KARYAGIN, N.P. (Gor'kiy)

The necessity of raising safety requirements for small
boiler rooms of heating systems. Vod.i san.tekh. no.7:28
Je '60.   (MIRA 13:7)
         (Boilers—Safety appliances)

KARYAGIN, N.P.

Scientific and technical conference on the use of boiler systems.
Prom.energ. 17 no.5:56-57 My '62.   (MIRA 15:5)
(Boilers—Congresses)

KARYAGIN, N.P.

Scientific and technical conference on problems concerning heating
from central stations in Gorkiy. Prom. energ. 17 no.9:54-55
S '62.
(MIRA 15:8)
(Gorkiy—Heating from central stations)
(Heating from central stations—Congresses)

KARYAGIN, N.P., kand.tekh.nauk (Gor'kiy)

Explosions in boiler gas conduits when burning liquid or solid
fuel. Vod.i san.tekh. no.11:30-31 N '62.   (MIRA 15:12)
                    (Boiler explosions)

KARYAGIN, N.P., kand.tekhn.nauk

Optimum temperature of flue gases with a capped heat exchanger
installed behind a boiler. Prom.energ. 18 no.4:14-19 Ap '63.
(MIRA 16:4)

(Boilers)   (Heat exchangers)   (Heat engineering)

BORISOV, B.G., kand.tekhn.nauk; POTOSKUYEV, M.N., kand.tekhn.nauk; ROMANOVA,
T.M., kand.tekhn.nauk; TROSHIN, P.V., kand.tekhn.nauk. TSELEBROVSKIY,
V.Ye., kand.tekhn.nauk; DANICHEK, Ye.A., kand.tekhn.nauk; KARYAGIN,
N.P., kand.tekhn. nauk; FATEYEV, V.P. (Ioshkar-Ola)

Training of engineers for work in industrial heat and electric power sys-
tems. Prom.energ. 18 no.8:35-41 Ag '63.   (MIRA 16:9)

1. Ivanovskiy energeticheskiy institut imeni V.I.Lenina. (for Borisov,
Potoskuyev, Romanova, Troshin). 2. Tomskiy politekhnicheskiy institut
(for TSelebrovskiy). 3. Dnepropetrovskiy metallurgicheskiy in-
stitut (for Danichek). 4. Gor'kovskiy inzhenerno-stroitel'nyy institut
(for Karyagin).
          (Power engineering—Education and training)

KARYAGIN, N.P.

Heat te * of steam boilers ope~.ting on gas fuel. Gaz. prom. 8
no.12:25-29 '63   (MIRA 17:7)

L 17725-66   EWT(m)/EWP(e)   GG/JAJ/WH/WW/GS

ACC NR: AT6006227

SOURCE CODE: UR/0000/65/000/000/0326/0330

AUTHOR: Karyagin, O. I.

ORG: none

TITLE: Scanning device utilizing a fiber-optical converter 10

SOURCE: AN SSSR. Institut avtomatiki i telemekhaniki. Tekhnicheskaya kibernetika (Technical cybernetics). Moscow, Izd-vo Nauka, 1965, 326-330

