83023

Determination of the Recombination Constants   S/181/60/002/008/042/045
and the Depth of the Position of the p-n   B006/B063
Junction From the Spectral Characteristics of Photocells

($J_{s.c.}$ - short-circuit current density, D_p - hole diffusion coefficient in the n-type region, q - electron charge, L_p - diffusion length of the minority carriers in the n-type region, l_n - thickness of the n-type region, L_n - diffusion length of the minority carriers in the p-type region, l_p - thickness of the p-type region, s - rate of surface recombination on the n-type surface, N - quantum flux density). Thus, for example, for $l_n/L_p \rangle 1$:
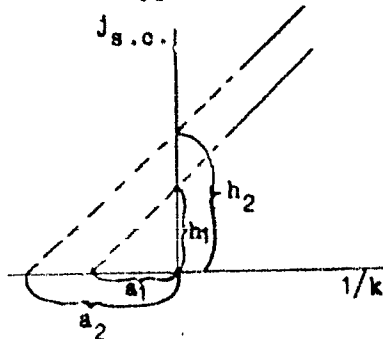
$L_p = (h_1 - h_2)/(h_2/a_2 - h_1/a_1)$, and for $l_n/L_p \langle 1$: $l_n = (h_1 - h_2)/(h_2/a_2 - h_1/a_1)$. If the ratio between the short-circuit current densities of the two wavelengths is denoted by α, the following relation is valid:

Card 2/3

83023

Determination of the Recombination Constants   S/181/60/002/008/042/045
and the Depth of the Position of the p-n   B006/B063
Junction From the Spectral Characteristics of Photocells

$s/D_p = (\alpha - 1)k_1/(1 - \frac{k_1}{k_2}\alpha)$. The above relations for L_p and l_n may also

be given for one wavelength, λ, if the sample has two different values for
s. Here, α' denotes the ratio between the short-circuit current

densities, and $w = (1 + \frac{s_2}{D_p}\frac{1}{k})/(1 + \frac{s_1}{D_p}\frac{1}{k})$.

$l_n/L_p \rangle 1$; $L_p = (1 - \alpha'w)/(\alpha'w\frac{s_1}{D_p} - \frac{s_2}{D_p})$;

$l_n/L_p \langle 1$: $l_n = (1 - \alpha'w)/(\alpha'w\frac{s_1}{D_p} - \frac{s_2}{D_p})$.

There are 1 figure and 3 Soviet references.

ASSOCIATION: Institut poluprovodnikov AN SSSR Leningrad (Institute of
             Semiconductors of the AS USSR, Leningrad)

SUBMITTED: February 3, 1960

Card 3/3

9, 4160

26.2421

23096

S/181/61/003/005/001/042
B101/B214

AUTHOR: Dubrovskiy, G. B.

TITLE: The optical properties of CdTe

PERIODICAL: Fizika tverdogo tela, v. 3, no. 5, 1961, 1305-1309

TEXT: CdTe is considered a promising material for the conversion of solar
energy into electrical and for use as indicators of x-rays and ultra-violet
rays. This was the reason for undertaking the work presented in this paper:
measurement of the absorption and reflection coefficients of CdTe in the
range 0.4-6.0 μ of the refractive index in the vicinity of the limit of the
self-absorption, and of the forbidden band width. A) Absorption coefficient:
The measurements were made on 0.05-2 mm thick plane parallel plates of CdTe
($\alpha = 930$ μv/deg; $\sigma = 4 \cdot 10^{-5}$ ohm^{-1}cm^{-1}), and on layers sputtered on quartz in
vacuum. The x-ray structure analysis confirmed that such layers showed no
deviation from the normal crystal structure of CdTe. The multiple reflec-
tion was taken into account in the range of weak absorption ($k < 50$ cm^{-1}) and
the absorption coefficient was calculated from the equation:

Card 1/9

23096

S/181/61/003/005/001/042
B101/B214

The optical properties ...

$$ k = \frac{\sqrt{\frac{I_0}{I_d}(1-r)^4 + 4r^2} - \frac{I_0}{I_d}(1-r)^2}{2r^2} . \qquad (1), $$

where k = absorption coefficient, I_0 = intensity of the incident light, r = reflection coefficient, I_d = intensity of the light transmitted through the sample, and d = thickness of the sample. For $k > 50$ cm^{-1} this equation goes over in: exp(-kd) = $I_d/I_0(1 - r)^2$ (2). The measurements at $k < 100$ cm^{-1} were made with the help of ЗМР-2 (ZMR-2) monochromator with recorder. In the range $k > 100$ cm^{-1} the monochromatic light beam was once again split up in the ИСП-65 (ISP-65) spectrograph in order to remove the scattered light and to separate the luminescence observed at short waves (maximum at 0.9-1.0 µ). The sources of light were: a 17 v, 170 w tungsten lamp, an ИКР (IKR) pin, or a high-pressure mercury lamp of the type СВДШ-1000 (SVDSh-1000). The transmitted light was measured by a bolometer, PbS photoresistance, Sb - Cs photoelement, or by means of a photographic plate and previously introduced neutral filters (when a two piece spectral apparatus is used). The results are shown in Fig. 1. B) Reflection coefficient:

23096

S/181/61/003/005/001/042
B101/B214

The optical properties ...

This was measured for the same samples. The total reflection was measured
by means of an CФ-2M (SF-2M) spectrophotometer in the range 0.4-0.7 μ, and
the reflected component was measured in the range 0.7-6.0 μ by means of a
7MR-2 monochromator. The results are shown in Fig. 2. C) The refractive
index was measured in the range of transmission by means of a continuously
variable light wave (Fig. 3). It was calculated from the interference effect
by means of the formula 2dn = Nλ, where d = thickness of the sample, n =

refractive index, N = ordinal number of interference. It was found that
n = 3.27 ± 0.05 in the range 1.0-1.3 μ. From the formula $\epsilon = n^2$ the dielec-
tric constant was found to be 10.7 ± 0.3. D) The forbidden band width was
found to be 1.45 ev from the function k = f(hν). The course of the curve
$k^{1/2}$ = f(hν) observed by G. G. Macfarlane and V. Roberts (Ref. 10, see
below) for Ge and Si does not hold for CdTe. As shown in Fig. 4,
$k^{1/2}$ = f(hν) has only one linear part. The curve is distorted for lower k
values, the distortion being explained as due to absorption at impurity
levels. The impurity level was determined by measuring the impurity photo-
emf on the p-n junction formed due to the occurrence of a p-type film in air.

Card 3/9

23096

The optical properties ...

The measurement was made by 1) fusion of indium on the n-type side, and 2) pressing a copper ring on the p-type side, (Fig. 5a). If a metal layer is laid on the exposed side to improve sensitivity, two maxima of the photocurrent are obtained (Fig. 5b). The second maximum at 1.2 ev is explained as being due to the diffusion of the metal into the sample and formation of new impurity centers. The curve of Fig. 5b is obtained after a slight heating of the specimens. The discussion of the data led to the following conclusions: 1) The small photo-emf is due to small thickness of the p-type layer (10^{-5} cm) and low absorption coefficients (< 0.05 cm^{-1}).   2) The maxima of the photo-emf in Fig. 5b correspond to two impurity levels at distances 0.15 ± 0.05 and 0.25 ± 0.05 ev from the bottom of the forbidden band. The level 0.15 ev is explained as due to the absorption of light at the impurity level $V_{\overline{Cd}}$. In order to determine the absorption coefficients as a function of the photo-energy, measurements have to be made in vacuum because a layer deficient in Cd is formed on the surface of the CdTe. Professor Yu. P. Maslakovets is thanked for discussions. There are 5 figures and 13 references: 4 Soviet-bloc and 9 non-Soviet-bloc. The 4 most recent references to English-language publications read as follows:

Card 4/9

The optical properties ...

S/181/61/003/005/C01/042
B101/B214
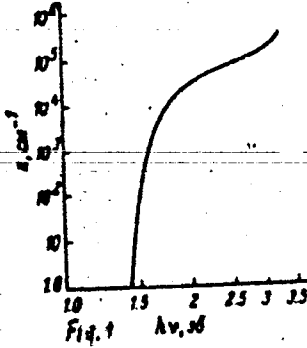
C. O. Macfarlane and V. Roberts, Phys. Rev., 98, 6, 1955; ibid., 97, 6, 1955; R. Braunstein, A. R. Moore, and P. Herman, Phys. Rev. 109, 3, 1958; D. de Nobel, Phylips Res. Rep., 14, 4, 1959.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconductors, AS USSR, Leningrad)

SUBMITTED: November 4, 1960

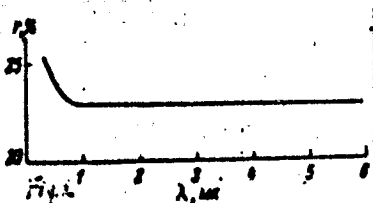Fig. 1: Light absorption coefficient k as a function of hv for CdTe

Fig. 1

Card 5/9

The optical properties ...

