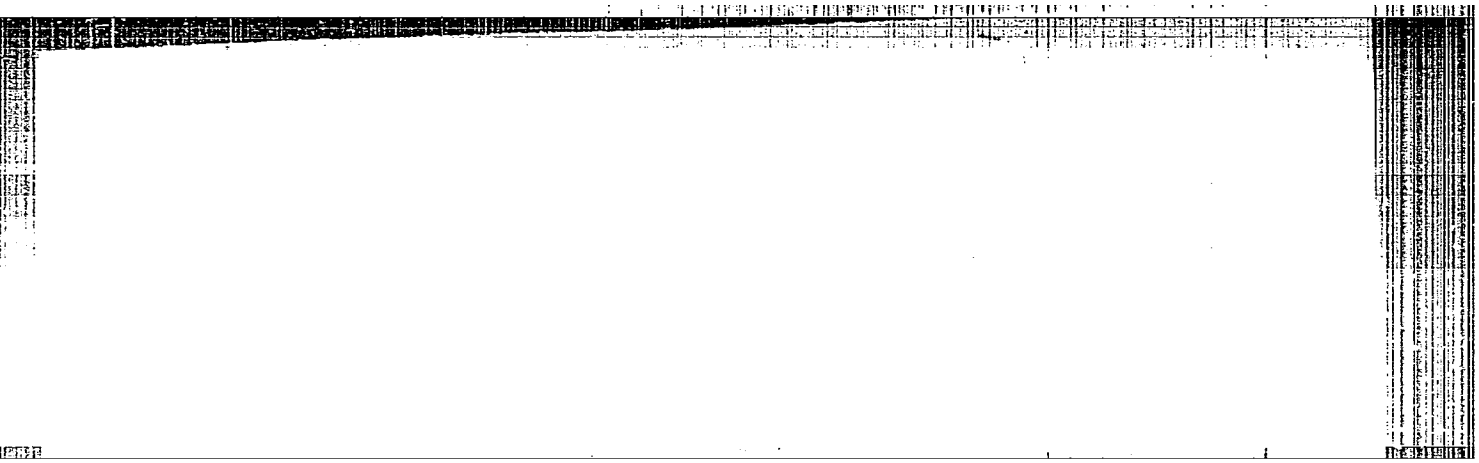

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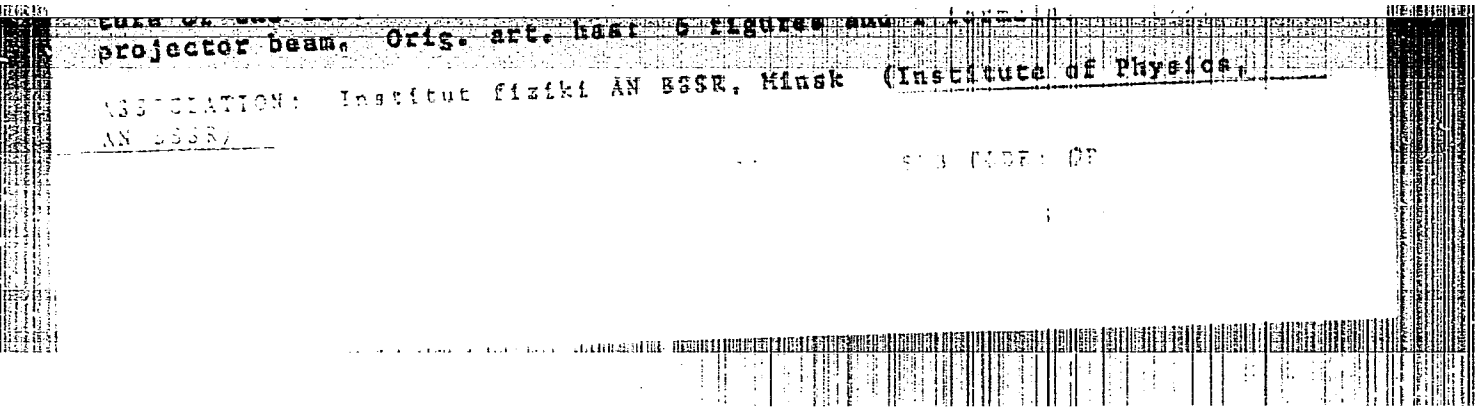

projector beam. Orig. art. has: 6 figures and 1 formula.

ASSOCIATION: Institut fiziki AN BSSR, Minsk (Institute of Physics, AN BSSR)

SUB CODE: OP

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

ZEGE, E.P.; IVANOV, A.P.

Effect of the radiation intensity on the coefficient of transmission of a light-scattering layer. Opt. i spektr. 17 no.1:87-92 Jl '64. (MIRA 17:9)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

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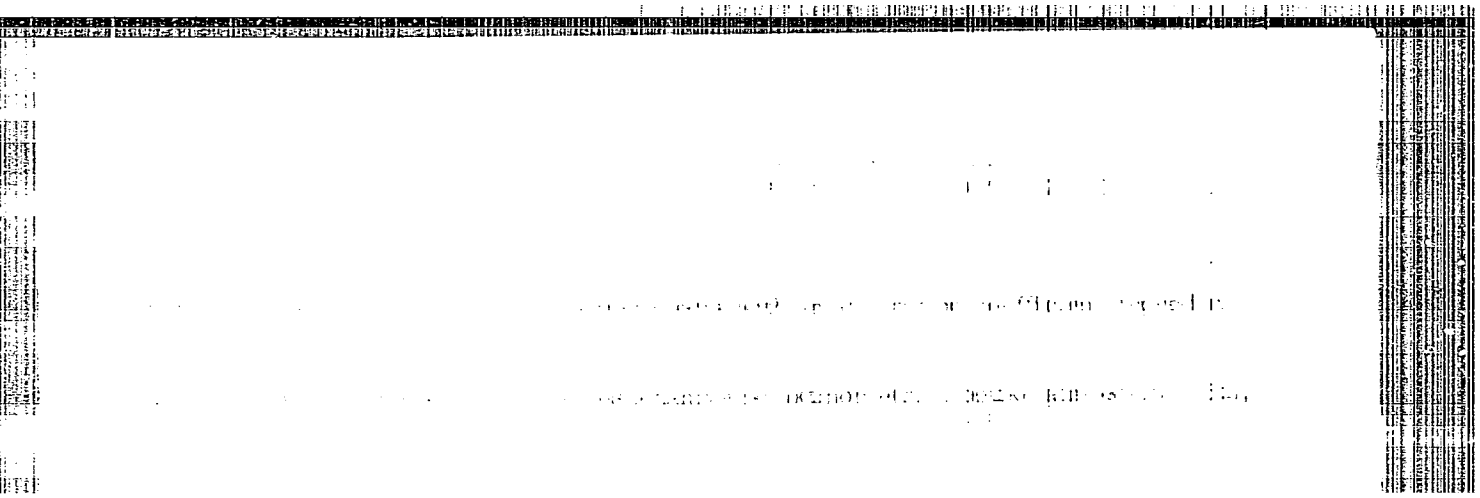

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

Moscow, 1963. Aktinometriya i optika atmosfery (Actinometry and atmospheric optics): trudy soveshchaniya. Moscow, Izd-vo Nauka, 1964, 77-84

[illegible] optics, absorption coefficient, radiation

[illegible] incident radiation, the optical properties of

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

[illegible], it is assumed that [illegible] the intensity of the parallel beam. Then, for attenuation of a light flux S incident on an

Card 1/3

ACCESSION NR: AT5011158

elementary layer dx, it is possible to write the expression:

$$dS = -(\varkappa + \rho) S dx, \quad (1)$$

where $\varkappa$ and ρ are the indices of light absorption and scattering. The dependence of the [illegible] radiation intensity for most cases is given by the

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

where T_0 is the transmission ...

is the transmission coefficient of the layer when S_0 is very small. A detailed analysis of (3) is already available in the literature, presented by the authors in Optika i ... [illegible] ... paper also presents an analysis for radiation propa- ... [illegible] ...

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

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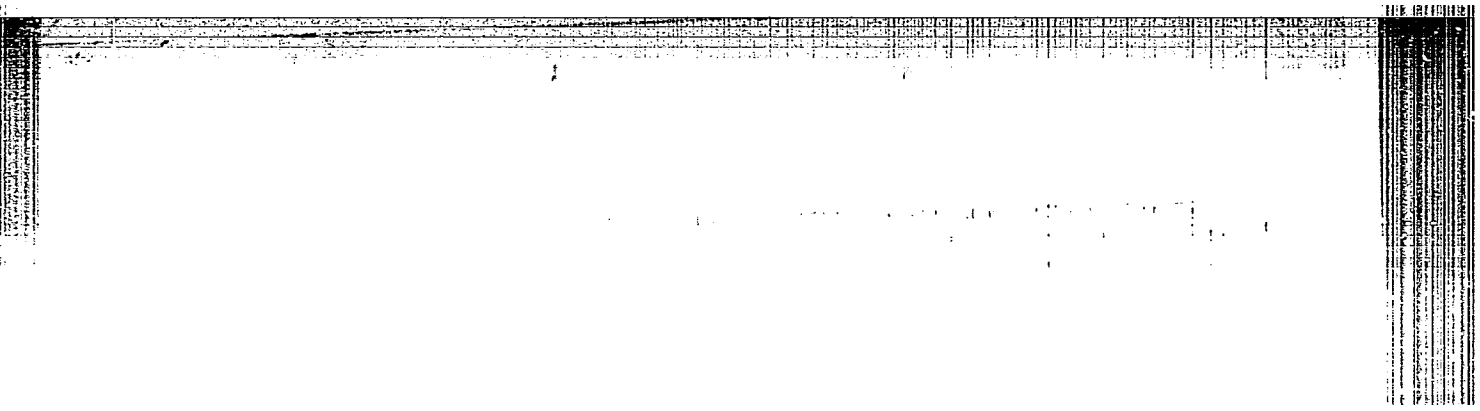


APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

thick layer. Orig. art. has: 20 formulas, 3 figures and 1 table.

ASSOCIATION: Institut fiziki AN BSSR, Minsk (Physics Institute, AN BSSR)

SUB CODE: OP, ES

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

ACCESSION NR: AP4042984 S/0051/64/017/001/0087/0092

AUTHORS: Zege, E. P.; Ivanov, A. P.

TITLE: Effect of radiation intensity on the transmission coefficient of a light-scattering layer

SOURCE: Optika i spektroskopiya, v. 17, no. 1, 1964, 87-92

TOPIC TAGS: reflected radiation, transmission, scattering amplitude, optical absorption, optical transmission, luminor

ABSTRACT: In order to check on the validity of Bouguer's law in mediums in which the radiation density of a multiply scattered light is small compared with the intensity of the radiation itself, the authors calculated the attenuation of a parallel beam in a medium in which the absorption coefficient depends on the radiation intensity. The effect of various parameters (nonlinearity parameter, optical thickness, survival probability) on the transmission coefficient of

Card 1/5

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

ACCESSION NR: AP4042984

a plane-parallel layer is analyzed. A method is proposed to determine the nonlinearity parameter of the medium. The theoretical calculations are compared with experiments on organic phosphors with scattering inclusions. The nonlinearity parameter is determined for tripaflavine and acridine orange in sugar. The results agree within the limits of experimental error. "The authors are deeply grateful to L. Lukashenko for help in preparing many samples and in the measurements." Orig. art. has: 5 figures and 7 formulas.

ASSOCIATION: None

SUBMITTED: 04Apr63 ENCL: 03

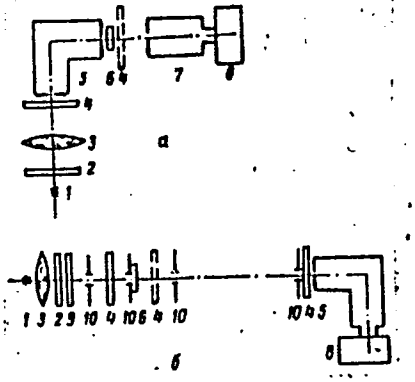
SUB CODE: OP NR REF SOV: 004 OTHER: 002

Card 2/2

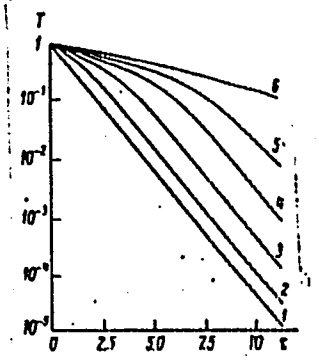
APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

ACCESSION NR: AP4042984 ENCLOSURE: 01



Diagrams of two set-ups: 1 - light source, 2 - thermal filter, 3 - condenser, 4 - neutral filters, 5 - monochromator, 6 - sample, 7 -monochromator, 8 - recording block, 9 - light filter, 10 -diaphragms.



Transmission coefficient (T) vs. optical thickness (τ) for different nonlinearity parameters.

Card 3/5 (continued in enclosure #2)

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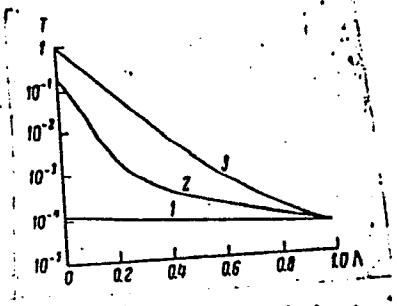
"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

ENCLOSURE: 02

ACCESSION NR: AP4042984



Transmission coefficient (T) vs. nonlinearity parameter ($^{\alpha}I_0$) at different optical thicknesses and quantum survival probabilities.