TOPIC TAGS: fiber optics, optic scanning, computer component

ABSTRACT: The Institute of Automation and Telemechanics reports the development of a fiber-optical scanning device. A fiber image distribution scheme and a block diagram are shown in Figs. 1 and 2. The device is intended for optical scanning of a signal in the form of a moving dot. The time necessary to scan an n x n element surface is reduced by a factor of n by virtue of a scanning concept which consists of sequential scanning of two mutually perpendicular strips 1 element wide and n elements long. The time necessary to scan one element and one (1 x n) element zone are assumed equal because of the form of the input signal. The system shown in Fig. 2 includes an optical part (1) for focusing the image on the fiber matrix, a fiber transformer (2) for dividing the image into horizontal and vertical zones, two photomultiplier tubes (FEU-31 type)   (3), control circuits (4), and a scanning mechanism (5) for signal transfer of zone images to the photomultiplier tube inputs. The image transformer
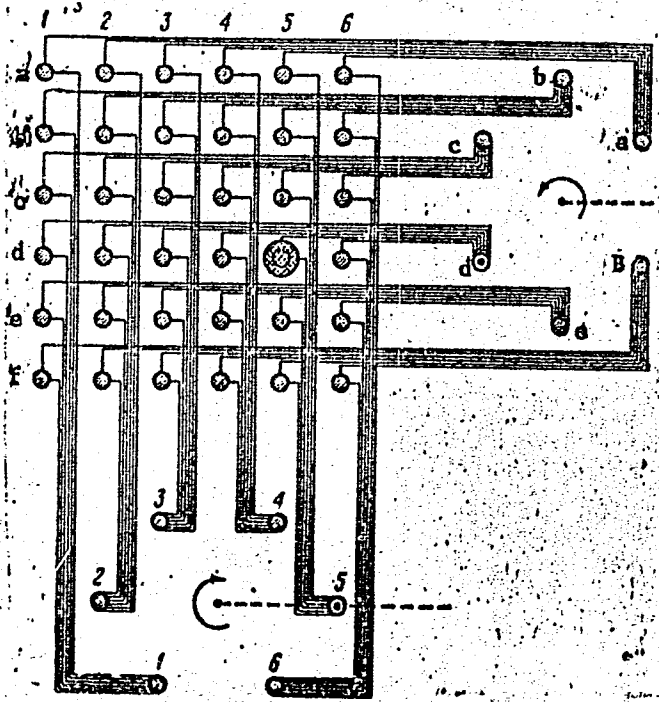
Card   1/3

L 17725-66
ACC NR: AT6006227

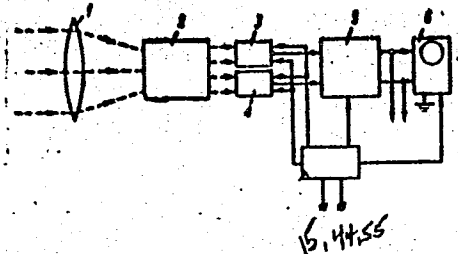Fig. 1. Fiber optical image transformer

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ACC NR: AT6006227

Fig. 2. Block diagram of the scanner

1 - Optical system focusing the image
on the fiber transformer input;
2 - fiber transformer; 3 - photomulti-
plier tubes; 4 - control circuits;
5 - scanning mechanism which serially
connects each zone to the photomulti-
plier tube input; 6 - oscilloscope.

consists of glass fibers 20 μ in diameter which are packed into 100 bunches 3 mm in
diameter and 120 mm long and arranged into a 10 x 10 matrix. The other ends of each
fiber cluster are split in two and grouped together as shown in Fig. 1. The operation
of the electronic section is as follows: The control circuit generates a staircase
signal which is allowed to momentarily pass through a gate where a coincidence between
the clock pulse and the signal from the PM tube occurs. Two such circuits are used:
for horizontal and veritcal scanning. To increase the S/N ratio, a special modulating
plate is used. Tests indicate that only 20% of the image screen area causes system-
atic errors proportional to element width. It is stated that this error may be easily
eliminated. Orig. art. has: 5 figures and 2 formulas.   [BD]

SUB CODE: 09/ SUBM DATE: 05Nov65/ ORIG REF: 003/ OTH REF: 001/ ATD PRESS:

39492
S/056/62/043/002/035/053
B125/B102

24,7900

AUTHORS: Karyagin, S. V., and Korst, N. N.