Fig. 2: Reflection coefficient
r as a function of the wave-
length
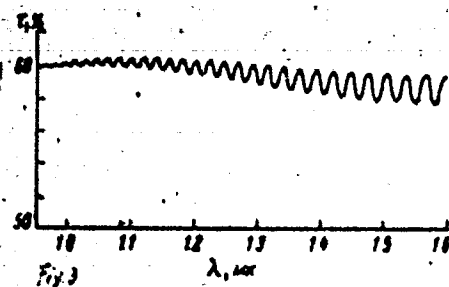

Card 6/9

The optical properties ...

Fig. 3: Interference effect
obtained by measuring the
transmission of light through
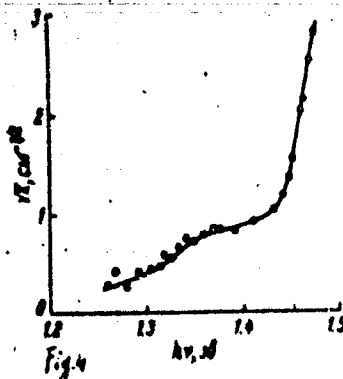a thin sample of CdTe

Fig. 3

Card 7/9

23096

The optical properties ...

S/181/61/003/005/001/042
B101/B214

Fig. 4: $k^{1/2} = f(h\nu)$ for
CdTe

Fig.4

Card 8/9

The optical properties ...

Fig. 5: Photocurrent in
CdTe samples with p-n type
junction as a function of
hν.
Legend: (1) Photocurrent
in relative units

Fig. 5
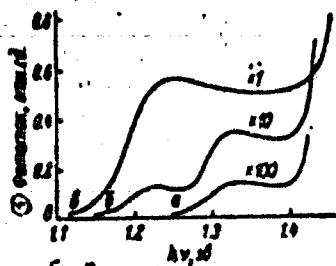
Card 9/9

DUBROVSKIY, G.B.

Methods of spectral characteristics for the determination of basic parameters of photocells with the p-n junction. Zav.lab. 27 no.10:1233-1236 '61.   (MIRA 14:10)

1. Institut poluprovodnikov AN SSSR.
                    (Photoelectric cells—Spectra)

43108
S/181/62/004/011/003/049
B102/B104

AUTHORS: Dubrovskiy, C. B., and Subashiyev, V. K.

TITLE: The effect of high alloying on the selfabsorption edge in
           silicon

PERIODICAL: Fizika tverdogo tela, v. 4, no. 11, 1962, 3018 - 3026

TEXT: Silicon single crystals doped with boron by means of diffusion up to
boron concentrations of $6 \cdot 10^{20} cm^{-3}$, a value close to the solubility limit,
were used to investigate the position of the selfabsorption edge in
dependence on the boron concentration. Specimens 9-13 μ thick, measuring
5.5 mm, were cut from doped crystals of about 1 mm thickness at various
boron concentrations and were then ground. Differences in the concentra-
tion along the surface of these layers were determined: In a layer of
13.5 μ thickness, the concentrations worked out at $7.2 \cdot 10^{19}$ and
$9.4 \cdot 10^{19} cm^{-3}$. The transmission and reflection of monochromatic (0.6-2.0ev)
light were measured by the usual method. All measurements were made at room
temperature, and in some cases down to $-150°C$. Results: Light absorption
Card 1/4

The effect of high ...

S/181/62/004/011/003/049
B102/B104

by free carriers satisfies the law $\alpha_k \sim \lambda^2$. When the hole concentration changes from 10^{13} to 10^{20} cm^{-3} the edge of the fundamental absorption band is shifted by ~ 0.03 ev toward higher energies, i. e., the forbidden band is somewhat broadened. The thermal broadening coefficient of the forbidden band, determined from the curves $\alpha_{self} = f(h\nu)$, was $\sim 4 \cdot 10^{-4}$ ev/°C, which is the same value as for pure Si. The change of the minimum energy occasioned by indirect transmission into doped silicon, ΔE_g may be due to various effects: Fermi degeneracy of the valence band (ΔE_{gf}), action of the Coulomb field of the impurity ions (ΔE_{gc}), changes in the lattice constant (ΔE_{ga}). Evaluations gave: $\Delta E_{gf} \simeq + 0.20$ ev at a hole concentration of $2 \cdot 10^{20}$cm^{-3}; $\Delta E_{ga} \simeq -5 \cdot 10^{-3}$ ev; E_{gc} cannot be evaluated quantitatively but is likely to be positive. An appendix deals with the calculation of the absorption coefficient α from measurements of light transmission and reflection. There are 4 figures.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of
              Semiconductors AS USSR, Leningrad)

Card 2/4

The effect of high ...

SUBMITTED: April 28, 1962

Fig. 1: $\alpha = f(h\nu)$ for $p = 2.10^{20}$ cm^{-3} (1), $1.3 \cdot 10^{20}$ cm^{-3} (2), $9.7 \cdot 10^{19}$ cm^{-3} (3) and $2.8 \cdot 10^{18}$ cm^{-3} (4).

Fig. 4. Silicon band structure ($\Delta \hat{=}$ ev).
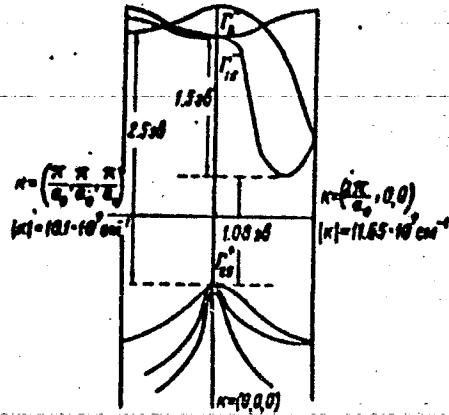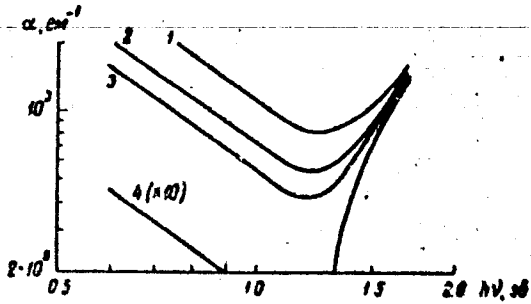
Card 3/4

S/181/63/005/003/041/046
B102/B180

AUTHOR: Dubrovskiy, G. B.

TITLE: Dependence of the forbidden-band width of InP$_x$As$_{1-x}$-compounds on composition

PERIODICAL: Fizika tverdogo tela, v. 5, no. 3, 1963, 954-955

TEXT: E_g the forbidden band width of InP$_x$As$_{1-x}$ with $0 < x < 1.0$ was determined from measurements of the fundamental absorption band edges, by linearly extrapolating the transmission curves (transmission as a function of hν) to 100% transmission (error 0.03 ev). The values obtained for E_g were plotted versus x and E_g was found to increase linearly with x from ~0.4 ev (x=0) to ~1.3 ev (x=1.0). There are 2 figures.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad
              (Institute of Semiconductors AS USSR, Leningrad)

Card 1/2

ACCESSION NO: AP4004857   S/0181/63/005/012/3361/3366

AUTHOR: Dubrovskiy, G. B.

TITLE: Absorption energy spectrum near main band edge in heavily doped Ge and Si

SOURCE: Fizika tverdogo tela, v. 5, no. 12, 1963, 3361-3366

TOPIC TAGS: germanium, silicon, direct transition, absorption edge, main absorption
edge, transition energy spectrum, transition energy, absorption band

ABSTRACT: The edge of the main absorption band in Ge and Si is determined by
indirect transitions of electrons from the valence band to the conduction band.
These transitions take place with change in the wave vector of the electrons, but
scattering at lattice vibrations or impurities may give insufficient impulse to the
electrons. For pure metals the principal mechanism of scattering is clearly
scattering by phonons. In strongly doped specimens there may be a change in the
shape of the band edge because of the increasing role of the impurity mechanism of
scattering and of the Fermi degeneracy of one of the bands. The author has examined
the energy spectra of direct and indirect transitions in strongly doped Ge and Si,
considering the deviation of the law of electron dispersion in the valence band

Card 1/2

ACCESSION NO: AP4004837

(from the quadratic law). For p-type Ge, the displacement of the edge of direct transition, when the valence band is degenerate, is approximately 10 times the Fermi energy of degeneracy. In degenerate n-type Ge, the displacement of the band edge is almost equal to the Fermi energy in the conduction band, since the energy of an electron in the conduction band is almost equal to the energy of a photon in excess of the width of the forbidden band. The author discusses ways of treating experimental data on the edge of the main absorption band which will permit one to determine the energy dependence for the probability of direct transition and the degree of deviation of the valence band from a parabolic form. "The author thanks b. Ya. Moyzhes and V. K. Subashiyev for their numerous useful discussions on this question." Orig. art. has: 4 figures and 20 formulas.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconductors AN SSSR)

SUBMITTED: 11May63   DATE ACQ: 03Jan64   ENCL: 00

SUB CODE: PH   NO REF SOV: 003   .   OTHER: 009

Card 2/2

ACCESSION NR: AP4013515   S/0181/64/006/002/0512/0514

AUTHORS: Subashiyev, V. K.; Dubrovskiy, G. B.