(continuation of enclosure #1)

Card 4/5

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

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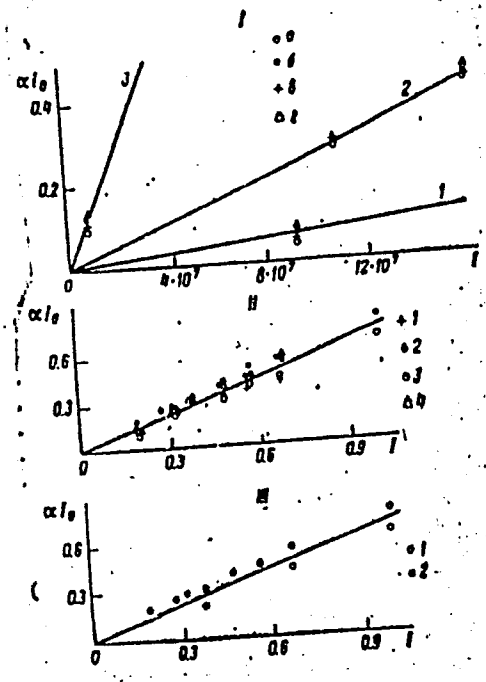
ACCESSION NR: AP4042984



Dependence of αI_0 on I_0 for different wavelengths (I), $\rho\ell$ (II), and $k_0\ell$ (III).

α - nonlinearity parameter
I_0 - intensity
ρ - scattering coefficient
ℓ - physical thickness
k_0 - absorption coefficient

Card: 5/5

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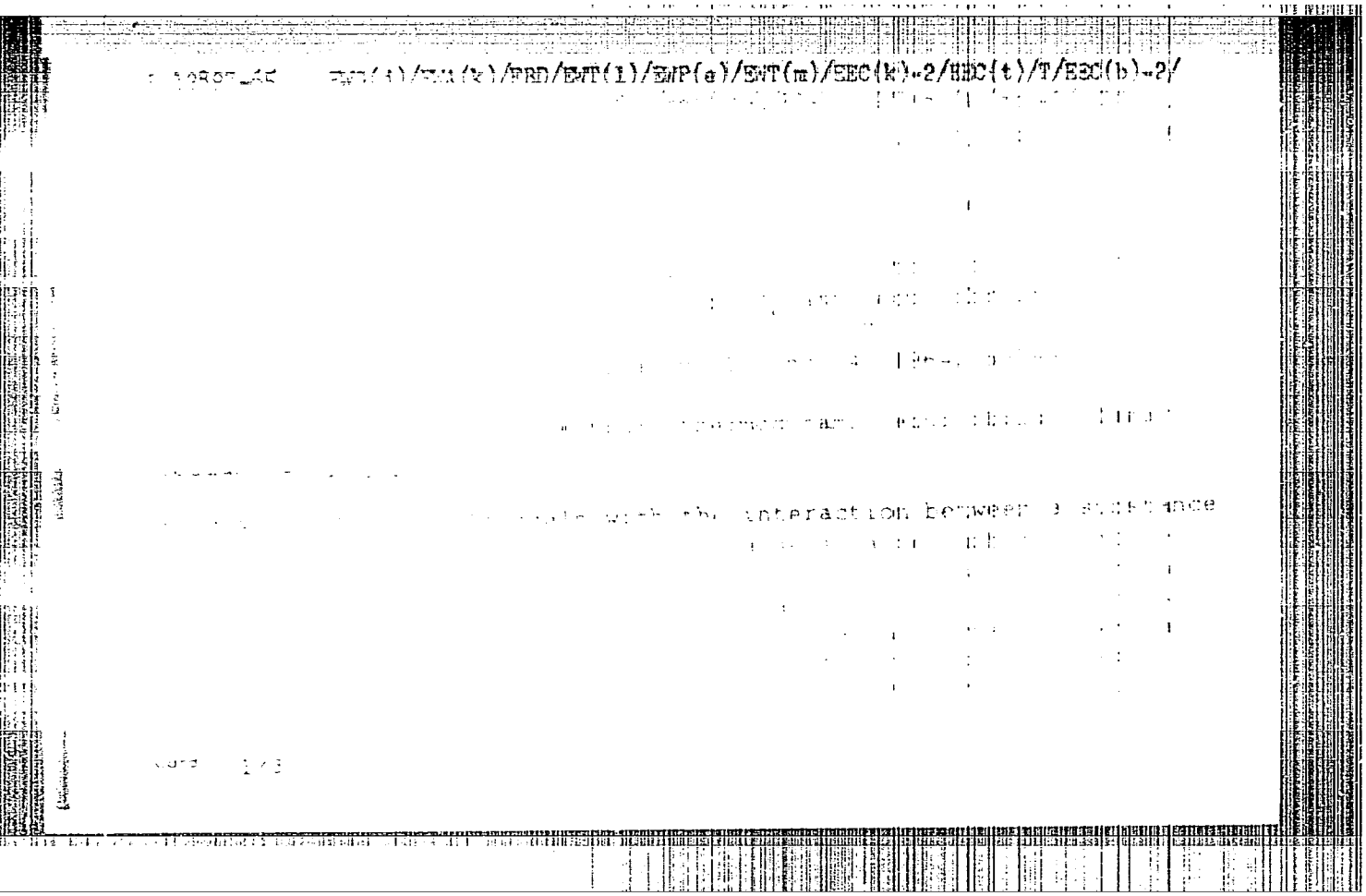

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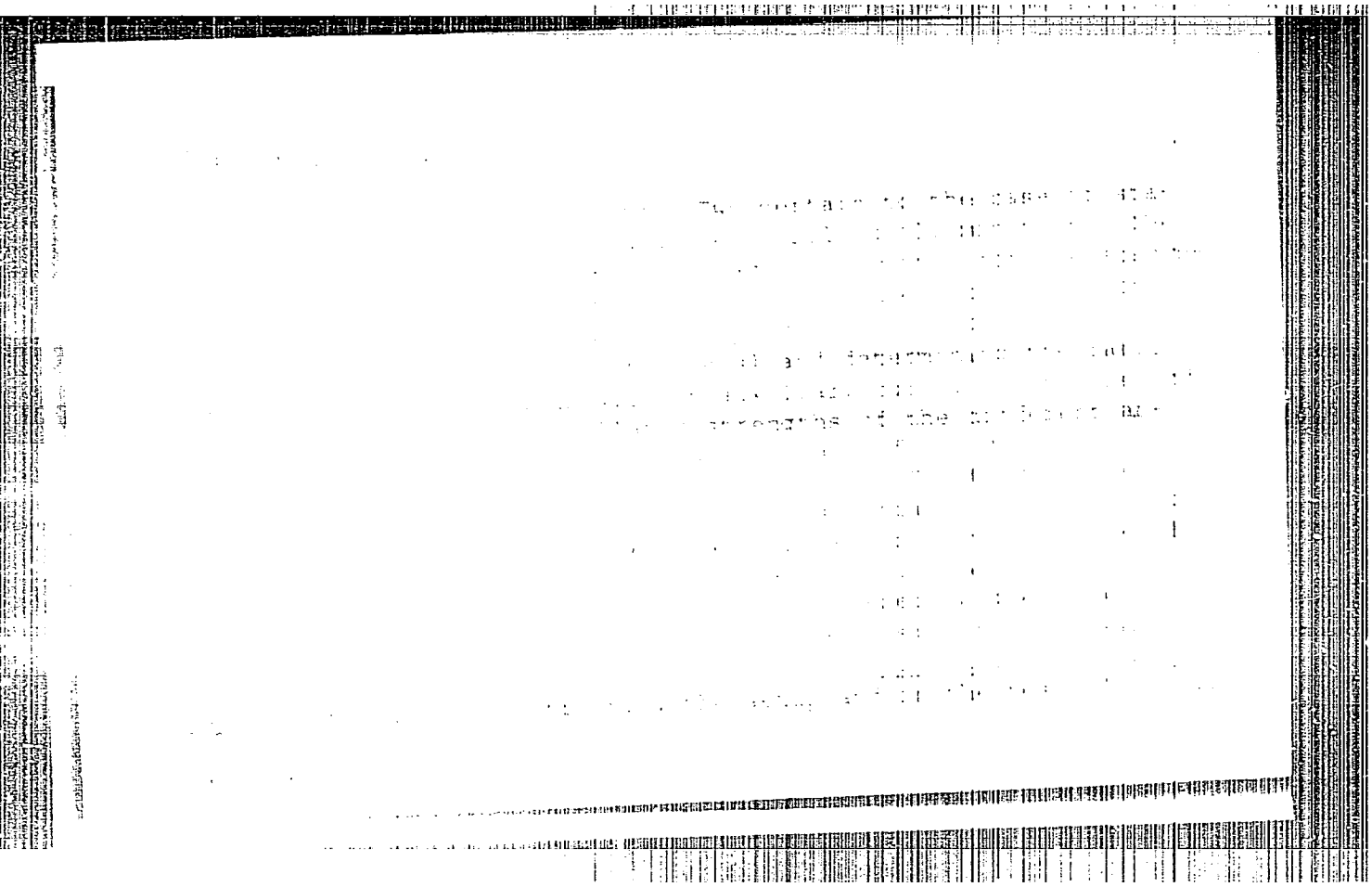


APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

ACCESSION NR: AP4047180

[illegible] formulas.

ASSOCIATION: None

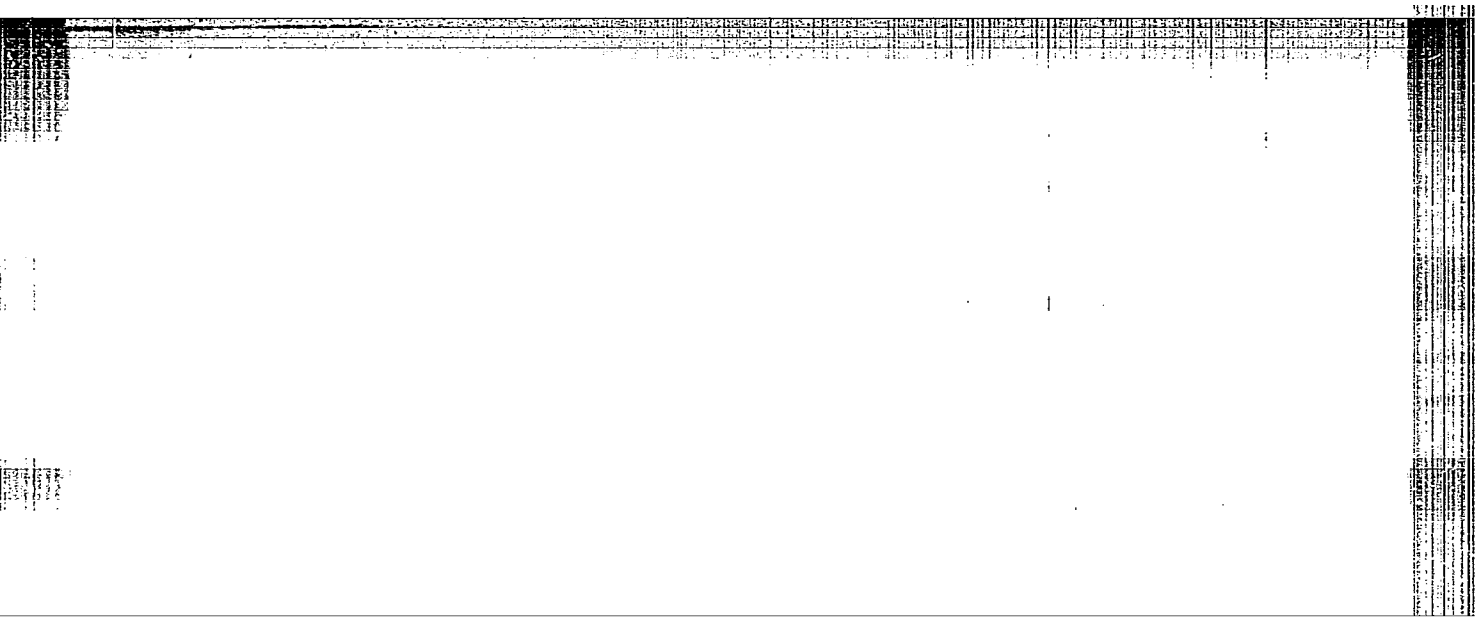
SUBMITTED: 03Jun63 ENCL: 00

SUB CODE: OP NR REF SOV: 005 OTHER: 002

Card 3/3

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8



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the system. The effect of the relations between the widths of the