TITLE: Calculation of the paramagnetic relaxation time in viscous
media

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43,
no. 2(8), 1962, 613 - 615

TEXT: A general method is given for calculating the relaxation time of
dissolved paramagnetic ions whose spin $I \geqslant 1$ interacts with the ambient
medium according to the law $G(t) = \sum_{l,m} I_l^m F_l^{-m}(t)$ (1). Here I_l^m are the

components of the irreducible spin tensor, $F_l^m(t)$ are the components of the
irreducible tensor as referred to the coordinates of the medium. For the
sake of simplicity, summation in (1) is confined to quadrupole interaction:

$G(t) = \sum_{m=-2}^{2} I_2^m F_2^{-m}(t)$. The symbols are the same as in U. Fano's and

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Calculation of the paramagnetic ...

S/056/62/043/002/055/053
B125/B102

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics of the Academy of Sciences USSR)

SUBMITTED: March 5, 1962

Card 3/3

ALEKSANDROV, I.V.; VETCHINKIN, S.I.; KARYAGIN, S.V.

Theory of superfine splitting anisotropy in electron para-
magnetic resonance spectra of free radicals. Dokl. AN SSSR
143 no.4:890-893 Ap '62.   (MIRA 15:3)

1. Institut khimicheskoy fiziki AN SSSR. Predstavleno akademikom
V.N.Kondrat'yevym.
                    (Radicals (Chemistry)--Spectra)

S/020/62/147/001/018/022
B101/B144

AUTHORS: Gol'danskiy, V. I., Corresponding Member AS USSR, Gorodinskiy,
G. M., Karyagin, S. V., Korytko, L. A., Krizhanskiy, L. M.,
Makarov, Ye. F., Suzdalev, I. P., Khrapov, V. V.

TITLE: Investigation into the Mössbauer effect in tin compounds

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 147, no. 1, 1962, 127 - 130

TEXT: The Mössbauer effect in the symmetrical compounds $SnCl_4$, $SnBr_4$,
SnI_4, $Sn(C_6H_5)_4$ and SnO_2 and in the asymmetrical compounds Ph_3SnHal
($Ph = C_6H_5$, $Hal = F$, Cl, Br, I) was studied using an apparatus in which the
absorber moved uniformly with respect to the source and an apparatus with
sinusoidal movement. β-Sn or SnO_2 were used as sources of the 23.8-kev
gamma-quanta (Sn^{119m}). With the symmetrical compounds the chemical shift δ
of the absorber lines with respect to β-Sn, expressed in mm/sec
(1 mm/sec $= 7.9 \cdot 10^{-8}$ ev), was a linear function of the electronegativity of
the atoms bound to Sn. The equation $\delta = 1.6 \cdot 10^{-29} \left[|\psi_s(0)|^2_{absorb} - |\psi_s(0)|^2_{emitt} \right] \Delta R/R$ ev

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Investigation into the...

S/020/62/147/001/018/022
B101/B144

given by A. J. F. Boyle, D. S. P. Bunbury, C. Edwards (Proc. Phys. Soc., 79, 416(1962)) and the data on the ionicity of the Sn-Hal bonds, obtained by the method of A. L. Schawlow (J. Chem. Phys., 22, 1211 (1954)) and those of M. M. Yakshin et al. (ZhNKh, 6, 2425(1961)) on refraction and dielectric constant give $\delta_{ion} = -(5.6 \pm 0.5)$ mm/sec = $-(4.4 \pm 0.4) \cdot 10^{-7}$ ev, $\Delta R/R(Sn^{119}) = +(1.9 \pm 0.2) \cdot 10^{-4}$ for a completely ionized bond. These data enable $|\psi_{5s}(0)|^2$ to be determined directly from δ. In the asymmetrical compounds, asymmetrical doubtlets were observed (Fig. 2) similar to those found by Boyle et al. in SnF_4. The asymmetry was found also in dissolved compounds and cannot be explained by a random orientation of the crystals in the direction of the gamma quanta or by ferromagnetic or paramagnetic impurities. From the equation

$$\frac{\sigma_{13\,no\pi\mu}}{\sigma_{11\,no\pi\mu}} = \frac{\int_{-1}^{+1} [2\sqrt{5}\,\bar{P}_0(\cos\vartheta) + \bar{P}_2(\cos\vartheta)]\,f(\cos\vartheta)\,d\cos\vartheta}{\int_{-1}^{+1} [2\sqrt{5}\,\bar{P}_0(\cos\vartheta) - \bar{P}_2(\cos\vartheta)]\,f(\cos\vartheta)\,d\cos\vartheta}, \qquad (3)$$

where the subscript полн = total, $\bar{P}_L(\cos\vartheta)$ is the normalized Legendre