TITLE: Quantum yield of the internal photoelectric effect in highly doped semiconductors

SOURCE: Fizika tverdogo tela, v. 6, no. 2, 1964, 512-514

TOPIC TAGS: quantum yield, photoelectric effect, photoactive absorption, nonphotoactive absorption, current carrier absorption

ABSTRACT: In some frequency range immediately next the edge of the principal absorption band, a continuous change in quantum yield is observed, from 0 to 1. This range narrows as temperature declines. If electrons are excited from the valence band to the conduction band by a single mechanism of light absorption, then at absolute zero the energy dependence of the quantum yield should exhibit a clear "step" at $h\nu = E_g$. It is shown that when nonphotoactive absorption is present, the quantum yield is expressed by the coefficients of absorption in the following form: $\beta = \dfrac{a_p}{a_p + a_n}$, where a_p and a_n are the coefficients of photo-

Card 1/2

ACCESSION NR: AP4013515

active and nonphotoactive absorption, respectively. It has been found that through a wide spectral range the coefficient of nonphotoactive absorption may be equal to or even considerably larger than that of photoactive absorption, and this, of course, leads to a decrease in quantum yield. In highly doped materials, the principal mechanism of nonphotoactive absorption is absorption by free current carriers. "The authors express their sincere thanks to N. S. Zhdanovich for his great aid in treating the experimental data and in making computations." Orig. art. has: 4 figures and 6 formulas.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconductors AN SSSR)

SUBMITTED: 30Aug63   DATE ACQ: 03Mar64   ENCL: 00

SUB CODE: OP,EC   NO REF SOV: 003   OTHER: 005

Card 2/2

ACCESSION NR: AP4028433   S/0181/64/006/004/1078/1081

AUTHORS: Subashiyev, V. K.; Dubrovskiy, O. B.; Kukharskiy, A. A.

TITLE: Determining the optical constants and concentrations of free current
carriers in strongly doped semiconducting materials by the reflection coefficient

SOURCE: Fizika tverdogo tela, v. 6, no. 4, 1964, 1078-1081

TOPIC TAGS: optical constant, current carrier, doped semiconductor, reflection
coefficient

ABSTRACT: The authors describe a method of determining the indices of refraction,
absorption, and concentration of free current carriers in semiconducting materials
by the spectral behavior of the reflection coefficient of nonpolarized light at
normal incidence. Beginning with the ordinary relations of reflection, refraction,
and absorption for normal incidence, the authors express the effective part of the
dielectric constant by refractive index and absorption coefficient. It follows the
the difference in dielectric constant (for pure and doped semiconductor) depends
linearly on the square of the wavelength. A graph may be drawn of this dependence
for standard samples with various carrier concentrations. The slope of this curve

Card 1/3

ACCESSION NR: AP4028433

is determined and extrapolated through a wide range of frequencies, thus
extrapolating the values of dielectric constant. This permits determination of
refractive index and absorption coefficient. Experimental tests were made on Si,
and the indices of refraction and absorption were found to exhibit spectral depend-
ence in the infrared region on the edge of intrinsic absorption. The authors
conclude that the method proposed is especially effective for small, highly doped
samples and also for rods with epitaxial films and p-n structures. A drop in
refractive index is observed with decrease in wave length, and this is due to
excitation of plasma vibrations in the electron gas. The natural frequencies of
these vibrations are proportional to the square root of the carrier concentration.
Thus, by determining the frequency from the behavior of the reflection coefficient
(according to wavelength), the carrier concentration can be determined. Orig. art
has: 4 figures and 9 formulas.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconduc-
tors AN SSSR)

SUBMITTED: 16oct63   DATE ACQ: 27Apr64   ENCL: 00

Card 2/3

ACCESSION NR: AP4028433

SUB CODE: EC, SS   NO REF SOV: 003   OTHER: 009

Card 3/3

ACCESSION NR: AP4034905   S/0181/64/006/005/1303/1310

AUTHORS: Subashiyev, V. K.; Dubrovskiy, O. B.

TITLE: Indirect transitions and structure of the valence band of silicon

SOURCE: Fizika tverdogo tela, v. 6, no. 5, 1964, 1303-1310

TOPIC TAGS: valence band, silicon, SF 4 spectrophotometer, fundamental absorption, parabolic band

ABSTRACT: The authors have measured the absorption near the edge of the fundamental absorption band in homogeneous single crystals of silicon obtained from melts with concentrations of B and P ranging from 10^{18} to $2.2 \cdot 10^{19}$ cm^{-3}. The spectral dependence of the absorption coefficient was measured for both n-type and p-type Si. It was found that the frequency dependence of free carriers in p-type Si follows the, law $\alpha \sim \nu^{-2}$, as is true of most semiconductors. All investigated samples of n-type Si, in the range from 0.8 ev to the edge of fundamental absorption, exhibited a dependence of $\alpha \sim \nu^{-m}$, where $m = 3.45 \pm 0.02$. On the basis of a parabolic band, a deviation was found between the frequency dependence of fundamental absorption and the calculated absorption. If a variable effective mass is accepted for the

Card 1/2

ACCESSION NR: AP4034905

valence band of Si, depending on energy, the density of state in the nonparabolic band defined by this mass is equal to the density of state at the given energy in the parabolic band, with a mass equal to the variable mass at this point. As a first approximation, it may be said that the effective mass of the valence band in silica increases with energy only by change in the mass of light holes. "The authors thank B. Ya. Moyzhes for numerous useful discussions concerning this paper." Orig. art. has: 7 figures.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconductors AN SSSR)

SUBMITTED: 08Oct63   ENCL: 00

SUB CODE: SS   NO REF SOV: 004

                                                                        OTHER: 010

Card 2/2

DUBROVSKIY, G.V.

Two-term approximation in the theory of slow collisions of heavy
particles. Vest. LGU 18 no.10:16-23 '63.   (MIRA 16:8)
                    (Collisions (Nuclear physics))

ACCESSION NR: AP4041829   S/0054/64/000/002/0005/0010

AUTHOR: Dubrovskiy, G. V.

TITLE: Adiabatic approximation in the collision theory

SOURCE: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii,
no. 2, 1964, 5-10

TOPIC TAGS: collision theory, heavy particle, slow collision, adiaba-
tic approximation, transition probability

ABSTRACT: Inelastic processes in slow collisions of heavy part-
icles are usually described by adiabatic approximation. In a
previous work (ZhTF 46, 861 (1964)), the author found the function
characteristic of the probability of transitions for the case of two
levels. In the present work, the fundamental matrix and the general
solution of the vector equation for the interaction of h levels is
constructed. The probabilities for nonadiabatic transitions are
obtained from the phase integral method. The results are illustrated
for the case of two pseudocrossing levels. "The author is grateful
to Yu. D. Demkov and G.F. Drukarev for discussions." Orig. art. has:
2 figures and 34 equations
Card 1/2

ACCESSION NR: AP4041829

ASSOCIATION: None

SUBMITTED: 29Dec63

SUB CODE: NP

NR REF SOV: 004

ENCL: 00

OTHER: 001

Card 2/2

ACCESSION NR: AP4025919   S/0056/64/046/003/0863/0871

AUTHOR: Dubrovskiy, G. V.

TITLE: Nonadiabatic transitions in slow collisions between heavy particles

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 46, no. 3, 1964, 863-871

TOPIC TAGS: nonadiabatic transition, heavy particle collision, slow collision, Landau Zener theory, frequency dependence, analytic properties, parametric method, pseudointersection of levels, transition probability, frequency minimum, inelastic transition cross section, wave method, adiabatic solution, two term approximation, superbarrier reflection

ABSTRACT: In view of the strong dependence of the Landau-Zener theory and its various refinements on the analytic properties of the

Card 1/3

ACCESSION NR: AP4025919

interaction and the frequency, the author solves the parametric equa-
tions for slow collisions between heavy particles in the presence of
a point of pseudointersection of the levels by expanding the solu-
tion in powers of the velocity of the colliding particles. The end
purpose is to obtain formulas that are applicable to specific prob-
lems and are less dependent on the analytic properties of the inter-
action and the frequency. Asymptotic integration of the differential
equation is used to determine the probability of the transitions in
the presence of a frequency minimum, and a formula is derived which
is a generalization of the presently known results on the theory of
pseudointersection and is free of their shortcomings. The method
is suitable for the investigation of the influence of other singu-
larities of the interaction and of the frequency ω on the cross sec-
tions of different inelastic transitions in the adiabatic region.
The character of the obtained adiabatic solutions makes it possible
to trace more fully the connection between the parametric method and
the wave method to ascertain the degree to which the two-term ap-

Card   2/3

ACCESSION NR: AP4025919

proximation is connected with the problem of superbarrier reflection,
and to determine the characteristic features of symmetrical reso-
nance. "I take the opportunity to thank Yu. N. Demkov for a dis-
cussion of the work." Orig. art. has: 49 formulas.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet' (Leningrad
State University)

SUBMITTED: 01Jun63   DATE ACQ: 16Apr64   ENCL: 00

SUB CODE: PH   NO REF SOV: 008   OTHER: 008

Card 3/3

ACCESSION NR: AP4043642   8/0056/64/047/002/0644/0648

AUTHOR: Dubrovskiy, G. V.