Card 1/2

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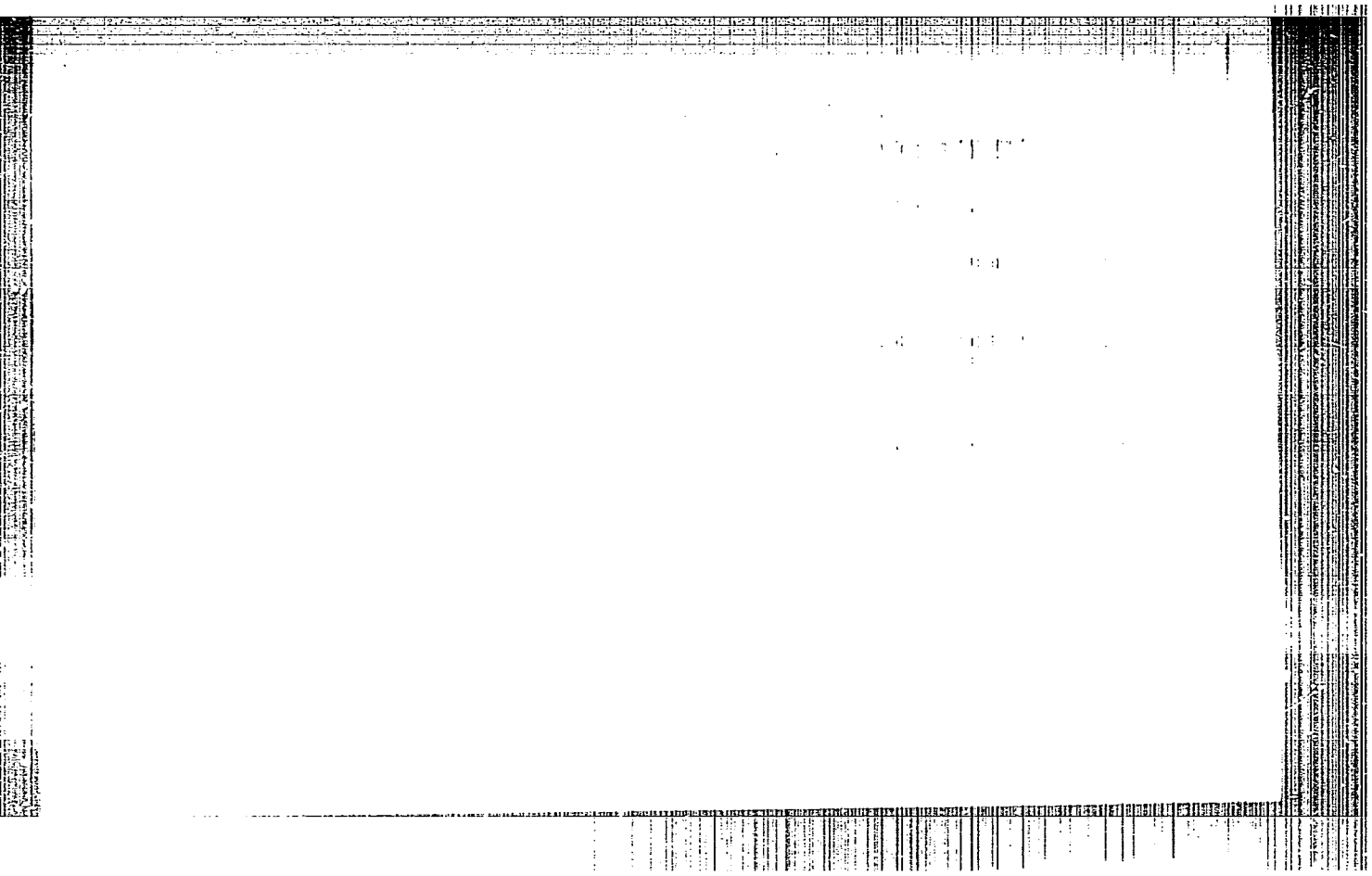

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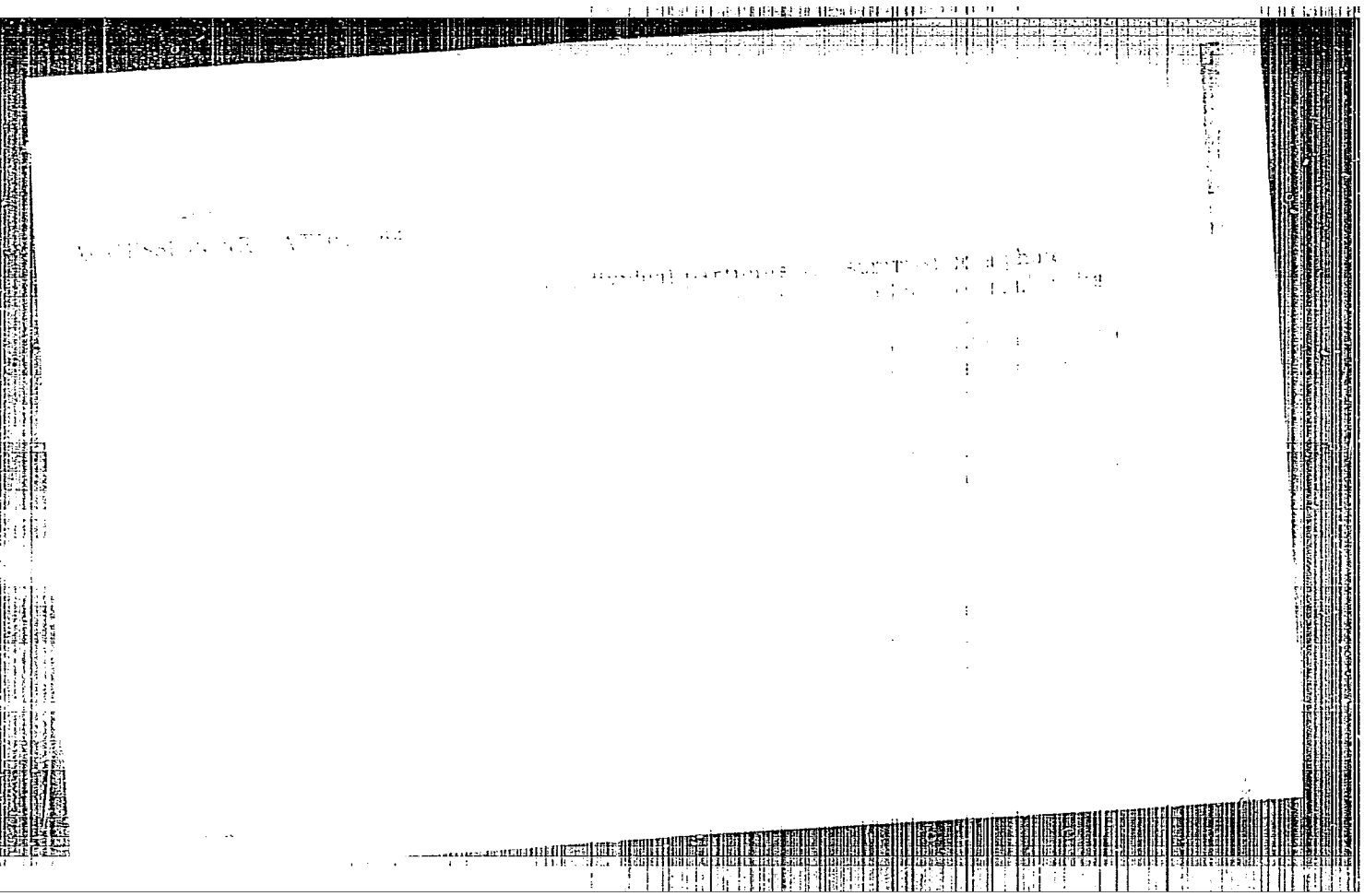

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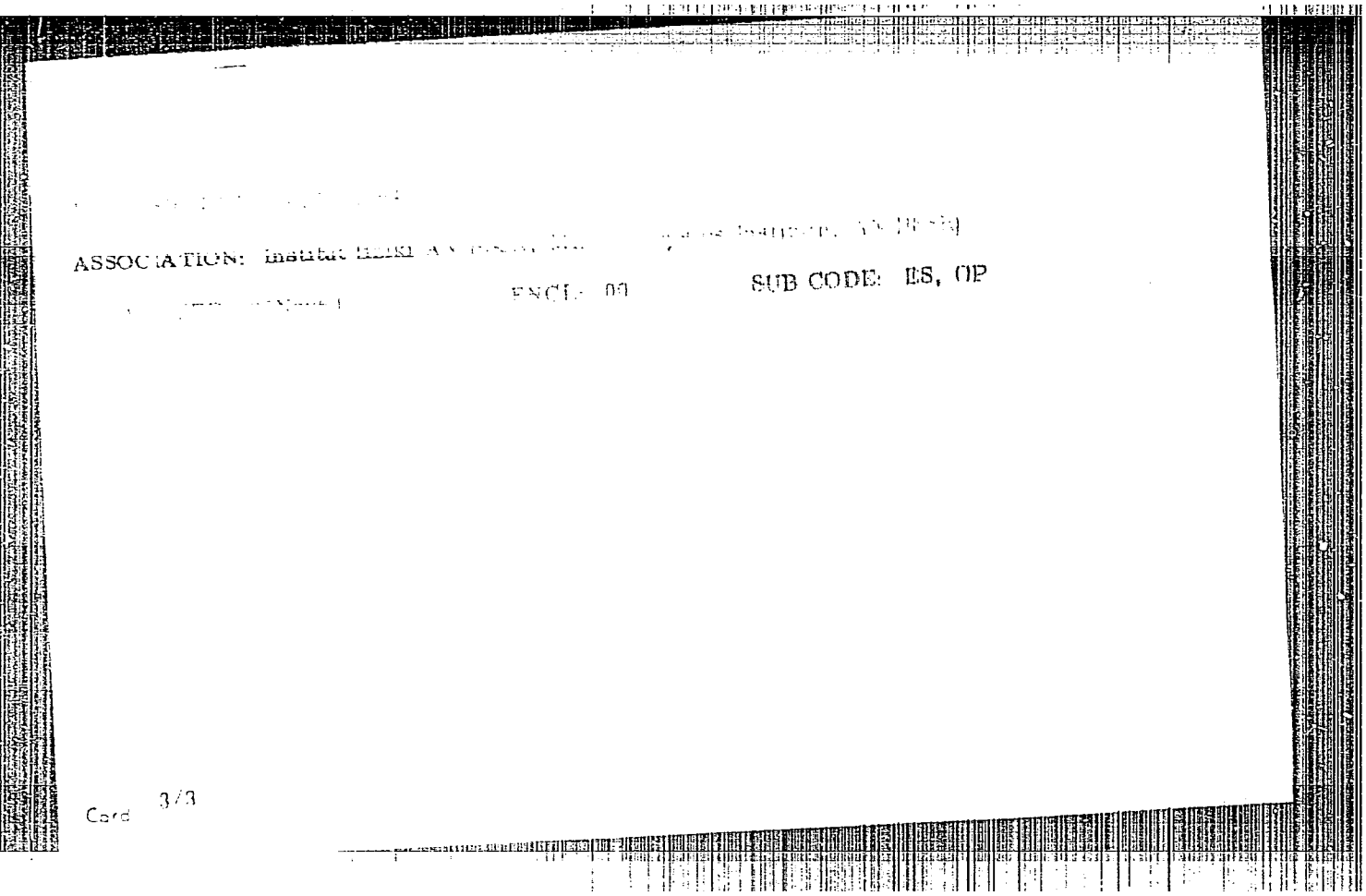

ASSOCIATION: Institut [illegible]

ENCL: 00 SUB CODE: ES, OP

Card 3/3

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

APANASEVICH, P.A.; BORISEVICH, N.A. VOLOD'KO, L.V.; GLADCHENKO, L.F.; GRIBKOVSKIY, V.P.; GURINOVICH, G.P.; IVANOV, A.P.; KUZNETSOVA, V.V.; PIKULIK, L.G.; PILIPOVICH, V.A.; RUBANOV, A.S.; RUBANOV, V.S.; SAMSON, A.M.; SARZHEVSKIY, A.M.; SOLOV'YEV, K.N.; UMREYKO, D.S.; KHAPALYUK, A.P.; YEL'YASHEVICH, M.A., akademik, red.

[Interaction between nonequilibrium radiation and matter] Vzaimodeistvie neravnovesnogo izlucheniia s veshchestvom. Minsk, Nauka i tekhnika, 1965. 223 p. (MIRA 18:3)

1. Akademiya nauk SSSR. Institut fiziki. Akademiya nauk Belorusskoy SSR (for Yel'yashevich).

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

L 2315-66 EWT(l)/EWP(e)/EWT(m)/EPF(c)/EWP(i)/EWP(b) IJP(c) WW/GG/WH

ACCESSION NR: AP5016287 UR/0362/65/001/006/0589/0598
551.521.3

AUTHORS: Il'ich, G. K.; Ivanov, A. P.

TITLE: Diffuse reflection from optically thick layers of light-scattering media

SOURCE: AN SSSR. Izvestiya, Fizika atmosfery i okeana, v. 1, no. 6, 1965, 589-598

TOPIC TAGS: light reflection, light scattering, scattering glass

ABSTRACT: The authors discuss the results of an experimental investigation of diffuse reflection of light by x scattering media of large optical thicknesses, with different values of the scattering indicatrix and different values of the probability of survival of a light quantum in the medium, and under different illumination conditions. The media employed were powders of various types of glass, concentrated emulsions, and suspensions (solutions in milk, rosin, polystyrene, etc.). The procedures used for the various measurements were all

Card 1/2

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

L 2315-66

ACCESSION NR: AP5016287 3

described by various authors elsewhere, and references to these papers are given. The absolute coefficients of reflection were also investigated as functions of the same parameters. The experimental results agree well with various theoretical calculations made by different authors. The results show that the angular distribution of the reflected flux is affected little by the scattering indicatrix or by the quantum survival probability. As a rule, when the ratio of the reflected scattered light is large, the fraction of the light flux reflected in the specular direction relative to the incident beam is also larger, but even this effect is small. Orig. art. has: 5 figures and 3 formulas

ASSOCIATION: Akademiya nauk BSSR, Institut fiziki (Physics Institute, Academy of Sciences, BSSR)

SUBMITTED: 24Jun64 ENCL: 00 SUB CODE: OP

NR REF SOV: 011 OTHER: 001

Card 2/2 pd

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

IVANOV, A.P.; IL'ICH, G.A.