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Investigation into the...

polynomial, $f(\cos\vartheta) = \sum_k a_k \bar{P}_k(\cos\vartheta)$ is the factor determining the intensity of the Mossbauer line, a_k the decay coefficient, it follows that if

$\sigma_{13\,tot}/\sigma_{11\,tot} = (2\sqrt{5}a_0 + a_2)/(2\sqrt{5}a_0 - a_2) \neq 1$ (with $a_2 \neq 0$) and $-2\sqrt{5} < a_2/a_0 < 2\sqrt{5}$, each of the peaks of the Mossbauer doublet may become higher than the other one according to the ratio a_0/a_2. This ratio can be determined experimentally. Assuming a quadrupole splitting of the Mossbauer line in SnF_4 and Ph_3SnHal, $q = 6.9 \cdot 10^{18}x$ v/cm^2 is obtained where $q = \partial^2 v/\partial z^2$ is the gradient of the electric field in the region of the Sn^{119} nucleus, and x is the degree of ionization of the bond. For Ph_3SnHal $x \simeq 0.55$ with Hal = I; $x \simeq 0.7$ with Hal = Br, Cl and $x \simeq 1$ with Hal = F.. Another possible interpretation of the asymmetrical splitting might be the different hybridization of the sp^3d^2 bonds. In order to explain this problem it is suggested that the effective charges of the halogen and tin atoms be determined directly. When an equimolecular mixture of $SnPh_4$ and SnI_4 was irradiated with 1.6-Mev electrons the Mossbauer spectrum was

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Investigation into the...   S/020/62/147/001/018/022
                                    B101/B144

observed to be greatly changed through the spectra of various disproportionation products Ph_iSnI_{4-i} being superimposed. Hence it is concluded that the Mossbauer effect can be used not only to study the chemical structure but also to solve problems of chemical kinetics and radiation chemistry. There are 2 figures.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics of the Academy of Sciences USSR)

SUBMITTED: July 21, 1962

Card 4/5

Card 5/5

S/020/63/148/005/019/029
B120/B102

AUTHOR: Karyagin, S. V.

TITLE: A possible cause of the asymmetry of the doublet components
            in the Mössbauer absorption spectrum of some powdery tin
            compounds

TEXT: The asymmetry of the Mössbauer doublet in certain organotin
compounds (ZhETF,43,no.2(8),1962; DAN,147,no.1,1962) is explained by an
effect of the local electric field components acting on the Sn^{119} nucleus.
If the doublet is due to a splitting of the $3/2^+$ excited state in the
nonuniform electric lattice field, the field acting on the nucleus being,
however, axisymmetric, the ratio of the Mössbauer transition intensities
will be

$$\frac{I_\pi}{I_\sigma} = \frac{\int_0^\pi I_\pi(\theta)\,I'(\theta)\sin\theta\,d\theta}{\int_0^\pi I_\sigma(\theta)\,I'(\theta)\sin\theta\,d\theta}, \qquad \begin{aligned} &(\pm^3/_2,\ ^{11}/_2^+)\rightarrow(\pm^1/_2,\ ^1/_2^+) \\ &(\pm^1/_2,\ ^3/_2^+)\rightarrow(\pm^1/_2,\ ^1/_2^+) \end{aligned}$$

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A possible cause of the asymmetry ...   S/020/63/148/005/019/029
B190/B102