TITLE: Charge exchange of multiply charged ions

SOURCE: Zh. eksper. i teor. fiz., v. 47, no. 2, 1964, 644-648

TOPIC TAGS: charge exchange, interaction cross section, ion transfer

ABSTRACT: The results previously obtained by the author (ZhETF, v. 46, 863, 1964) concerning the theory of pseudointersection of the potential-energy curve are used to derive more accurate formulas for the cross sections for the charge exchange of multiply charged ions in the reaction.

$$A^{n+} + B \rightarrow A^{(n-1)+} + B^{+} + \Delta E \qquad (1)$$

The derivation takes into account the dependence of the matrix ele-

Card   1/2

ACCESSION NR: AP4043642

ment of the interaction on the time and the fact that the terms do not diverge at infinity. Comparison with the experimental data shows good agreement between the theory and experiment over a wide interval of variation of the parameters of the problem. Some further possible developments of the theory are considered. "The author thanks Yu. P. Korostin and I. N. Gagarina for help with the numerical calculations, and academician V. A. Fok, Yu. N. Demkov, and G. F. Drukarev for a discussion of the work." Orig. art. has: 1 figure and 15 formulas.

ASSOCIATION: Leningradskiy gosudarstvenny*y universitet (Leningrad State University)

SUBMITTED: 24Feb64   ENCL: 00

SUB CODE: NP   NR REF SOV: 008   OTHER: 007

Card 2/2

... of the quantum theory of ... ... with dissociation

Universitet. Vestnik, ...

... Rampling, ...
... atomic molecule, ...

... ...

EXCL: 00

OTHER:

DUBROVSKIY, G.V.; OB"YEDKOV, V.D.

Electron capture by alkali metal ions scattered on atoms of
inert gases. Zhur.eksp. i teor.fiz. 49 no.6:1850-1857 D '65.
                                              (MIRA 19:1)
1. Leningradskiy gosudarstvennyy universitet. Submitted June 21,
1965.

ACC NR: AP0002727   SOURCE CODE: UR/0056/65/049/006/1850/1857

ORG: Leningrad State University (Leningradskiy gosudarstvenny universitet)

ACC NR: AP6002727

ACC NR: AT6013485   UR/0120/66/000/002/0005/0012

AUTHOR: Dubrovskiy, I.A.

ORG: Moscow Engineering-Physical Institute (Moskovskiy inzhenerno-fizicheskiy institut)

TITLE: Wide band and pulse transistor amplifiers of the nanosecond range (a review)

SOURCE: Pribory i tekhnika eksperimenta, no. 2, 1966, 5-12

TOPIC TAGS: electronic amplifier, pulse amplifier, wide band amplifier, transistor amplifier, nanosecond range amplifier

ABSTRACT: The author reviews transistorized wide band and pulse amplifiers with an upper cutoff frequency over 100 megacycles, capable of high gain faithful amplification of pulses with a rise time of not over a few nanoseconds. Methods for enhancing amplifier gain are reviewed. An analysis of lumped parameter and of distributed amplification circuits follows. The capability of modern transistor circuits to attain wide band amplification without the complicated correction circuitry of tube amplifiers is noted. Orig. art. has: 13 figures, 2 formulas, 2 tables.

SUB CODE: 09   SUBM DATE: 10Jun65   ORIG REF: 012   OTH REF: 030

Card 1/1   UDC: 621.375.4

ACC NR: AP7001533   SOURCE CODE: UR/0108/66/021/012/0012/0018

AUTHOR: Dubrovskiy, I. A. (Active member of society)

ORG: Scientific and Technical Society of Radio Engineering and Electro-
communication im. A. S. Popov (Nauchno-tekhnicheskoye obshchestvo
radiotekhniki i elektrosvyazi)

TITLE: High-frequency inductive compensation of tunnel-diode RC-amplifiers

SOURCE: Radiotekhnika, v. 21, no. 12, 1966, 12-18

TOPIC TAGS: tunnel diode, rf amplifier, electronic amplifier

ABSTRACT: A simple single-stage parallel-circuit tunnel-diode amplifier is used
as an example demonstrating the efficiency of inductive compensation of the
amplifier's frequency and transient characteristics. The compensating inductance
is made up of stray inductances of the tunnel diode and associated connections. It

Card 1/2   UDC: 621.375.4

ACC NR: AP7001533

is found that: (1) The compensating inductance raises the upper cutoff frequency
by 2—5 times without impairing the monotonous shape of the frequency
characteristic; (2) Further increase of the inductance results in a humped
characteristic with but a small (< 20%) cutoff frequency rise; (3) The compen-
sating inductance shortens the front rise time to 1/2—1/4 without impairing the
monotonous shape of the transient characteristic; (4) Further increase of the
inductance, with a first spike of 10% or less, permits a further shortening of the
rise time by 50%. An experimental verification involved two amplifiers designed
with Soviet-made type-217 tunnel diodes operated at frequencies up to 17 Mc.
"The author wishes to thank Engineer I. I. Shagurin for an experimental verifica-
tion, and Technician R. Ya. Khusainova for plotting the curves." Orig. art. has:
5 figures, 30 formulas, and 4 tables.

SUB CODE: 09 / SUBM DATE: 30Nov64 / ORIG REF: 006

Card 2/2

DUBROVSKIY, I.A.

Design of a two-stage pulse amplifier with complex
feedback. Izv. vys. ucheb. zav.; radiotekh. 5
no.3:381-387 My-Je '62.   (MIRA 15:9)

1. Rekomendovana kafedroy elektroniki Moskovskogo
inzhenerno-fizicheskogo instituta.
                    (Amplifiers (Electronics))
                    (Amplifiers, Electron tube)

ACCESSION NR: AP4042895   S/0108/64/019/007/0069/0075

AUTHOR: Dubrovskiy, I. A. (Active member)

TITLE: Nonlinearity of the output voltage waveshape in transistorized saw-toothed oscillators

SOURCE: Radiotekhnika, v. 19, no. 7, 1964, 69-75

TOPIC TAGS: transistor, transistorized oscillator, saw toothed oscillator

ABSTRACT: The effect of the operating mode of a transistor on its parameters and, further, on the linearity of the output voltage shape in saw-toothed oscillators is theoretically analyzed for these three oscillator types: (1) with a current-stabilizing transistor, (2) with an emitter repeater, and (3) with a capacitive feedback. These conclusions are offered: (1) Shortening the working period by reducing the capacitance of the main charge-discharge capacitor (C_0) results in an essential impairment of the output voltage waveshape due to

Card 1/2

ACCESSION NR: AP4042895

nonlinear capacitances of the junctions; (2) To avoid the above phenomenon, the capacitance C_0 should be selected from this inequality $C_0 \geqslant (500 \div 1000)(C_{\kappa 1} \varepsilon_\kappa + C_{\kappa 1} \varepsilon_\kappa)$ for the current-stabilizing-transistor circuit or from $C_0 \geqslant (500 \div 1000) C_{\kappa 1} \varepsilon_\kappa$ for the two other schemes. "In conclusion, the author wishes to thank T. M. Agakhanyan under whose guidance the project has been carried out." Orig. art. has: 7 figures and 18 formulas.

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi (Scientific and Technical Society of Radio Engineering and Electrocommunication)

SUBMITTED: 05Jul62   ENCL: 00

SUB CODE: EO.   NO REF SOV: 010   OTHER: 005

Card 2/2

GR   AP5009818   UR/0106   4 0092
                               621.375.4   //

Jurovskiy, I. A.; Shagurin, I. I.

ation of the gain in tunnel-diode single-stag   at medium

atroavyaz', no. 3, 1965, 47-52

amplifier, tunnel diode amplifier   er

ries-circuit and parallel-circuit   s are
investigated. The effects of the following   amplifier
(a) positive- and negative-resista   negative-
perature dependence; (c) negative-res   due to
he operating point when the bias-voltag   The tunnel
as an active two-pole network   the
are neglected. These findings are   e effect of

NR   AP5009818

...b...is higher for higher gains...
...for lower ratios R_2/R_1, where R...
...generator and load, respectively...
...the series amplifier is recommended...
...(4) The parallel amplifier has a...
...gain variation in the parallel amplifier...
...insertion. (5) Tunnel-diode amplifiers...
...negative-resistance spread would...
...and 22 formulas.

...all three
...resistances of
...resistance
...resistance
...than the
...of the type
...resistors
Orig. art.