Experimental study of certain parameters in the theory of the diffusion of light. Zhur.prikl. spekt. 2 no.4:358-362 Ap '65. (MIRA 18:8)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

L 10894-66 EWT(1) IJP(c) GG/WW

ACC NR: AP6000023 SOURCE CODE: UR/0368/65/003/005/0421/0427

48
B

AUTHOR: Zege, E. P.; Ivanov, A. P. (44,55; 44,55)

ORG: none

TITLE: Luminescence of a light-scattering layer with regard to transilluminance (21,44,55; 21,44,55)

SOURCE: Zhurnal prikladnoy spektroskopii, v. 3, no. 5, 1965, 421-427

TOPIC TAGS: luminescence, theoretical physics, light scattering, optic thickness

ABSTRACT: The authors calculate the radiative emittance of luminescence from a light-scattering layer with regard to transilluminance. An infinitely extended plane-parallel layer of a dispersive phosphor is considered. The following assumptions are made: this layer is illuminated on one side by a diffuse monochromatic radiation flux S_0; diffraction and interference phenomena are insignificant; the excitation light and the light from luminescence due to multiple scattering are completely depolarized; the scattering particles are in a vacuum; the excitation light and the luminescence light are diffuse throughout the thickness of the layer. The authors analyze the effects which the various parameters of the light scattering layer and those of the excitation light have on the luminescence of the layer. Formulas are given for determining the upward and downward luminescence intensities. These formulas may be considerably simplified or approximated by analytical expressions in several cases of practical importance. The cases of excitation by weakly and strongly absorbed radia-

UDC: 535:87

Card 1/2

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

L 10894-66

ACC NR: AP6000023

tion, and luminescence from an infinitely thick layer are considered. It is found that although the technical luminescence yield is nearly independent of excitation power for an infinitely thick layer, there is a noticeable reduction in the technical luminescence yield with an increase in excitation power for optical thicknesses of the order of 1-10. Orig. art. has: 3 figures, 1 table, 13 formulas. [14]

SUB CODE: 20/ SUBM DATE: 19Jul65/ ORIG REF: 007/ OTH REF: 001
ATD PRESS: 4172

HW

Card 2/2

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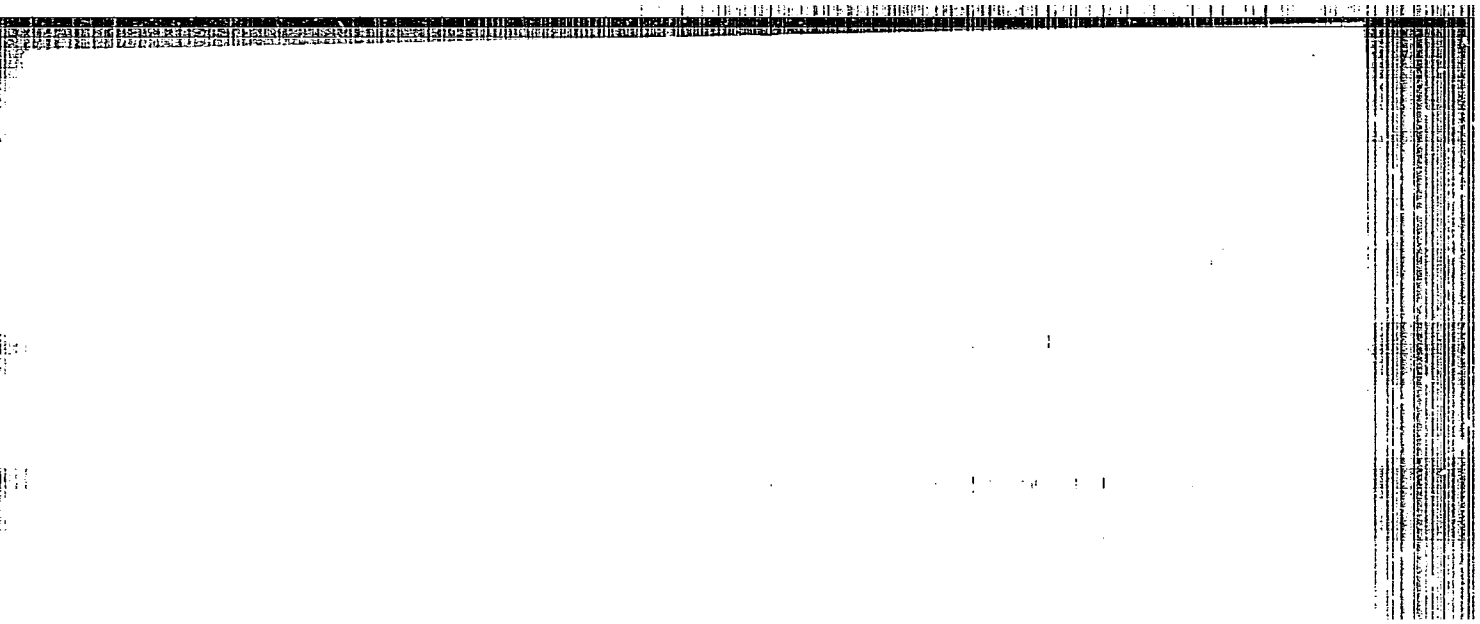

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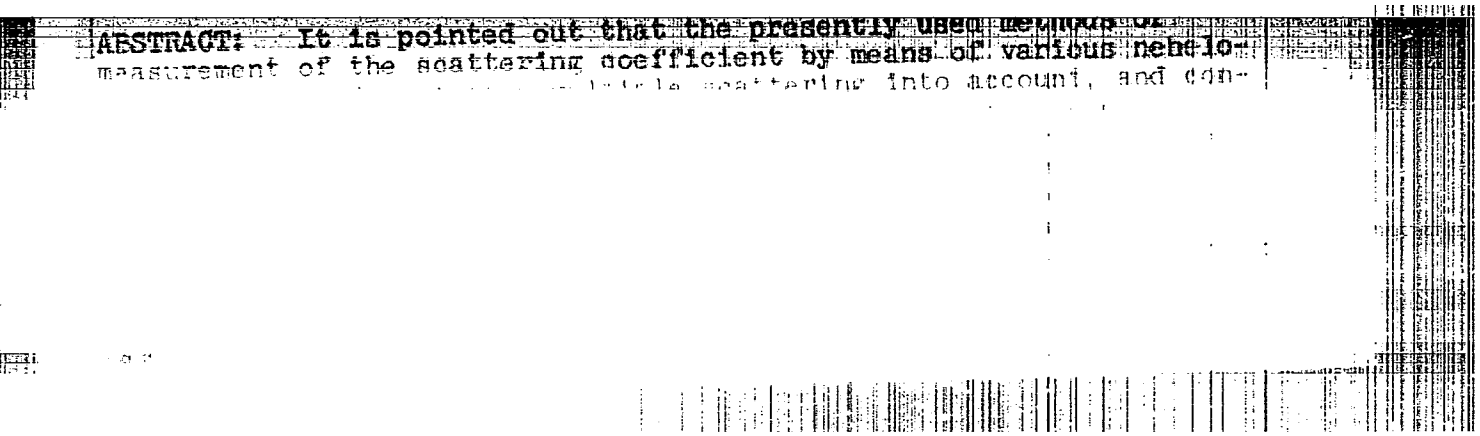

ABSTRACT: It is pointed out that the presently used methods of measurement of the scattering coefficient by means of various nebelo-

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

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ACCESSION NR: AP5012635

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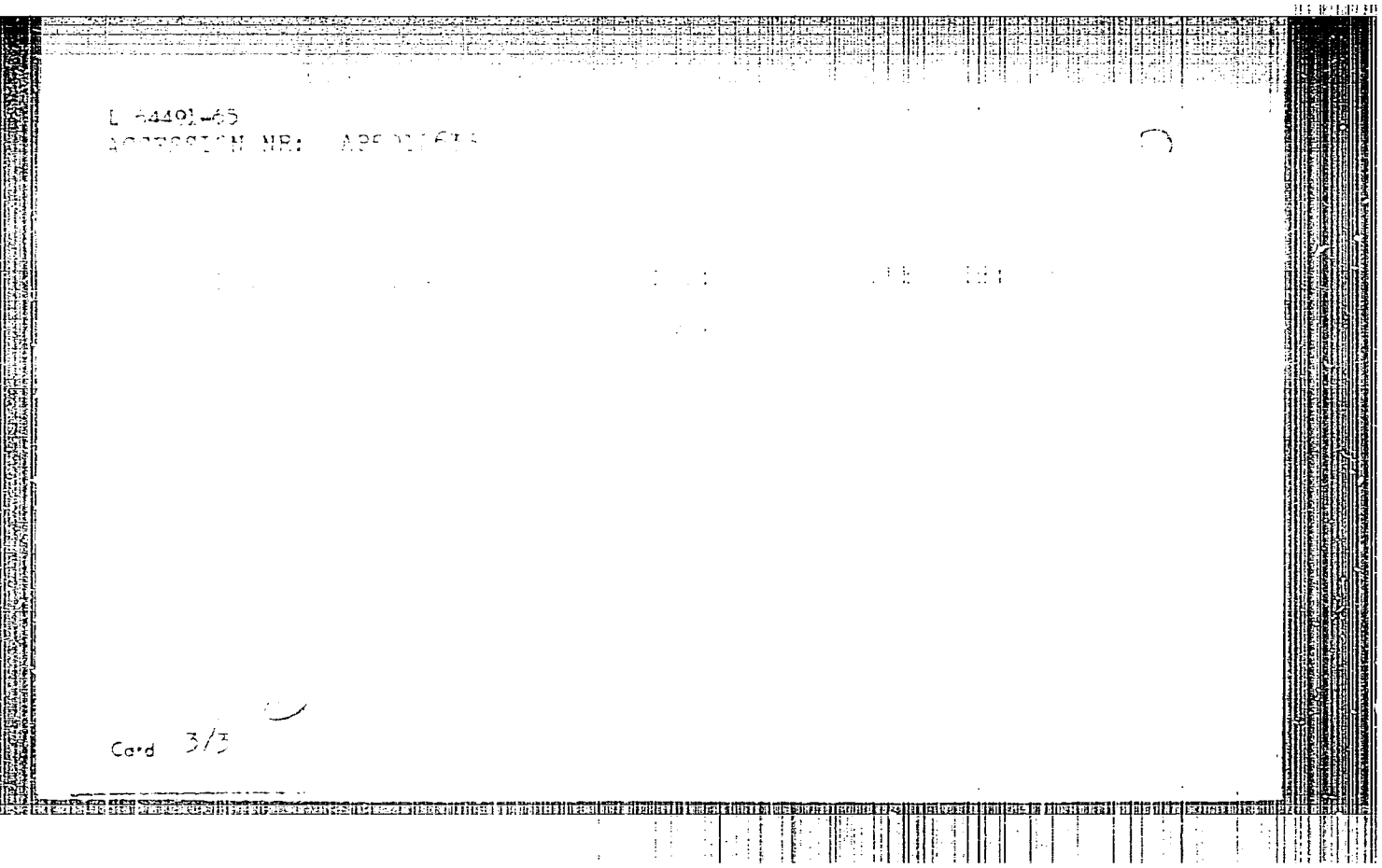
"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8



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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

IVANOV, A.P.; SHERBAF, I.D.

Effect of the angular aperture of an emitter on illuminance in a scattering medium. Dokl. AN BSSR 9 no. 5:301-304 My '65 (MIRA 19:1)

1. Institut fiziki AN BSSR. Submitted April 22, 1964.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

IVANOV, [illegible]

Optical correlation in a turbid medium illuminated by a narrow radiation [illegible] 18 no.4:728-733 Ap '65.

(MIRA 18:8)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

L 5085-66 EWT(1) GW

ACC NR: AP5025972 UR/0250/65/009/008/0504/0508

64
61
B

AUTHOR: Ivanov, A. P.; Makarevich, S. A.

TITLE: The influence of optical characteristics on the spectral composition of radiation in turbid media

SOURCE: AN BSSR. Doklady, v. 9, no. 8, 1965, 504-508

TOPIC TAGS: solar radiation, solar radiation absorption, spectral absorptivity, photon, photon scattering, optic analysis, luminescence, water

ABSTRACT: It is known that the spectral composition of solar radiation penetrating aqueous media changes rapidly with depth. Using the theoretical investigations of V. A. Ambartsumyan (Izv. AN ArmSSR, No 1-2, 1944) as the starting point, the author investigates theoretically the spectral modification problem in details. Graphs and tables present 1) the spectral composition of the extinction coefficient $\varepsilon = \rho + k$; of the photon survival probability $\Lambda = \rho/(\rho + k)$; of ρ; of the transmission coefficient, of the primary light transmission coefficient, and of the luminosity; and 2) the luminosity magnitude as function of depth for various values of the parameter δ describing ratio of the flux scattered forward (in the 2π solid angle) to the flux scattered backwards by a unit layer. The paper concludes by a brief discussion concerning the measurability of the various parameters. Presented by Academician AN BSSR B. I. Stepanov. Orig. art. has: 5 formulas, 2 figures, and 1 table.