$I_\pi(\vartheta)$ and $I_\sigma(\vartheta)$ are the total intensities of the Mössbauer and non-Mössbauer transitions for γ-quanta whose angle of incidence is ϑ (measured relative to the crystal axis); $f'(\vartheta)$ characterizes the Mössbauer line intensity. $f'(0)/f'(90°)$ depends on temperature and lattice elastic properties. With

$$I_\pi(\vartheta) = \text{const}(1 + \cos^2\vartheta) = \text{const}'[2\sqrt{5}\,\bar{P}_0(\vartheta) + \bar{P}_2(\vartheta)], \qquad (2)$$

$$I_\sigma(\vartheta) = \text{const}(^5/_3 - \cos^2\vartheta) = \text{const}'\,[2\sqrt{5}\,\bar{P}_0(\vartheta) - \bar{P}_2(\vartheta)],$$

$$\bar{P}_0(\vartheta) = \sqrt{^1/_3}; \quad \bar{P}_2(\vartheta) = ^1/_2 \sqrt{^5/_2}(3\cos^2\vartheta - 1)$$

and $f'(\vartheta) = \sum_k a_k \bar{P}_k(\vartheta)$ one obtains

$$\frac{i_\pi}{i_0} = \frac{1 + a_2/2a_0\sqrt{5}}{1 - a_2/2a_0\sqrt{5}} \qquad (4).$$

Numerical calculations are carried out for tetragonal symmetry, applying

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A possible cause of the asymmetry ...

relations and data from Yu.Kagan (DAN,140,794,1961). If the single crystal does not exhibit axial symmetry, the $3/2^+$ state splits into two sublevels which cannot be characterized by the spin projection quantum numbers. In this case one obtains for the total transition probabilities to the $\pm$ levels:

$$I_{\pm}(\vartheta, \varphi) = const \cdot N_{\pm}^2 \left\{ \frac{5}{6} + \frac{\lambda_{\pm}^2}{2} + \left(-\frac{1}{2} + \frac{\lambda_{\pm}^2}{2}\right)\cos^2\vartheta \pm \lambda_{\pm} \sqrt{\frac{1}{3}} \sin^2\vartheta \cos^2\varphi \right\} \quad (12)$$

where

$$N_{\pm} = (1 + \lambda_{\pm}^2)^{-1/2}; \quad \lambda_{\pm} = \frac{\pm s + a}{b}; \quad s = \sqrt{a^2 + b^2}; \quad a = \frac{3}{2} Aeq; \quad b =$$

$$= \frac{\sqrt{3}}{2} Aeq \, \eta; \quad A = \frac{eQ}{2I(2I-1)}; \quad I = \frac{3}{2} \text{ for Sn}^{119}; \quad eq = \frac{\partial E_z}{\partial z}; \quad \eta =$$

$$= \frac{\partial E_x/\partial x - \partial E_y/\partial y}{\partial E_x/\partial z}; \quad eQ = (II|\sum e_i r_i^2 (3 \cos^2\vartheta_i - 1) | II)$$

II denotes the nuclear quadrupole moment, $\hbar\omega_0^{\pm}$ is the frequency of the resonance γ-quantum corresponding to an excitation to the $\pm$ level, ω_0 is the γ-transition frequency without quadrupole field, ϑ, ψ are the angles of incidence of the γ-quanta absorbed. For $\eta \to 0$, the plus level

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A possible cause of the asymmetry ...   S/020/63/143/005/019/029
B190/B102

tends to the $(\frac{+3}{-2},\frac{3}{2}^+)$ level and the minus level to $(\pm\frac{1}{2},\frac{3}{2}^+)$ so that the

splitting amounts to 2a and Eq.(12) goes over to (2). Therefore, if
$f'(\nu,\eta)$ = const, then i_+ = i_- and the doublet is symmetrical. Since
i_+/i_- depends on η, the doublet components differ not only in intensity
but also in shape when the local field strength components are scattered.
The doublet asymmetry will thus depend also on temperature, since
$f'(\nu,\eta)$ is a temperature function.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute
of Chemical Physics AS USSR)

PRESENTED: July 26, 1962, by V. N. Kondrat'yev, Academician

SUBMITTED: July 20, 1962

Card 4/4

L 18423-63   EWT(m)/BDS   AFFTC/ASD
ACCESSION NR: AP3005318   S/0181/63/005/008/2128/2132

AUTHOR: Karyagin, S. V.