...none

18 Dec 63   ENCL: 00   SUB...EC

...3   OTHER: 001

NR   AP5004421

2

...rmulas are based on the nonlinear...
...which is a fundamental source of ... ...also, the
...icient K_f shows that positive ... ...are not
...vantages of this definition are ... ...of analysis
...transistorized stage. Some sup... ...P15
...ted to prove the validity of the ...
...e author wishes to thank I. P. Ste... ...work,
...akhanyan for his valuable comments ... ...manuscript."
...: 3 figures, 12 formulas, and 1 table.

DUBROVSKIY, I.F., inzh.

Some problems in the specialization of the repairing of machine tools and forging and pressing machines. Vest. mashinostr. 45 no.8:75-76 Ag '65.

(MIRA 18:12)

DUBROVA, P.F., kand. sel'khoz. nauk; DUBROVSKIY, I.I., red.; POPOV, V.N., tekhn. red.

[Manual for the fruit grower] Sputnik sadovoda. Tambov, Tambovskoe knizhnoe izd-vo, 1960. 478 p. (MIRA 15:1)
(Fruit culture)

DUBROVSKIY, I.A.; SHAGURIN, I.I.

Instability of the amplification coefficient of single-stage
tunnel diode amplifiers in the midfrequency region. Elektrosvyaz',
19 no.3:47-52 Mr '65.   (MIRA 18:5)

BAKHAREV, A.N., nauchnyy sotr.; DOBRINSKIY, N.Ya., nauchnyy sotr.;
    STEPANOV, P.A., nauchnyy sotr.; DUBROVSKIY, I.I., red.;
    RACHKOV, P.A., tekhn. red.

[In the orchards and laboratories of Michurinsk]V sadakh i
laboratoriiakh Michurinska. Tambov, Tambovskoe knizhnoe izd-
vo, 1961. 158 p.   (MIRA 15:9)

1. TSentral'naya geneticheskaya laboratoriya im. I.V.Michurina
(for Bakharev, Dobrinskiy). 2. Nauchno-issledovatel'skiy in-
stitut sadovodstva im. I.V.Michurina (for Stepanov).
   (Michurin, Ivan Vladimirovich, 1855-1935)
(Michurinsk—Fruit culture—Research)

MATROSOV, Ivan Pavlovich; DUBROVSKIY, I.I., red.; POPOV, V.N.,
tekhn. red.

[The time of great achievements]Vremia bol'shikh sversheni1.
Tambov, Tambovskoe knizhnoe izd-vo, 1961. 25 p. (MIRA 16:3)

1. Predsedatel' kolkhoza "Udarnik" Morshanskogo rayona (for
Matrosov).
    (Morshansk District--Collective farms--Management)

DUBROVSKIY, Ivan Ivanovich; CHERNYAK, R.I., red.; POPOV, V.N.,
tekhn. red.

Mariia Dmitrievna Trunova. Tambov, Tambovskoe knizhnoe izd-vo,
1960. 28 p.   (MIRA 16:3)
          (Trunova, Mariia Dmitrievna)
(Pervomaiskiy District (Tambov Province))—Stock and stockbreeding)

DUBROVSKIY, I.M.

On the theory of condensation, the critical point, and the meta-
stable state. Ukr.fiz.zhur. 7 no.7:724-732 Jl '62.

(MIRA 15:12)

(Condensation)   (Critical point)

MARTYNOVA, O.I., doktor tekhn.nauk, prof.; KATKOVSKAYA, K.Ya., kand.tekhn.nauk;
FEODOSEYCHUK, T.A., insh.; VAYNEYKIS, A.A., insh., dissertant;
DUBROVSKIY, I.Ya., insh.

Transition of ammonia from water solutions to saturated steam.
Teploenergetika 12 no.10:75-79 O '65.   (MIRA 18:10)

1. Moskovskiy energeticheskiy institut.

DUBROVSKIY I.Ya

METRIK, B.A., inzhener; MAKEYEV, P.V., inzhener; DUBROVSKIY, I.Ya.

Efficient scheme for supplying steam to plants of the
rubber industry. Prom.energ. 12 no.9:15-17 S '57.   (MIRA 10:10)
              (Steam engineering)

DUBROVSKIY I.Ya

STYRIKOVICH, M.A.; MARTYNOVA, O.I.; KATKOVSKAYA, K.Ya.; DUBROVSKIY, I.Ya.;
    MINCULINA, E.I.

Investigating the distribution of aluminum hydroxide in water and
saturated water vapor. Atom. energ. 15 no.2:161-163 Ag '63.
                                                    (MIRA 16:8)
            (Nuclear reactors)   (Aluminum hydroxide)

STYRIKOVICH, M. A.; MARTYNOVA, O. I.; KATKOVSKAYA, K. Ya.; DUBROVSKIY, I. Ya.;
    SMIRNOVA, I. N.

    Transition of iodine from aqueous solutions into saturated steam.
    Atom. energ. 17 no.1:45-49 Jl '64.   (MIRA 17:7)

DUBROVSKIY, I.Ye., kand. tekhn. nauk; MIGAI, V.K., kand. tekhn. nauk;
NAZARENKO, V.S., inzh.

Method for the thermal calculation of regenerative air pre-
heaters of boiler units. Energomashinostroenie 9 no.3:47-48
Mr'63.
                                              (MIRA 17:5)

Ferensta, V. A.; Vishnyak, Ya. B.; Dub... ...
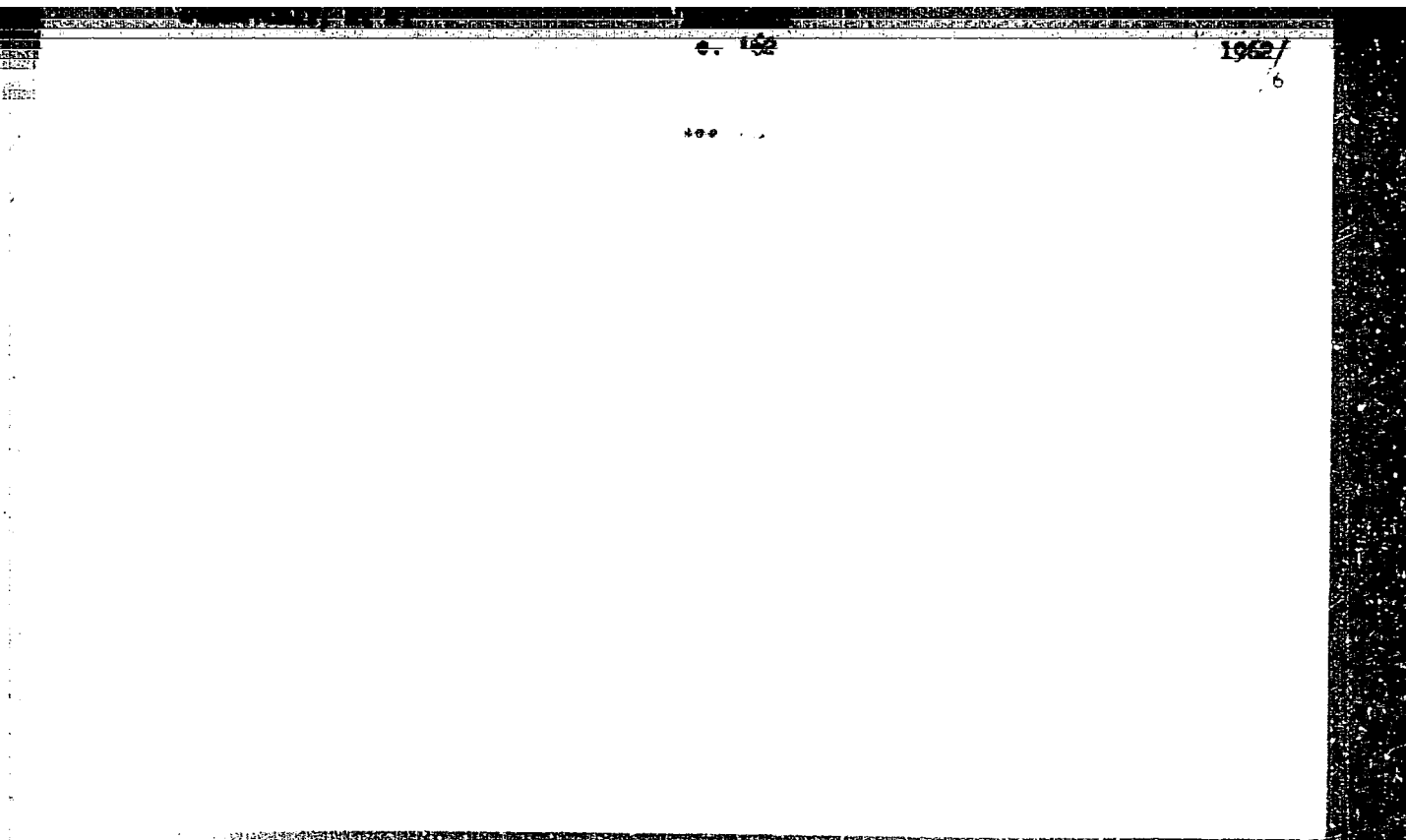
DUBROVSKII, Konstantin Vladimirovich.