Card 1/2

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

L 5085-66

ACC NR: AP5025972

ASSOCIATION: Physics Institute, AN BSSR (Institut fiziki AN BSSR)

44,55

SUBMITTED: 22Oct64 ENCL: 00 SUB CODE: OP, AA

NO REF SOV: 008 OTHER: 002

Card 2/2

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

ACCESSION NR: AP5019325 UR/0250/65/009/007/0438/0442

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

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Card 1/3

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

IVANOV, A.P. [Ivanou, A.P.]

Scattering of light by large spherical particles. Vestsi AN BSSR. Ser.fiz.-mat.nav. no.1:63-67 '65.
(MIRA 19:1)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

IVANOV, A.P. [Ivanou,A.P.]; PREDKO, K.G. [Predka, K.R.]

Experimental study of the broadening of a narrow light beam on a scattering screen. Vestsi AN BSSR. Ser.fiz.-mat.nav. no.2:54-61 '65. (MIRA 19:1)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

L 8215-66 EWT(1) IJP(c) WW/GG

ACC NR: AP5013861 SOURCE CODE: UR/0368/65/002/004/0356/0362

44,55 44,55

AUTHOR: Ivanov, A. P.; Il'ich, G. K.

ORG: none

31
B

TITLE: Experimental study of some parameters in the theory of light scattering

SOURCE: Zhurnal prikladnoy spektroskopii, v. 2, no. 4, 1965, 356-362

TOPIC TAGS: light scattering, optic property, optic analysis

ABSTRACT: Parameters appear in G. V. Rozenberg's formula for a diffused radiation field which depend on the form of the dispersion coefficient $x(\gamma)$. Calculation of the parameters is complex and is carried out only in certain special cases. The physical meanings of these parameters are discussed, and experimental methods are proposed for determining them by measuring the photometric characteristics of radiation scattered by systems with particles of various optical properties in various binding media. Studies of the parameter g (having the physical meaning of brightness), optically transmitted in a diffuse manner by a thick layer of the medium, show that the angular distribution of the outgoing radiation is nearly independent of the survival possibility for light quanta within a wide range. Besides this, g is only slightly dependent on the form of the dispersion coefficient. Investigation of parameters h and S is based on measurement of the angular distribution of radiation diffusely reflected by

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UDC: 535.361

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a semi-infinite diffusion layer. The authors consider the effect which the angle of incidence and the properties of the volume element have on these parameters. The results give the first significant information on the Rosenberg parameters. A systematic study is necessary for wide practical use of the parameters in working formulas. Orig. art. has: 4 figures, 5 formulas.

SUB CODE: OP/ SUBM DATE: 12Aug64/ ORIG REF: 007/ OTH REF: 000

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

ZEGE, E.P.; IVANOV, A.P.

Luminescence of a light-scattering layer with allowance for the brightening-up effect. Zhur. prikl. spektr. 3 no.5:421-427 N '65. (MIRA 18:11)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

LEVIN, I.M.; IVANOV, A.P.

Separate determination of the indices of absorption and scattering for turbid media. Opt. i spektr. 18 no.5:920-923 My '65.

(MIRA 18:10)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

L 45643-65 EPF(c)/EEC(t)/EWT(1) IJP(c) GG/WW

[illegible] UR/0091/65/018/004/0694/0703

[illegible] a turbid medium illuminated by a [illegible]

SOURCE: Optika i spektroskopiya, v. 18, no. 4, 1965, 698-703

TOPIC TAGS: turbidity, light scattering, milk, aerosol scattering, aerosol

ABSTRACT: An experimental analysis was made of the effect of the parameters of a [illegible] narrow light beams. The experimental setup consisted [illegible] with a highly turbid medium (milk) [illegible] illuminating [illegible] devices. An optical system was used to introduce a narrow par- [illegible] lamp into the tank from above or from [illegible]. The [illegible] The illuminating system was equipped to accomo- [illegible] was used

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

allel beam of light from a PRK-4 lamp into the tank from above or from below. The beam was subsequently scattered. The illuminating system was equipped to accomodate light filters, polaroids, and diaphragms. An FEU-25 photomultiplier was used [illegible] the illumination in various parts of the medium. The photomultiplier, [illegible] from the segment whose intensity was being measured, was connected with that segment by means of a light tube. The optical characteristics of the medium (natural indices of scattering σ and absorption k)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

L 45643-65

ACCESSION NR: AP5011125

were measured by means of an attachment to the SF-4 spectrophotometer, described earlier by the author (Opt. AN BSSR, Ser. fiz., no. 2, 1962, 39). It was shown

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the illumination at great depths and at distances sufficiently far from the region in which the narrow light beam is propagated. The formula, however, holds only for large values of the lifetime probability of a quantum. Practically speaking, the characteristics of a light field remain invariant to the degree of polarization for any specific absorption k/σ, a conclusion which is significant in the study of polarization phenomena and the theory of radiative transfer. Orig. art. has: 1 table, 3 formulas, and 5 figures. [VK]

ASSOCIATION: none

SUBMITTED: 07Jan63 ENCL: 00 SUB CODE: OP

NO REF SOV: 004 OTHER: 009 ATD PRESS: 3044

Card 2/2 75

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

IVANOV, A.P.; MAKAREVICH, S.A.

Effect of optical characteristics on the spectral composition of radiation in a turbid medium. Dokl. AN BSSR 9 no.8:504-508 Ag '65. (MIRA 18:10)

1. Institut fiziki AN BSSR.

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

IVANOV, A.P.; IL'ICH, G.K.

Diffusive transmissivity of optically thick light-diffusing media.
Dokl. AN BSSR 9 no.7:438-442 Jl '65. (MIRA 18:9)

1. Institut fiziki AN Belorusskoy SSR.

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

L 54790-65

ACCESSION NR: AP5015779 UR/0250/65/009/005/0301/0304

AUTHOR: Ivanov, A. P.; Sherbaf, I. D.

TITLE: The effect of the angular aperture of an emitter on the illumination in a scattering medium

SOURCE: AN BSSR. Doklady, v. 9, no. 5, 1965, 301-304

TOPIC TAGS: turbid medium, scattering medium, illumination

ABSTRACT: Scattering turbid media (milk and rosin) were used to investigate experimentally the dependence of illumination on the angular aperture of the emitter. It was concluded that 1) for small optical thicknesses, the role of the solid angle subtended by the emitter is important since a slight decrease in the angular aper-

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perimentally the dependence of illumination on the angular aperture of the emitter. It was concluded that 1) for small optical thicknesses, the role of the solid angle subtended by the emitter is important since a slight decrease in the angular aperture leads to a sharp increase in the depth of penetration of light into the medium; 2) at given optical depths, depending both on the angular aperture and on the coefficient of scattering and absorption of the turbid medium, the relative change in the illumination, corresponding to different angular apertures, attains a maximum; and 3) for large optical thicknesses at different depths, the role of the angular structure of a narrow light beam incident on a medium remains unchanged—the angular aperture affects the illumination, but the

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L 54790-65
ACCESSION NR: AP5015779

effect is minimal. It was also observed that the dependence of illumination on the angular aperture becomes more appreciable as the absorptive power is increased. Also, in highly absorbent media the illumination at large depths is more dependent on the illuminating conditions than in the weakly absorbent media. Orig. art. has: 1 formula and 2 figures.

[VK]

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on the illuminating conditions than in the weakly absorbent med.a. Orig. art. has: 1 formula and 2 figures. [VC]

ASSOCIATION: Institut fiziki AN BSSR (Physics Institute, AN BSSR)

SUBMITTED: 22Apr64 ENCL: 00 SUB CODE: OP

NO REF SOV: 002 OTHER: 000 ATD PRESS: 4029

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

L 45777-66 EWT(1)

ACC NR: AP6030717 (N) SOURCE CODE: UR/0363/66/005/002/0195/0201

AUTHOR: Ivanov, A. P.; Sherbaf, I. P.

ORG: none

TITLE: Attenuation of a narrow parallel beam of light in a turbid medium

SOURCE: Zhurnal prikladnoy spektroskopii, v. 5, no. 2, 1966, 195-201

TOPIC TAGS: light beam, turbidity, turbid medium, light absorption, light attenuation, extinction coefficient, absorption coefficient, ILLUMINATION OPTICS, OPTIC DENSITY

ABSTRACT: The attenuation of a narrow beam of light in a turbid medium consisting of water in a tank, with optical density controlled by addition of milk or rosin, has been investigated. The absorptivity was varied by dissolving premeasured amounts of aniline black. A narrow collimated beam at $\lambda = 546$ nm with a 3.4-cm^2 cross section and a divergence of 1° was produced by passing radiation from a DRSh-250 lamp through a mercury filter. The results of the experiments were summarized in the form of graphs of the dependence of illumination on the optical depth at different values of the extinction coefficients (ε) and the dependence of illumination on the square of the extinction coefficient at different values of the optical depth (τ). It was shown that as a result of the negligible contribution of scattering, attenuation of light in slightly turbid media, in which $\varepsilon < 0.05$ cm^{-1} and τ is less than 10, obeys the exponential law of absorption (Bouguer-Lambert

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ACC NR: AP6030717

law). However, in media with larger coefficients of extinction, the exponential law of absorption is not obeyed at any depth, with the illumination at constant τ increasing with the increasing coefficient of absorption. As τ was increased at constant $\Lambda = \sigma/(k + \sigma)$, where k is the turbidity and σ is the absorption coefficient, the intensity of the scattered light was observed to increase, reach a peak, and then decrease to a limiting value equal to E/E_0, where E and E_0 are the illumination inside and at the surface of the medium, respectively. As ε increased the peak shifted toward larger τ. The maximum illumination, which depends only on the scattered light, increases monotonically with ε. The maximum illumination is sharper the smaller the value of ε. Orig. art. has: 7 figures and 1 formula. [CS]

SUB CODE: 20/ SUBM DATE: 30Sep65/ ORIG REF: 005/ ATD PRESS: 5084

Card 2/2

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

L 37090-66 EWT(1)

ACC NR: AP6017594 SOURCE CODE: UR/0250/66/010/001/0018/0021

AUTHOR: Ivanov, A. P.; Sherbaf, I. D. 43

ORG: Institute of Physics, AN BSSR (Institut fiziki AN BSSR) 8

TITLE: Influence of the polarization properties of external radiation on the illumination of different sections of a turbid medium

SOURCE: AN BSSR. Doklady, v. 10, no. 1, 1966, 18-21

TOPIC TAGS: light polarization, radiation intensity, light scattering, light polarization, ILLUMINATION OPTICS

ABSTRACT: To check on a hypothesis that in a strongly turbid medium the orientation of the intensity vector of the external radiation would be less important than in a weakly turbid medium, and to obtain quantitative estimates of this difference, the authors have experimented with the influence of the electric-intensity vector orientation on the illumination produced by radiation in a light-scattering medium. The investigations were carried out with apparatus described earlier (Opt. i spektr. v. 18, no. 4, 1965). The polarization plane was rotated with the aid of a polaroid. The theory of the experiment is briefly described. The tests were made with the optical receiver immersed in the turbid medium to different depths. Plots are presented of the percentage change of electric intensity against the orientation of the electric vector and against the extinction coefficient. The results show that the larger the extinction coefficient, the smaller the influence of the polarization angle on the

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ACC NR: AP6017594 O

intensity. The plots of the change of intensity against the polarization angle are symmetrical about the value at 90°, at which their relative change of intensity has a maximum. It is concluded from the results that at large distances from the point of penetration of the light into the medium, or in the case of strong turbidity, differences in the orientation of the electric intensity vector of the incident radiation do not change the illumination noticeably. However, when the turbidity is low and the multiple scattering is small, the illumination may change by a factor of two as the angle of polarization changes from 0 to 90°. This report was presented by AN BSSR Academician B. I. Stepanov. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 28Aug65/ ORIG REF: 003

Card 2/2

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

L 40931-66 EWT(1) IJP(c) WW/GG/GW

ACC NR: AP6011374 SOURCE CODE: UR/0362/66/002/003/0312/0315

45
B

AUTHOR: Ivanov, A. P.; Sherbaf, I. D.

ORG: Physics Institute, Academy of Sciences BSSR (Akademiya nauk BSSR, Institut fiziki)

TITLE: Effect of the angular dispersion of a light beam on its penetration into a scattering medium

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 2, no. 3, 1966, 312-315

TOPIC TAGS: optic property, ocean property, oceanography, light dispersion, light scattering, water

ABSTRACT: The problem of the effect of the angular dispersion of a light beam on illumination in a turbid medium was investigated experimentally. The experiments were set up in a small basin filled with turbid water. The method of investigation was such that it was possible to change both the angular aperture of the radiator from 0.5 to 180° at a constant luminous flux entering the water and the optical characteristics of the medium, the probability of photon survival, and the optical depth. The cross sectional area of the light beam entering the water was 3.14 cm^2. The authors examined the region of small optical depth which corresponds to a slightly turbid atmosphere, space, and water to shallow depths; the region of average optical

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L 40931-66
ACC NR: AP6011374

depths; and the region of large optical depths. It is concluded that the greater the probability of photon survival, the slower the illumination decreases with an increase of the radiator aperture angle. At large optical depths illumination depends on the angular dimensions of the radiator but not as much as could be expected. Illumination drops not by several orders of magnitude but only by a factor of 2—3 when an acutely directed radiator is replaced by a completely diffusive one. Orig. art. has: 4 figures and 2 formulas.

SUB CODE: 20,08/ SUBM DATE: 05Oct65/ ORIG REF: 001/ OTH REF: 000

Card 2/2 vmb

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

S/260/62/000/003/001/002
1001/1201

Author: Ivanov, A. P.

Title: RESULTS OF INTRODUCTION OF GAMMA-RAY DEFECTOSCOPY USING Tm[170]

Periodical: *Referativnyy zhurnal, Pribory dlya issledovaniy i ispitaniy fiziko-tekhnicheskikh svoistv materialov*, 1962, 13, abstract 40.3.79. (*V sb.* "*Radioakt. izotopy i yadern. izlucheniya v nar. kh-ve SSSR. v. 3.*" *M., Gostoptekhizdat*, 1961, 35–38)

Text: Reported the expediency of using Tm^{170} for examination of welded and cast articles from steel and light alloys. Operating characteristics for running of the industrial pilot plant for ГУП-Ту 0.5-1 (GUP-Tu-0.5-1) were determined and its construction faults have been determined as well as economic efficiency of gamma-ray testing of large welded constructions. The sources with an activity of 0.5 gr eq. of radium can be widely used in gamma-ray testing, provided the output is not the essential factor, but sources of smaller activity are required for protective shielding and transport.

[Abstractor's note: Complete translation.]

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

IVANOV, A.P.

Converter unit. Put' i put. khoz. 4 no. 12:35-37 D '60.
(MIRA 13:12)

1. Master mekhanicheskikh masterskikh, stantsiya Orel, Moskovskoy dorogi.
(Electric current converters)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

ACC NR: AP6013353 SOURCE CODE: UR/0363/66/002/004/0761/0763

AUTHOR: Nadgornyy, E. M.; Grigor'yeva, L. F.; Ivanov, A. P.

ORG: Institute of the Chemistry of Silicates im. I. V. Grebenshchikov, Academy of

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 4, 1966, 761-763

TOPIC TAGS: asbestos product, synthetic fiber, fluoroamphibole fiber, heat resistance, tensile strength

ABSTRACT: The relative tensile strength at room temperature has been determined in fibers of synthetic lithium-magnesium fluoroamphibole $Li_2Mg_6[Si_8O_{22}]F_2$, synthetic fluororichterite $Na_2Mg_6[Si_8O_{22}]F_2$, and natural crocidolite asbestos which were heat-treated at a temperature in the 200-800C range. These determinations were necessary to supply data on the effect of heat treatment on mechanical properties of the fibers which are important for high temperature technology because of their high heat resistance. All data in this study were related to the fibers of 1.5 μ in diameter.

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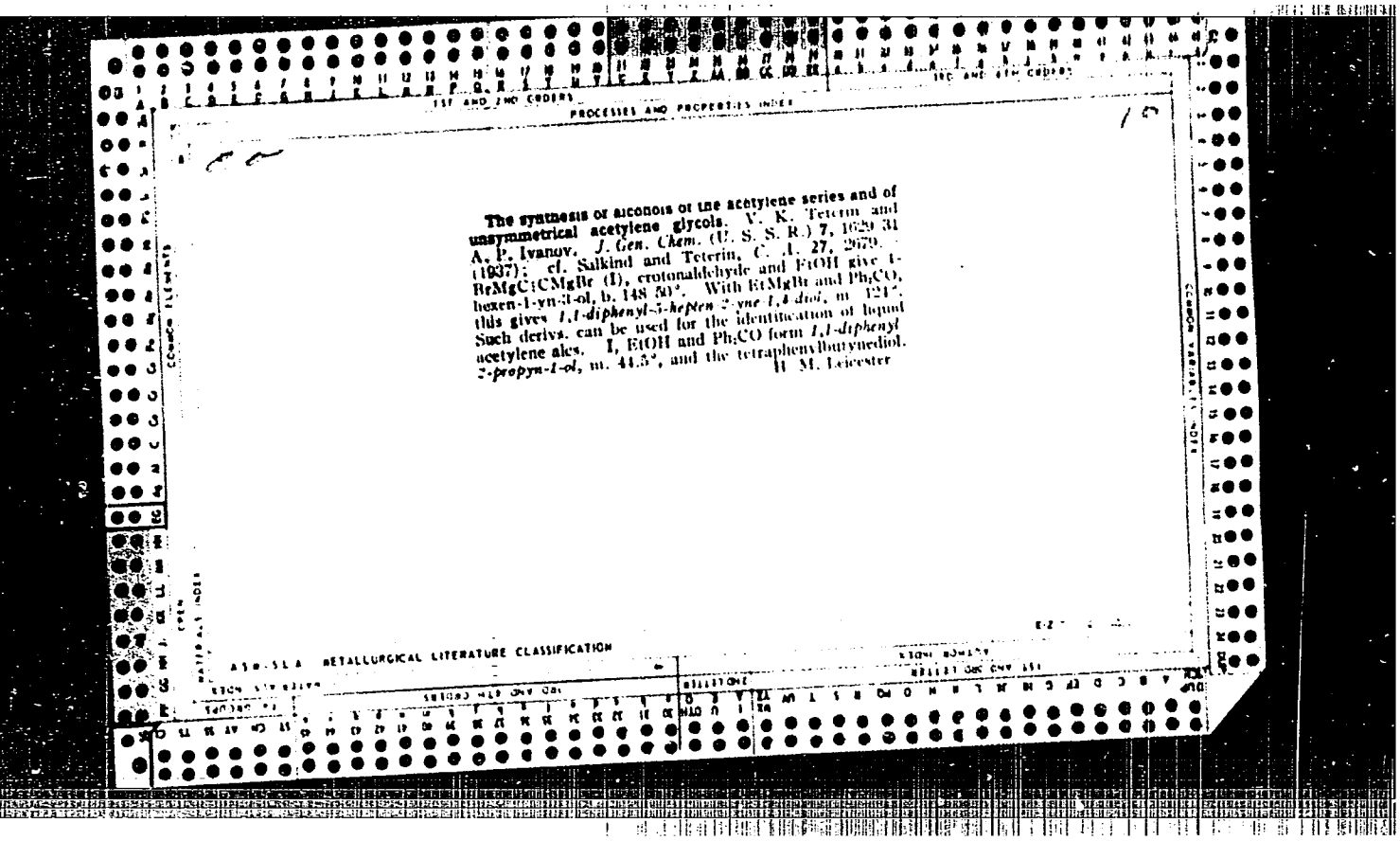

The synthesis of alcohols of the acetylene series and of unsymmetrical acetylene glycols. V. K. Teterin and A. P. Ivanov. *J. Gen. Chem.* (U. S. S. R.) 7, 1629-31 (1937); cf. Salkind and Teterin, C. A. 27, 2979. BrMgC:CMgBr (I), crotonaldehyde and EtOH give 1-hexen-1-yn-3-ol, b. 148-50°. With EtMgBr and Ph_2CO, this gives *1,1-diphenyl-5-hepten-2-yne 1,4-diol*, m. 121°. Such derivs. can be used for the identification of liquid acetylene alcs. I, EtOH and Ph_2CO form *1,1-diphenyl-2-propyn-1-ol*, m. 44.5°, and the tetraphenylbutynediol.

H. M. Leicester

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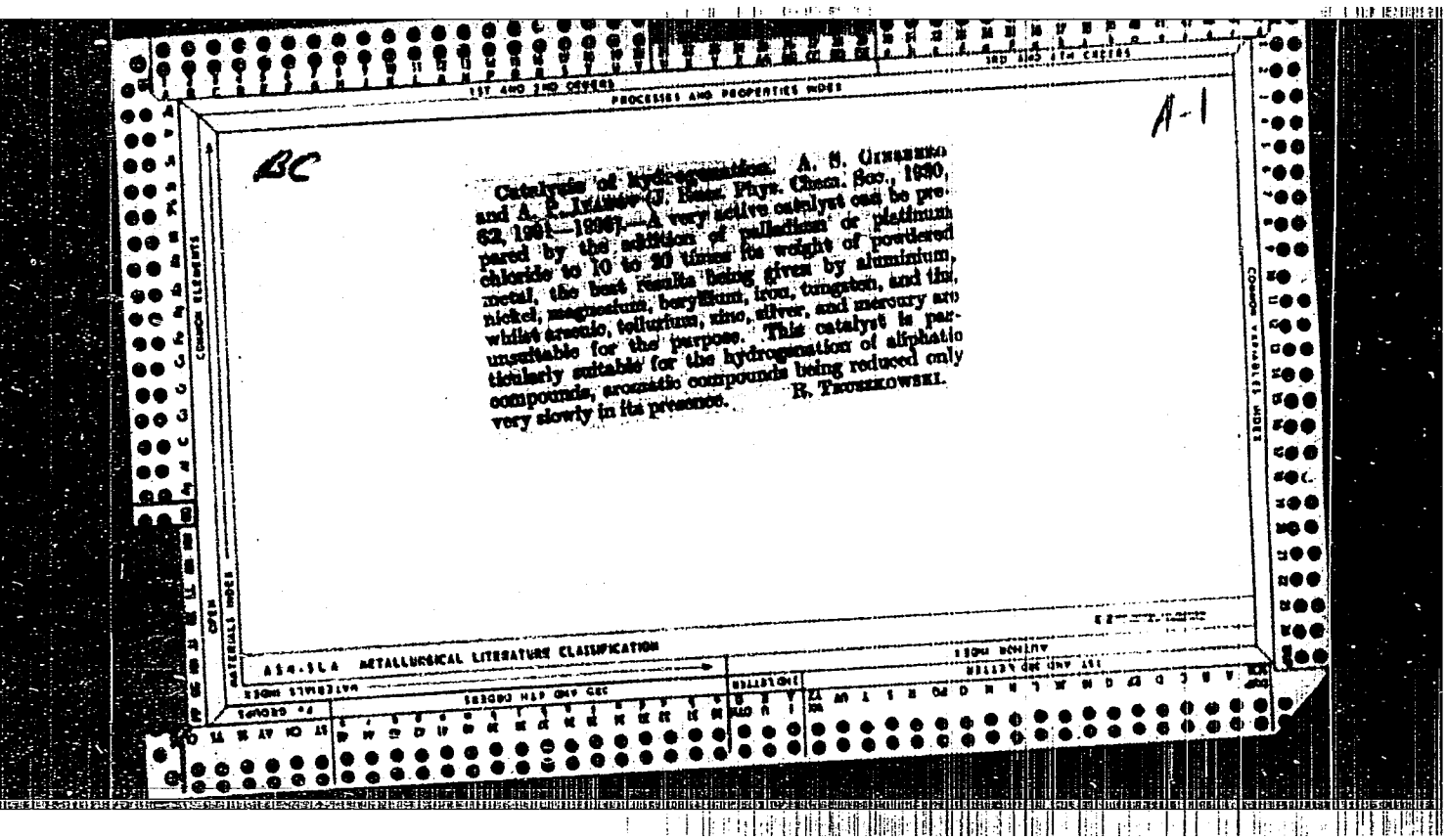

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CA

Isomerization of methylphenylethynylcarbinol in acid medium. E. D. Venus-Danilova, A. P. Ivanov, and I. I. Martynov (Lensovet Technol. Inst., Leningrad). *Zhur. Obshchel Khim.* (J. Gen. Chem.) 21, 1806-10(1951).—Treatment of (BrMgC≡)$_2$ simultaneously with PhAc and EtOH in Et$_2$O gave 31% $MePhC(OH)C{:}CH$ (I), m. 48.5-9.5°; purification is best done by steam distn. of the petr. ether ext. of the reaction mixt. after hydrolysis. A 36-42% yield of corresponding diol is also obtained. I (4 g.) in 20 ml. 60% AcOH and 3.5 g. Hg(OAc)$_2$ in 30 ml. 60% AcOH kept 2 hrs. on a steam bath, gave 2.2 g. unchanged I and a trace of a reducing substance. However, 4 g. I in 20 ml. EtOH, 2 g. HgO, and 100 ml. 1:7 H_2SO_4 kept 3 hrs. on a steam bath gave from several runs an av. yield of 28.8% *methylphenylacetylcarbinol* (3-hydroxy-3-phenyl-2-butanone), b$_5$ 95-8° (*semicarbazone*, m. 182-3°), and 14.5% $MePhC{:}CHCHO$, b$_5$ 76-7° (*semicarbazone*, m. 198-9°); the best sepn. is via the semicarbazone route. Oxidation of the aldehyde by Ag$_2$O failed, yielding only AcPh. The aldehyde probably forms by anionotropic rearrangement of the acetylene-allene type through the enolic form of the aldehyde. O. M. Kosolapoff