DUBROVSKII, Konstantin Vladimirovich.   V strane snegov i zolota. IAkutskaia Avtonomnaia
Respuhlika, ee nastoiashchee, proshloe i buduahchee. Moskwa, Gosizdat, 1927. 48 p.
                                                            DLC: Unclass

So: LC, Soviet Geography, Part II, 1951/Unclassified.

KNIGIN, P.I.; DUBROVSKIY, L.A.

Operation of silicon photocells in the case of large fluxes of
solar energy. Izv. AN Uz. SSR. Ser. fiz.-mat. nauk 6 no.3:
39-44 '62.   (MIRA 15:8)

1. Fiziko-tekhnicheskiy institut AN UzSSR.
                              (Photoelectric cells)

DUBROVSKIY, L.A.; KNIGIN, P.I.

Optimum operating conditions for silicon phototubes in case of large luminous fluxes. Izv. AN Uz. SSR. Ser. fiz.-mat. nauk 6 no.4:57-61 '62.   (MIRA 15:9)

1. Fiziko-tekhnicheskiy institut AN UzSSR.
                              (Photoelectric cells)

DUBROVSKIY, L.A.; MEL'NIK, V.G.; ODYNETS, L.L.

Anodic oxidation of silicon in pure water. Zhur.fiz.khim. 36
no.10:2199-2204 O '62.   (MIRA 17:4)

1. Petrozavodskiy gosudarstvennyy universitet.

... thin film, diode s'...
... are current characteristic...

... was undertaken because ... ... the
... especially in a direction ... ...
... in high-resistance films ... ... in
... development of theory of sp... ... die-
... idea that an investigation of ... ... na can
... information and is also of in... ... experiments
... specially prepared film-type ... ... ing

... of 5×10^{-5} mm Hg at a substra... ... The con-
... evaporation in vacuum using Au, In, ... assembly of
... lower electrode, prepared ... ... ad, as

... ...

... The voltage ... ... ained
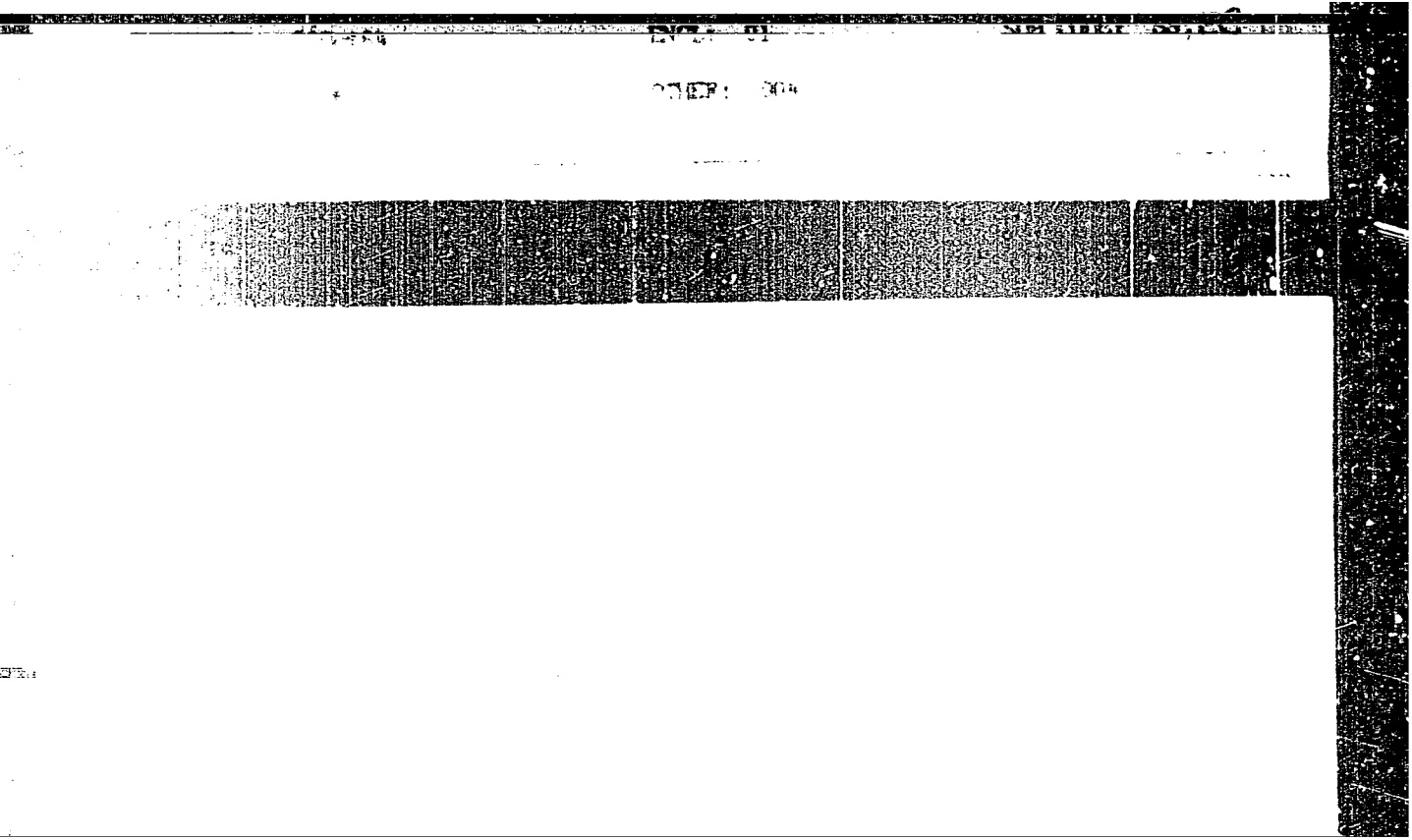
24(5)

AUTHORS: Wang Kang-Ch'ang, Wang Ts'u-Tseng,   SOV/56-35-4-10/52
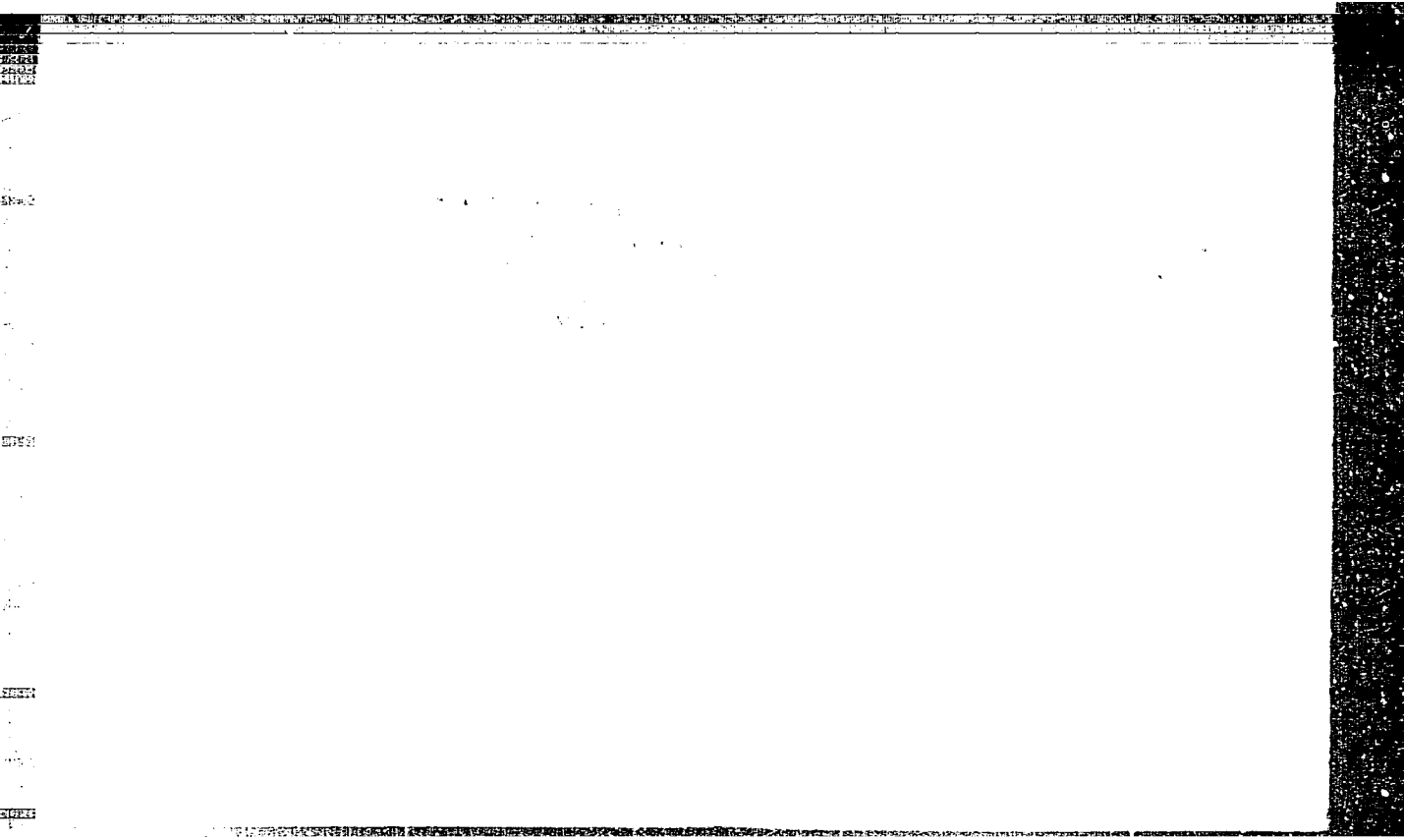   Ting Ta-ts'ao, Dubrovskiy, L. N., Kladnitskaya, Ye. N.,
             Solov'yev, M. I.