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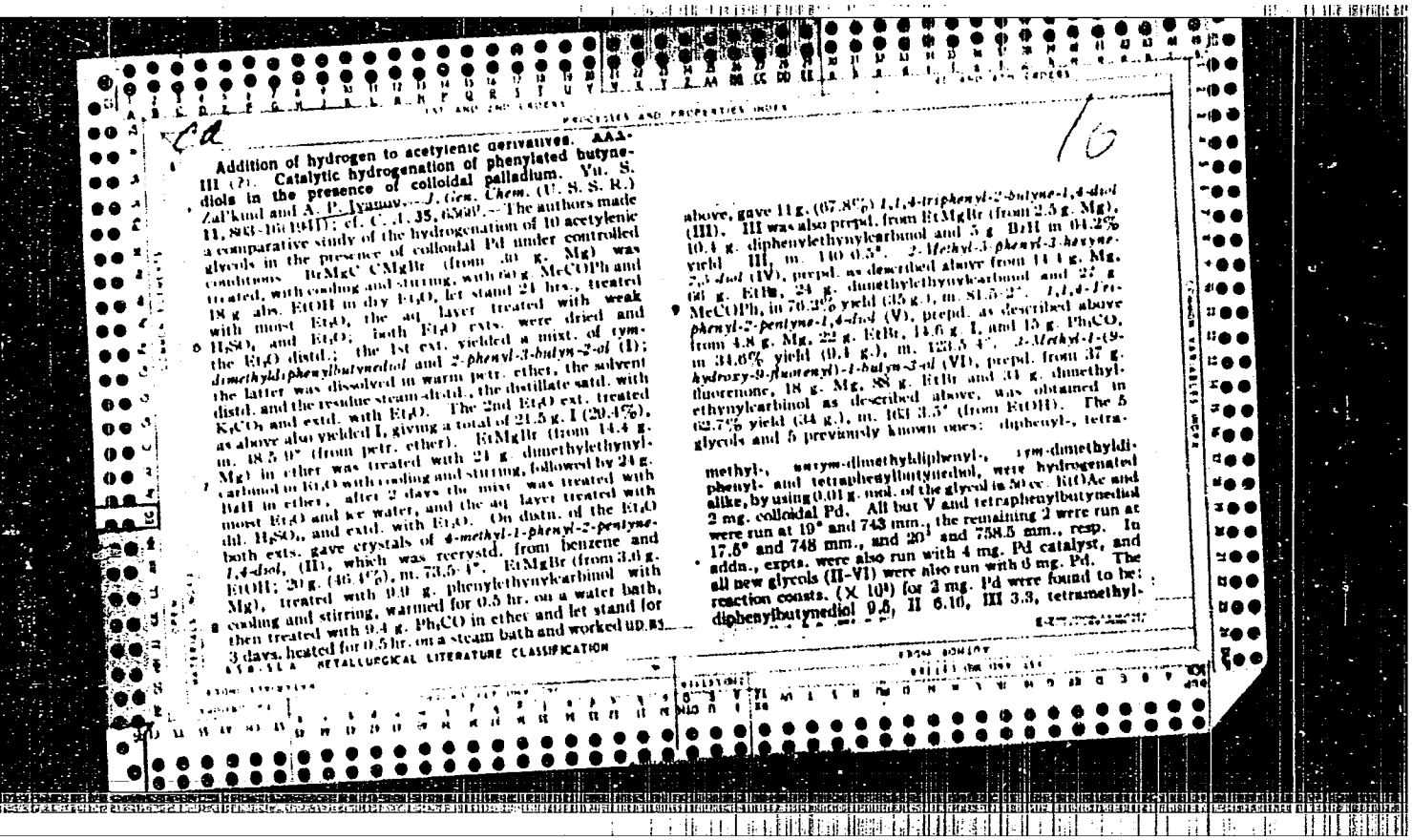

Addition of hydrogen to acetylenic derivatives. AAA-III (7). Catalytic hydrogenation of phenylated butynediols in the presence of colloidal palladium. Yu. S. Zal'kind and A. P. Ivanov. *J. Gen. Chem.* (U. S. S. R.) 11, 883-10(1941); cf. C. A. 35, 6300.—The authors made a comparative study of the hydrogenation of 10 acetylenic glycols in the presence of colloidal Pd under controlled conditions. BrMgC:CMgBr (from 30 g. Mg) was treated, with cooling and stirring, with 80 g. MeCOPh and 18 g. abs. EtOH in dry Et_2O, let stand 24 hrs., treated with most Et_2O, the aq. layer treated with weak H_2SO_4 and Et_2O; both Et_2O exts. were dried and the Et_2O distd.; the 1st ext. yielded a mixt. of *tym-dimethyldiphenylbutynediol* and *2-phenyl-3-butyn-2-ol* (I); the latter was dissolved in warm petr. ether, the solvent distd. and the residue steam-distd., the distillate satd. with K_2CO_3 and extd. with Et_2O. The 2nd Et_2O ext. treated as above also yielded I, giving a total of 21.5 g. I (20.4%), m. 48.5-9° (from petr. ether). EtMgBr (from 14.4 g. Mg) in ether was treated with 21 g. dimethylethynylcarbinol in Et_2O with cooling and stirring, followed by 24 g. BuBr in ether, after 2 days the mixt. was treated with moist Et_2O and ice water, and the aq. layer treated with dil. H_2SO_4, and extd. with Et_2O. On distn. of the Et_2O both exts. gave crystals of *4-methyl-1-phenyl-2-pentyne-1,4-diol*, (II), which was recrystd. from benzene and EtOH; 20 g. (46.4%), m. 73.5-4°. EtMgBr (from 3.6 g. Mg), treated with 9.0 g. phenylethynylcarbinol with cooling and stirring, warmed for 0.5 hr. on a water bath, then treated with 9.4 g. Ph_2CO in ether and let stand for 3 days, heated for 0.5 hr. on a steam bath and worked up as above, gave 11 g. (67.8%) *1,1,4-triphenyl-2-butyne-1,4-diol* (III). III was also prepd. from EtMgBr (from 2.5 g. Mg), 10.4 g. diphenylethynylcarbinol and 5 g. BuBr in 64.2% yield. III, m. 140 0.5°. *2-Methyl-3-phenyl-3-hexyne-2,5-diol* (IV), prepd. as described above from 14.4 g. Mg, 66 g. EtBr, 24 g. dimethylethynylcarbinol and 27 g. MeCOPh, in 70.3% yield (35 g.), m. 81.5-2°. *1,1,4-Tri-phenyl-2-pentyne-1,4-diol* (V), prepd. as described above from 4.8 g. Mg, 22 g. EtBr, 14.6 g. I, and 15 g. Ph_2CO, in 34.6% yield (9.1 g.), m. 123.5 4°. *2-Methyl-1-(9-hydroxy-9-fluorenyl)-1-butyn-3-ol* (VI), prepd. from 37 g. fluorenone, 18 g. Mg, 88 g. EtBr and 31 g. dimethylethynylcarbinol as described above, was obtained in 62.7% yield (34 g.), m. 161 3.5° (from EtOH). The 5 glycols and 5 previously known ones: diphenyl-, tetramethyl-, *sym*-dimethyldiphenyl-, *unsym*-dimethyldiphenyl- and tetraphenylbutynediol, were hydrogenated alike, by using 0.01 g. mol. of the glycol in 50 cc. EtOAc and 2 mg. colloidal Pd. All but V and tetraphenylbutynediol were run at 19° and 743 mm., the remaining 2 were run at 17.8° and 748 mm., and 20° and 758.5 mm., resp. In addn., expts. were also run with 4 mg. Pd catalyst, and all new glycols (II-VI) were also run with 6 mg. Pd. The reaction consts. ($\times 10^4$) for 3 mg. Pd were found to be: diphenylbutynediol 9.5, II 6.10, III 3.3, tetramethyl-

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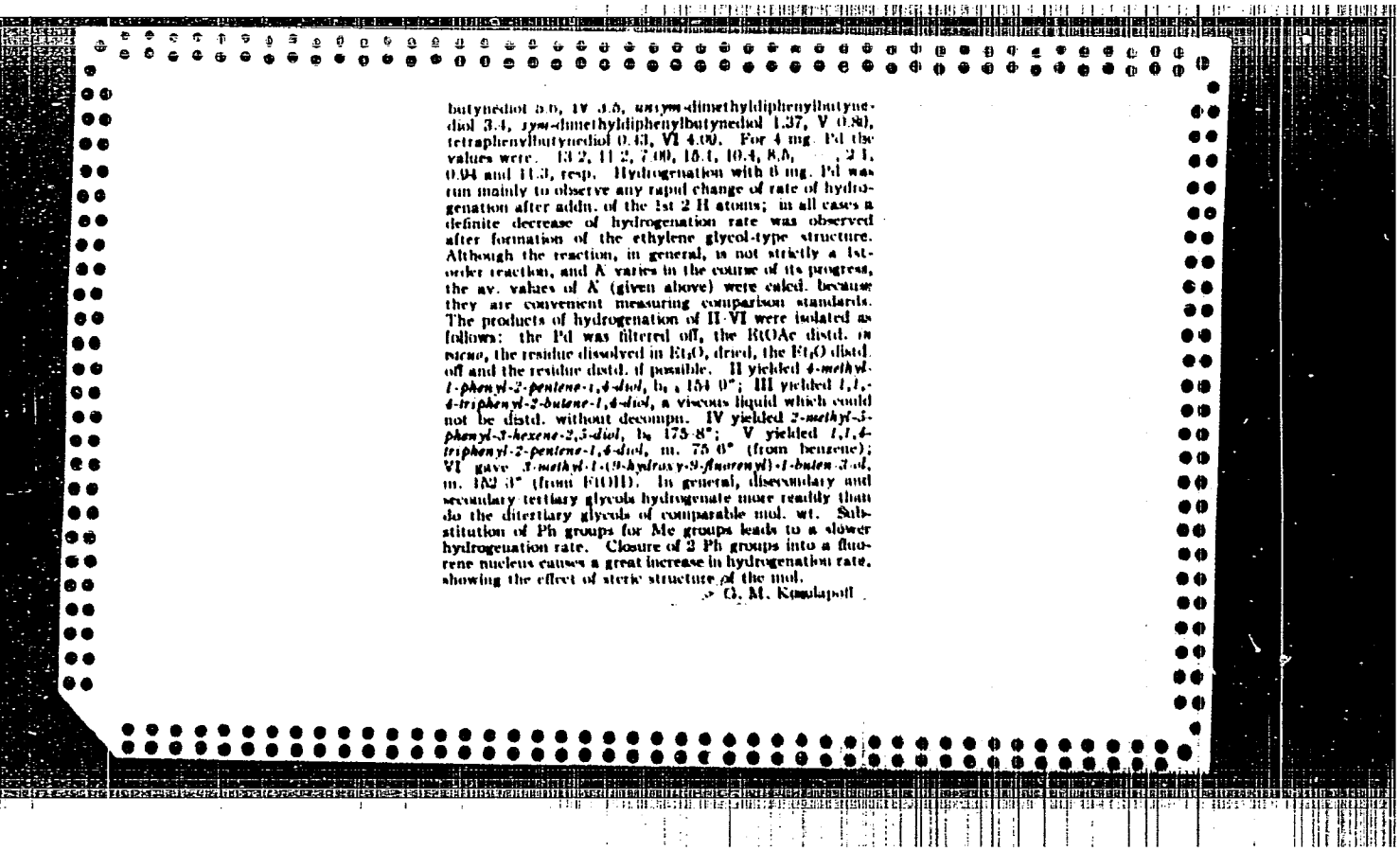

butynediol 5.6, IV 4.5, *unsym*-dimethyldiphenylbutynediol 3.4, *sym*-dimethyldiphenylbutynediol 1.37, V 0.80, tetraphenylbutynediol 0.43, VI 4.00. For 4 mg. Pd the values were 13.2, 11.2, 7.00, 15.1, 10.4, 8.0, , 2.1, 0.94 and 11.3, resp. Hydrogenation with 6 mg. Pd was run mainly to observe any rapid change of rate of hydrogenation after addn. of the 1st 2 H atoms; in all cases a definite decrease of hydrogenation rate was observed after formation of the ethylene glycol-type structure. Although the reaction, in general, is not strictly a 1st-order reaction, and K varies in the course of its progress, the av. values of K (given above) were calcd. because they are convenient measuring comparison standards. The products of hydrogenation of II–VI were isolated as follows: the Pd was filtered off, the HOAc distd. *in vacuo*, the residue dissolved in Et_2O, dried, the Et_2O distd. off and the residue distd. if possible. II yielded *4-methyl-1-phenyl-2-pentene-1,4-diol*, $b_{4.5}$ 154.0°; III yielded *1,1,4-triphenyl-2-butene-1,4-diol*, a viscous liquid which could not be distd. without decompn. IV yielded *2-methyl-5-phenyl-3-hexene-2,5-diol*, b_6 175.8°; V yielded *1,1,4-triphenyl-2-pentene-1,4-diol*, m. 75.0° (from benzene); VI gave *3-methyl-1-(9-hydroxy-9-fluorenyl)-1-buten-3-ol*, m. 182.3° (from EtOH). In general, disecondary and secondary tertiary glycols hydrogenate more readily than do the ditertiary glycols of comparable mol. wt. Substitution of Ph groups for Me groups leads to a slower hydrogenation rate. Closure of 2 Ph groups into a fluorene nucleus causes a great increase in hydrogenation rate, showing the effect of steric structure of the mol.

G. M. Kosolapoff

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IVANOV, A. P.

"Isomerisation of methyl phenyl ethinyl carbinol in an acid medium."
Venus-Danilova, E. D., Ivanov, A. P., and Martynov, I. I. (p. 1806)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1951, Vol 21, No 10.

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

VIVANOV, A. P:

Catalytic reactions of cyclohexane in the presence of water on nickel. T. A. Slovokhotova, and A. P. Ivanov. (Moscow State Univ.). Vestnik Moskov. Univ. 6 No. 2, Ser. Fiz-Mat. 2 Estestven. Nauk No. 1, 125-35 (1951). - In the presence of H_2O, cyclohexane (I) on Ni in the temp. range 250-350° undergoes simultaneously 3 parallel reactions: (1) dehydrogenation, $I \rightarrow C_6H_6 + 3H_2$ (2) hydrogenocracking, $I + 6H_2 - 6CH_4$ (3) $I + 12H_2O - 6CO_2 + 18\ H_2$. Expt. were run with 3 g. of a Ni/Al_2O_3 catalyst, at a feed rate of I of 0.2 ml./min., without or with H_2O (vol. ratio $H_2O/I = 7$), at 250, 275, 300, 325, and 350°. The rate of evolution of gas was const. in all expts., which indicates absence of poisoning of the catalyst. Exptl. data (temp., rate of evolution of gas in ml. (STP)/min., % C_6H_6 in the catalyzate, vol. % of H_2, CH_4, CO_2, in the gas) are: pure I, 250°, 22.2, 17.39, 97.9, 2.1, --; 275°, 26.0, 19.60, 97.0, 3.0, --; 300°, 34.4, 26.59, 94.0, 6.0, --; 325° 47.0, 39.76, 93.0, 7.0, --; 350°, 55.0, 51.65, 91.5, 8.5, --; I + H_2O, 250°, 4.34, 5.15, 87.74, 6.06, 6.20; 275°, 7.40, 7.91, 83.24, 7.92, 8.84; 300°, 15.20, 8.63, 76.26, 11.57, 12.17; 325°, 23.40, 9.35, 69.31, 16.18, 12.51; 350°, 31.80, 12.77, 64.78, 18.59, 16.63. The following are data of the rates for the 3 simultaneously occurring reactions with I + H_2O (temp., ml. gas evolved per min., 10^{-5} X moles I reacted per min. by reactions (1), (2), and (3), % I reacted (relative to the original amt. of I) by reactions (1), (2), and (3), total % I reacted): 250°, 4.34, 4.9, 0.20, 0.20, 2.65, 0.11, 0.10, 2.86; 275°, 7.40, 7, 0.43, 0.48, 3.78, 0.23, 0.26, 4.28; 300°, 15.20, 10.06, 1.18, 1.37, 5.45, 0.64, 0.74, 6.82; 325°, 23.40, 13, 2.5,

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KHRESKIN, A.I., inzh.; BREZGUNOV, K.V.; IVANOV, A.P.

Snow drift control. Puti i put. khoz. no.4:18-19 Ap '59.
(MIRA 13:3)

1.Starshiy dorozhnyy master, stantsiya Abdulino, Ufimskoy dorogi (for Khreskin). 2. Zamestitel' nachal'nika distantsii, g. L'vov (for Brezgunov). 3.Master mekhanizheskikh masterskikh, stantsiya Orel, Moskovsko-Kursko-Donbasskoy dorogi (for Ivanov).
(Railroads--Snow protection and removal)

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ALEKSEYEV, V.N.; VINOGRADOV, A.N., kand.ekon.nauk; VLADIMIROV, V.A., inzh.; KOCHETOV, I.V., prof.; doktor ekon.nauk; MINAKOV, P.P.; POTAPOV, I.A.; ROMANOV, M.P., dotsent, kand.ekon.nauk; SPENGLER, Ye.N., kand.ekon.nauk; SHITOV, A.V.; SHUKHATOVICH, I.M.; YAKUBOV, L.S.; IVLIYEV, I.V., red.; KRISHTAL', L.I., red.; KOCHETOV, I.V., prof., doktor ekon.nauk, nauchnyy red.; IVANOV, A.P., nauchnyy red.; BOBROVA, Ye.N., tekhn.red.

[Statistics and bookkeeping in railroad transportation; manual] Statistika i bukhgalterskii uchet na zheleznodorozhnom transporte; spravochnik. Moskva, Vses.izdatel'sko-poligr.ob"edinenie M-va putei soobshcheniia, 1960. 485 p. (MIRA 14:3)

(Railroads--Accounts, bookkeeping, etc.)
(Railroads--Statistics)

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IVANOV, A.P.

We do it ourselves. Put' i put.khoz. 4 no.11:35-36 N '60.
(MIRA 13:12)

1. Master masterskikh, st. Orel, Moskovskoy dorogi.
(Electric connectors)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

KREYNIS, Zosim Leybovich; KOTOV, Sergey Ivanovich; IVANOV, Anatoliy Petrovich; POTOTSKIY, G.I., inzh., red.; MEDVEDEVA, M.A., tekhn. red.

[Communist labor railroad division; experience of the Orlovskaya division of the Moscow Railroad] Distantsiia puti kommunisticheskogo truda; opyt Orlovskoi distantsii Moskovskoi dorogi. Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-va putei soobshcheniia, 1961. 60 p. (MIRA 14:7)

(Railroads—Maintenance and repair)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

IVANOV, A.P., master mekhanicheskikh masterskikh, ratsionalizator (Orel)

Efficiency promoters share their practices with the brigades of communist labor. Put' i put.khoz. 4 no.1:14-16 Ja '60. (MIRA 13:5)
(Orel District--Railroads)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

IVANOV, A.P.

Snow removal units with two-way communication systems. Put' i put. khoz. 4 no.9:12-14 S '60. (MIRA 13:9)

1. Master mekhanicheskikh masterskikh, stantsiya Orel, Moskovskoy dorogi.

(Railroads--Communication systems)
(Railroads--Snow protection and removal)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

BABELYAN, V.B.; VINNICHENKO, N.G., kand. ekon. nauk; GNEDASH, G.N.; GRIGOR'YEV, A.N.; DANILOV, N.K.; IVANOV, A.P.; IVLIYEV, Ivan Vasil'yevich; POTAPOV, I.A.; TRUBNIKHIN, M.G., kand.ekon. nauk; TUKHOVITSKAYA, L.K., inzh.; TYVANCHUK, D.P., inzh.; SHERMAN, A.Ya.; SHCHERBAKOV, P.D., inzh.; EVENTOV, G.S.; KRISHTAL', L.I., red.; MAKUNI, Ye.V., tekhn. red.

[Financing in railway transportation; manual] Finansirovanie na zheleznodorozhnom transporte; spravochnik. Pod obshchei red. I.V. Ivlieva. Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-va putei soobshcheniia, 1962. 422 p. (MIRA 15:4)
(Railroads—Finance)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

SHUKHATOVICH, Iosif Moiseyevich; IVANOV, A.P., retsenzent; KOLTUNOVA, M.P., red.; KHITROVA, N.A., tekhn. red.

[Financial planning and accounting in the supply organizations of railroad transportation] Finansovoe planirovanie i uchet v snabzhencheskikh organizatsiiakh zheleznodorozhnogo transporta. Izd.2., dop. i perer. Moskva, Transzheldorizdat, 1963. 387 p. (MIRA 16:4)
(Railroads--Finance)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

IVANOV, A.P., inzh.

Using the UR-1250 diesel hammer for laying the foundations. Transp. stroi. 15 no.7:51-52 Jl '65. (MIRA 18:7)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

SMIRNOVA, Muza Konstantinovna; SOKOLOV, Boris Pavlovich; SIDORIN, Yakov Sergeyevich; IVANOV, Aleksey Pavlovich; VILUNAS, V.P., inzh., retsenzent; KUSKOVA, A.I., red.

[Hull strength of a fiberglass boat] Prochnost' korpusa sudna iz stekloplastika. Pod obshchei red. M.K.Smirnova. Leningrad, Sudostroenie, 1965. 331 p. (MIRA 19:1)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

ACC NR: AP6024428 SOURCE CODE: UR/0362/66/002/007/0721/0728

AUTHOR: Ivanov, A. P.; Khayrullina, A. Ya.

ORG: Physics Institute, Academy of Sciences BSSR (Akademiya nauk BSSR, Institut fiziki)

TITLE: Determination of the extinction coefficient of turbid media

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 2, no. 7, 1966, 721-728

TOPIC TAGS: turbid medium, light scattering, light reflection coefficient

ABSTRACT: This article examines the problem of the effect of scattered light on the effective magnitude of the extinction coefficient as a function of the optical parameters of the medium and angular characteristics of the source and receiver. Tables of errors in the measured values of the extinction coefficient are presented and, by using the data of these tables, it is possible to make recommendations concerning the choice of the measurement instrument under certain conditions when a given accuracy of measurement is required. Milk, an alcoholic solution of rosin, and a solution of polystyrene in acetone diluted with distilled water were used as media having different scattering indicatrices. Bouguer's law was used to determine the extinction coefficient. It was found that the error in determining the extinction coefficient for a milk medium was highest owing to the greater elongation of the indicatrix of refrac-

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ACC NR: AP6024428

tion. Orig. art. has: 2 formulas, 3 tables, and 4 figures.

SUB CODE: 20/ SUBM DATE: 15Jan66/ ORIG REF: 015/ OTH REF: 004

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

MADATOV, Nemayr Mukhtovich; KARNAUKHOV, G.T., red.; IVANOV, A.I., red.

[Underwater repair of ships and other vessels] Podvodnyi remont korablei i sudov. Moskva, Voenizdat, 1965. 279 p. (MIRA 18:9)

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L 4021-66 EWP(e)/EWT(m)/EWP(i) WH

ACCESSION NR: AP5022276 UR/0363/65/001/007/1221/1228 54-114

AUTHOR: Nadgornyy, E. M.; Grigor'yeva, L. F.; Ivanov, A. P.

TITLE: Mechanical properties of synthetic fibrous fluor-amphiboles and certain natural asbestoses

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 7, 1965, 1221-1228

TOPIC TAGS: asbestos, fluoride mineral, fiber crystal

ABSTRACT: Mechanical properties of crocidolite asbestos from an African deposit, anthophyllite asbestos from the Sysert' deposit, chrysotile asbestos from the Bazhenovo deposit, and two types of synthetic fibrous fluor-amphiboles (lithium fluor-amphibole and magnesium fluor-richterite) were investigated. Values of the tensile strength and stress-strain diagrams for fibers of various diameters were obtained for each material. From these diagrams, a qualitative estimate of Young's modulus in the direction of the tension is made. Analytical relations are derived which permit the calculation of the strength of fibers of various diameters. It is found that several mechanical properties of natural asbestoses and synthetic fluor-amphiboles (high tensile strength, dependence of

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strenth on diameter) are identical to the properties of filamentary crystals (whiskers). Certain differences in the mechanical properties of the fibers of these materials are apparently due to structural differences. A possible mechanism of the rupture of fibers of natural asbestoses and synthetic fluor-amphiboles is discussed.
"The authors thank A. V. Stepanov, Doctor of Mathematical Sciences, and A. D. Fedoseyev, Doctor of Technical Sciences, for their joint review of the results."
Orig. art. has: 8 figures, 3 tables, and 5 formulas.

ASSOCIATION: Institut khimii silikatov im. I. V. Grebenshchikova Akademii nauk SSSR (Institute of Silicate Chemistry, Academy of Sciences SSSR)

SUBMITTED: 02Mar65 ENCL: 00 SUB CODE: MT

NO REF SOV: 009 OTHER: 005

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

IVANOV, A.P., kand. med. nauk, podpolkovnik meditsinskoy sluzhby

Some problems in providing medical and sanitary supplies for the Soviet Army during the defense of Sevastopol. Voen.-med.zhur. no.7:90-92 '64. (MIRA 18:5)

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IVANOV, A.P., inzh.

Mechanization and the automatic control of pipe mill production. Met. i gornorud. prom. no.4:27-31 Jl-Ag '63. (MIRA 16:11)

1. Ukrainskiy nauchno-issledovatel'skiy trubnyy institut.

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

EPSHTEYN, Ye.I., inzh.; SMORODINOV, A.N., inzh.; BOCHAROV, D.I., inzh.; BOCHKAREV, G.N., inzh.; Prinimali uchastiye: MURAV'YEV, I.T.; MASLOV, V.I.; LOBANOV, I.I.; IVANOV, A.P.; IVANOV, L.I.

Start of converter substations with mercury-arc rectifiers without sorting and forming of the rectifiers. Prom. energ. 18 no.9:32-35 S '63. (MIRA 16:10)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

GOMEL'SKIY, M.S.; GANICH, P.Ya.; ZEGE, E.P.; IVANOV, A.P.; RUBINOV, A.N.

Use of quartz glass in manufacturing instruments for spectrum analysis. Dokl. AN BSSR 6 no.12:772-776 D '62. (MIRA 16:9)

1. Institut fiziki AN BSSR. Predstavleno akademikom AN BSSR B.I. Stepanovym.

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IVANOV, A.P., inzh.

Experience in building roadbed. Transp. stroi. 14 no.10:11-12 O '64. (MIRA 18:3)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619020005-8

SELYUZHENOK, Yevgeniy Fedorovich; IVANOV, A.P., red.

[Winged vessels; vessels and ships on underwater wings]
Krylatye suda; suda i korabli na podvodnykh kryl'iakh.
Moskva, Voenizdat, 1964. 110 p. (MIRA 17:12)

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1. Rekomendovana kafedroy pochvovedeniya Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova i Zagorskim rayzdravotdelom Moskovskoy oblasti.
(MOSCOW PROVINCE--SOILS--IODINE CONTENT)
(GOITER)

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