TITLE: Investigation of the Interaction of π^+ Mesons With Carbon
             at Energies of 250 - 270 MeV With the Help of a Propane Bubble
             Chamber (Izucheniye vzaimodeystviy π^+-mezonov s uglerodom pri
             energiyakh 250 - 270 MeV s pomoshch'yu puzyr'kovoy propanovoy
             kamery)

ABSTRACT: The interaction between pions and nuclei (especially C) has
             already been investigated by a number of papers for $E_\pi < 200$ MeV
             (Refs 1-4) and for $E_\pi > 200$ MeV (Refs 5-7) partly carried out
             by means of a cloud chamber and partly by means of scintillation
             counters. The authors of the present paper investigated the
             π^+-C-interaction in a propane bubble chamber, which was
             subjected to the action of a pion beam of the synchrocyclotron
             of the Ob"yedinennyy institut yadernykh issledovaniy (United
Card 1/4   Institute for Nuclear Research). The experimental arrangement

Investigation of the Interaction of π^+ Mesons   SOV/56-35-4-10/52
With Carbon at Energies of 250 - 270 MeV With the Help of a Propane Bubble
Chamber

is described and shown by figure 1 . Experimental results:
1.) Elastic π^+-C scattering: for $10°\leq\theta\leq70°$ the cross section
$\sigma_{elast.}$ = (176 ± 16)mb is obtained. For the scattering
nucleus the absorption coefficient is $K = 0.54 \cdot 10^{13}$cm^{-1} and
$V = 30$ MeV, $R = 3.2 \cdot 10^{-13}$cm. The dependence $d\sigma/d\Omega(\theta)$ is
shown (Fig 2). For $45°<\varphi<135°$ (isotropic distribution)
$\sigma_{elast.}$ = (192 ± 18.5)mb, which agrees well with the
diffraction scattering cross section for the above V- and K-
values. 2.) Inelastic π^+-D-scattering: Reaction: $\pi^+ + C \rightarrow \pi^+ +$
(N beams)(N=0,1,2...6), $\sigma_{inelast.}$ = (120^{+38}_{-19})mb.

A table shows the number of stars arranged according to the
number of beams (separately for stars with and without mesons).

Card 2/4

Investigation of the Interaction of π^+ Mesons   SOV/56-35-4-10/52
With Carbon at Energies of 250 - 270 MeV With the Help of a Propane Bubble
Chamber

3.) Absorption of π^+ mesons in carbon and charge exchange:

For meson-free stars cross section $\sigma = \sigma_a + \sigma_o = (165^{+34}_{-22})$mb,

where σ_a denotes the absorption cross section σ_o-charge

exchange cross section. Table 2 shows the distribution of the
number of beams in the stars for meson-free stars, in which
connection experimental and theoretical data are compared;

figure 5 shows the energy dependence of $\sigma_a/\sigma_{nucleus}$ for pions.

4.) Total inelastic cross section of π^+-C interaction :

$\sigma_{inelast} = (296^{+38}_{-19})$mb. The authors finally thank Professor

V. P. Dzhelepov who made it possible for them to work at the
Laboratoriya yadernykh problem (Laboratory for Nuclear Problems),
and they also expressed their gratitude to R. M. Sulyayev ,
Yu. A. Shcherbakov, A. I. Filippov, and L. B. Parfenov for
their aid in carrying out experiments, and they also thank the

Card 3/4

Investigation of the Interaction of π^+ Mesons   SOV/56-35-4-10/52
With Carbon at Energies of 250 - 270 MeV With the Help of a Propane Bubble
Chamber

> group of laboratory workers under the supervision of
> I, A. Ivanovskaya for their assistance in utilizing results.
> There are 5 figures, 2 tables, and 24 references, 12 of which
> are Soviet.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy
              (United Institute for Nuclear Research)

SUBMITTED: May 5, 1958

Card 4/4

ACCESSION NR: AT4031807   S/2914/62/000/079/0003/0031

AUTHOR: Dubrovskiy, M. I.; Chernyayev, R. N. (Candidate of technical sciences);
Shchegolev, V. I.

TITLE: The harbor radar station "Raskat" harbor radar stations-a new aid to safe
investigation in harbor approaches.

SOURCE: Leningrad. Tsentral'ny*y nauchno-issledovatel'skiy Institut morskogo flota.
Informatsionny*y sbornik, no. 79, 1962. Sudovozhdeniye i svyaz' (Navigation and com-
munications), no. 20, 3-31

TOPIC TAGS: harbor radar, harbor radar station, radar, radar station, navigation aid,
harbor approach, ship radar, navigation radar

ABSTRACT: The first experimental harbor radar station, "Raskat", was installed in
Leningrad harbor in 1961. The location of the station and sector coverage (each on a
separate display) of the 100-meter-wide open channel is shown in Figure 1 of the Enclo-
sure. In the present paper, the basic radar parameters of "Raskat" are compared with
the parameters of some harbor radars manufactured in Western Europe. The main sub-
systems of "Raskat" are: 1) Antenna and waveguide system, including: a) parabolic
cylinder dish with pancake feed; b) drive mechanism with motor and synchro system; c)
waveguide system elements (phase shifter, measuring device for control of transmitter

Card   1/4

ACCESSION NR: AT4031807

parameteri . ferrite valve-switch, bidirectional coupler, channel commutator, output power measuring device). 2) Transmitter system, consisting of two identical transmitters with magnetron oscillators, modulators and associated control circuits. 3) Receiver system, including: a) two identical receivers with RF amplifiers, AFC circuits, mixer sections, rectifiers, etc. (separate console); b) two sets of amplifiers with IF cascades (6 in each set) and detectors (separate console); c) two sets of sensitivity control circuits placed in the same console with transmitted power measuring device; d) system selector and interface circuits. 4) Display distribution panel. 5) Control console. 6) PPI with scales of 2, 5, 10 and 25 miles. Equipped with stationary and movable range markers and variable sweep. 7) Sector display indicator (A station can have up to 6 indicators) with maximum observation interval of 6.5 miles. 8) Generator of electronic markers of channel axis (360 markers, spaced at a minimum of 0.5 degrees in angle, angular stability 6', range stability 15 miles). 9) Main power panel. 10) Display system power panel. 11) Transmitter-receiver system power panel. 12) Power panel for UHF radio stations. 13) Voltage rectifier VSA-5. 14) Two power supplies ALA-7M. 15) Two voltage stabilizers SN-5. 16) Two UHF communication systems.

Card   2/4

ACCESSION NR: AT4031807

A functional description of the main radar subsystems is given. The overall design is sufficiently flexible so that it could be installed in any harbor. Orig. art. has: 13 figures and 3 tables.

ASSOCIATION: Tsentral'ny*y nauchno-issledovatel'skiy institut morskogo flota, Leningrad (Central Naval Scientific Research Institute)

SUBMITTED: 00   DATE ACQ: 06May64   ENCL: 01

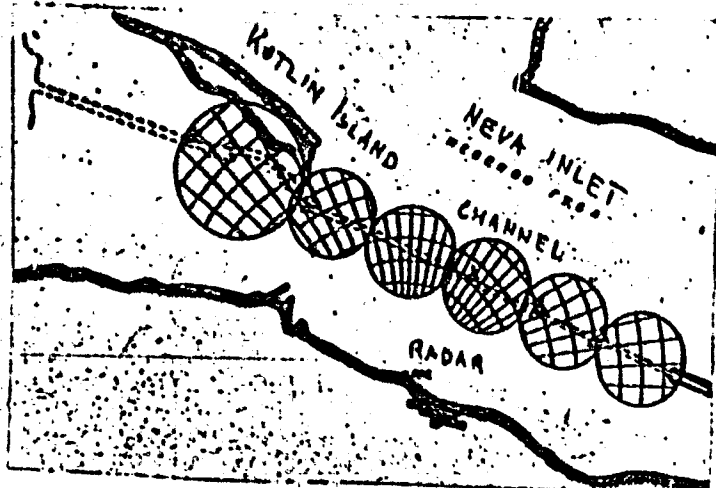SUB CODE: EC, NG   NO REF SOV: 000   OTHER: 000

Card   3/4

Fig. 1 – Approach to Leningrad Port and Radar Sector Coverage

Card 4/4

PALAGIN, A.; CHATSKIY, O.; ALEKSEYEV, A.; GLUZ, I.S.; ZABLOTSKIY, R.V.; DUBROVSKIY, M.A.

In honor of the 21st Congress of the CPSU. Kons. i ov. prom. 14 no.1:4-7 Ja '59.   (MIRA 12:1)

1.Direktor Odesskogo konservnogo kombinata (for Palagin). 2.Predsedatel' Odesskogo konservnogo zavodskogo komiteta (for Chatskiy). 3.Direktor Kharabalinskogo konservnogo zaveda (for Alekseyev). 4.Glavnyy inzhener Tiraspol'skoge pledokombinata (for Gluz). 5.Glavnyy inzhener Starodubskoge oveshchesushil'-nogo kombinata (for Zablotskiy). 6.Nachal'nik planovogo otdela Moskovskogo ordena Lenina Pishchevogo kombinata imeni Mikoyana (for Dubrovskiy).
                    (Canning.industry)

DUBROVSKIY, M.A.

Socialist competition between the enterprises of Moscow and of
Leningrad. Kons. 1 ov. prom. 18 no.11:9-10 N '63. (MIRA 16:12)

1. Moskovskiy ordena Lenina Pishchevoy kombinat.

DUSTOVSKIY, M. B.

Res Inst of Epidemiol. and Microbiol., (-1944-)

Branch State Hospital for Children's Diseases. (-1944-).

"Experiment with Employment of Tartaric Acid in both Diptheritic Patients and Healthy Bacilli - Carriers."

-Zhur. Mikrobiol., Epidemiol., i Immunobiol., No. 6, 1944.

DUBROVSKIY, M.I.; CHERNYATEV, R.N., kand.tekhn.nauk; SHCHEGOLEV, V.I.

Harbor radar station "Raskat." Inform. sbor. TSNIIMF no.79
Sudovozh.i sviaz' no.20:3-31 '62.   (MIRA 16:7)
   (Harbors—Equipment and supplies) (Radar in navigation)

MEDVETSKIY, G.V., kand.tekhn.nauk; DUBROVSKIY, M.V., insh.; STEPANENKOV, I. Ye., insh.

Seam welding of low-alloy 09G2 steels. Svar. proizv. no.12:35-36 D '61. (MIRA 14:12)

1. Bryanskiy institut transportnogo mashinostroyeniya.
                    (Steel alloys--Welding)

DUBROVSKIY, N.

Training workers and raising their qualifications. Mast. ugl. 4
no.3:5-6 Mr '55.   (MLRA 8:6)

1. Nachal'nik otdela rabochikh kadrov Ministerstva ugol'noy
promyshlennosti SSSR.
    (Mining engineering--Study and teaching)

DUBROVSKIY, B.

Strengthen in every possible way socialist labor discipline.
Mast.ugl. 6 no.5:15-16 My '57.   (MIRA 10:7)

1. Nachal'nik otdela rabochikh kadrov Ministerstva ugol'noy
promyshlennosti SSSR.
                    (Mine management)

DUBROVSKIY, N. A.

DUBROVSKIY, N. A. - "Seasonal Displacements of Certain Climatic
    Elements." Sub 13 Mar 52, Moscow State Pedagogical Inst
    imeni V. I. Lenin (Dissertation for the Degree of
    Candidate in Geographical Sciences).

SO: Vechernaya Moskva January-December 1952

DUBROVSKIY, Nikolay Alekseyevich; KOZLOV, M.V., redaktor; MESTERGAZI,
M.M., tekhnicheskiy redaktor

[Geography lessons in class 8; work practice] Uroki po geografii
v VIII klasse; iz opyta raboty. Moskva, Gos. uchebno-pedagog. izd-
vo Ministerstva prosveshcheniia RSFSR, 1955. 42 p.   (MIRA 8:7)
        (Geography--Study and teaching)

BORYCHEV, Nikolay Ivanovich; ZAV'YALOV, Pavel Fedorovich; DUBROVSKIY, N.D., otv.red.; OSVAL'D, B.Ya., red.izd-va; BERESLAVSKAYA, L.Sh., tekhn.red.

[Work and relaxation of miners in the U.S.S.R.] Trud i otdykh shakhterov v SSSR. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1960. 53 p.   (MIRA 13:12)
        (Miners)   (Hours of labor)

DUBROVSKIY, N. N.

Use of water soluble styrene butadiene paints. Transp. stroi.
13 no.3:55 Mr '63.   (MIRA 16:4)

1. Instruktor peredovykh metodov truda Tashkentskoy nauchno-
issledovatel'skoy stantsii Orgtransstroya.

(Painting, Industrial)

DUBROVSKIY, N.M., inzh.; MESHTA, G.F., inzh.

Lashing of the wires of an overhead power transmission line. Elek.
sta. 34 no.8:76-78 Ag '63.   (MIRA 16:11)

GERSHANOV, S.V.; DOBROVSKIY, Nikolay Petrovich

[Corn cultivation with over-all mechanisation] Vozdelyvanie
kukuruzy pri kompleksnoi mekhanisatsii. Moskva, Gos.izd-vo
selkhoz.lit-ry, 1958. 109 p.
                                                    (MIRA 12:3)
                        (Corn (Maize))

CHALISHCHEV, Aleksandr Matveyevich [deceased]; DUBROVSKIY, M.M., inzhener, nauchnyy redaktor; KUNITS, A.P., redaktor izdatel'stva; TOKER, A.M., tekhnicheskiy redaktor

[Drilling bore holes for water supply] Ustroistvo burovykh skvashin dlia vodosnobsheniia. Moskva, Gos. izd-vo lit-ry po stroit. i arkhitekture, 1956. 194 p.   (MLRA 9:12)
          (Water, Underground)   (Boring)

DUBROVSKIY, N. V.

14-57-6-12747

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 6,
                   p 136 (USSR)

AUTHOR: Dubrovskiy, N. V.

TITLE: Zoobenthos in Fish Ponds on the Collective Farm Imeni
             Stalin in the Bogodukhov Rayon   (Zoobentos rybovod-
             nykh prudov kolkhoza im. Stalina Bogodukhovskogo
             rayona)

PERIODICAL: Uch. zap. Khar'kovsk. un-ta, 1956, Vol 67, pp 153-155

ABSTRACT: The author presents a list of bottom-dwelling species
             in three ponds. The main, according to numbers and
             bulk, are the oligochaeta and the chironomid larvae.
             The biomass of zoobenthos is considerably greater in
             April and May than it is in summer months. This can
             be explained by the fact that carp, feeding on
             zoobenthos, destroy much of it.
                                                          I. B.
Card 1/1

OSIPOV, K.I.; DUBROVSKIY, N.V., zasluzhennyy uchitel' shkoly RSFSR

Practice of rural schools in uniting academic instruction with agricultural work of students. Biol. v. shkole no.2:42-46 Mr-Ap '61.
(MIRA 14:3)

1. Penzenskiy peda-gogicheskiy institut (for Osipov). 2. Direktor Sosedskoy sredney shkoly (for Dubrovskiy).
(Agriculture--Study and teaching)
(Soseoka--Education, Cooperative)

USSR

s/0286/64/000/004/0037/0037

ACCESSION NR: AP4021226

AUTHOR: Bel'kovich, P. I.; Gayduk, K. A.; Dubrovskiy, N. V.; Yakobson, B. V.;
Lamm, B. A.; Faydol', Il Ya.; Sokolov, A. D.

TITLE: A method for producing extrusion materials. Class 39, No. 160583

SOURCE: Byul. izobret. i tovarn. znakov, no. 4, 1964, 37

TOPIC TAGS: plastic, resin, phenolformaldehyde resin, peat, extrusion material,
molding material

ABSTRACT: This authorship certificate introduces a method for producing molding
materials based on phenolformaldehyde resins with peat as a filler. In order to
raise the quality of the plastic, the peat is subjected to preliminary heat treat-
ment. 2. A method on this same system in which the heat treatment of the peat
is carried out at 200-250°C in a vacuum or in an inert gas vehicle. 3. A method
on this same system in which wood flour goes into the composition of x the
extrusion materials.

ASSOCIATION: none

Card 1/2

ACCESSION NR: AP4021226

SUBMITTED: 29Oct62   DATE ACQ: 01Apr64   ENCL: 00

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

Card 2/2

DUBROVSKIY, Nikolay Vasil'yevich; VANCHUK, L., red.

[How to set up antennas for long-distance television
reception] Kak ustroit' antenny dlia dal'nego priema
televideniia. Minsk, Belarus', 1965. 56 p.
(MIRA 18:4)

DUBROVSKIY, O. V.

DUBROVSKIY, O. V.- "Investigation of the Aerodynamics of Two-Register Combustion
Chambers in Gas-Turbine Installations." Leningrad Shipbuilding Inst, Leningrad, 1955
(Dissertations For Degree of Candidate of Technical Sciences)

SO: Knizhnaya Letopis' No. 26, June 1955. Moscow