TITLE: Shape of lines of the Messbauer spectrum associated with spread in local
values of the electrical field strength gradient

SOURCE: Fizika tverdogo tela, v. 5, no. 8, 1963, 2128-2132

TOPIC TAGS: Messbauer spectrum, electrical field, gradient, Gamma-transition,
doublet, Bessel function

ABSTRACT: The example of dipole γ-transitions $3^+/2 \longrightarrow 1^+/2$ has been used to
compute the shape of the Messbauer spectrum when local values of the electrical
field gradient are spread. If there is no spread, the lines are assumed to be
infinitely narrow; i.e., the other factors tending to expand the lines are not
considered. Two peaks are obtained, and it is shown that these have different
shapes if the Messbauer factor is anisotropic. A formula is found for determining
the degree of spreading of the electrical field gradient from measurement of the
spectrum. When the spread is insufficiently small, the maximums of the spectral
components are displaced relative to the points for energy of γ-quanta, determined

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L 18423-63
ACCESSION NR: AP3005318

by the average values of the gradient.   "The author thanks V. I. Gol'danskiy,
V. F. Makarov, and N. D. Sokolov for discussions of the work." Orig. art. has:
20 formulas.

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR, Moscow (Institute of Chemical
Physics, Academy of Sciences, SSSR)

SUBMITTED: 25Feb63   DATE ACQ: 06Sep63   ENCL: 00

SUB CODE: PH   NO REF SOV: 003   OTHER: 000

Card 2/2

L 23155-66   EWT(1)

ACC NR: AP6006836   SOURCE CODE: UR/0181/66/008/002/0493/0499

AUTHOR: Karyagin, S. V.

ORG: Institute of Chemical Physics, Moscow (Institut khimicheskoy fiziki)

TITLE: Determining the parameters of a localized field from the hyperfine structure of the Mössbauer spectrum

SOURCE: Fizika tverdogo tela, v. 8, no. 2, 1966, 493-499

TOPIC TAGS: Mossbauer spectrum, hyperfine structure, magnetic field, electric field

ABSTRACT: The localized field of a nucleus is described by the parameters $g\beta H$ and e^2Qq and by the angles θ and ϕ (see figure) for orientation of a magnetic field in the system of the principal axes of the tensor for the gradient of the electric field intensity. The authors show that the Brown-Parker method (L. C. Brown, R. M. Parker, *Phys. Rev.*, 100, 1764, 1955) may be used in the case of the 1/2 → 3/2 transition for approximating the parameters e^2Qq, η, θ and ϕ, and for exact determination of $g_{II}\beta H$, $g_{I}\beta H$, and $\xi = \frac{1}{2}\left|e^2Qq\right|\sqrt{1+\frac{1}{3}\eta^2}$

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L-23155-66

ACC NR: AP6006836   3

as well as for calculating the relative intensities of the components in the hyper-
fine structure in the frequency (relative velocity) spectrum. Various methods are
also proposed for determining the energies of sub-
levels in the hyperfine structure and the chemical
displacement δ. The appropriate formulas are de-
rived. A number of formulas and derivations of a
more general nature may be used for any transitions.
This paper may be of interest to research workers
studying the hyperfine structure which arises in
Mössbauer spectra with simultaneous quadrupole and
magnetic interactions. The author is grateful to
V. I. Gol'danskiy, Ye. F. Makarov and N. D. Sokolov
for discussing the work. Orig. art. has: 2 figures,
2 tables, 20 formulas.
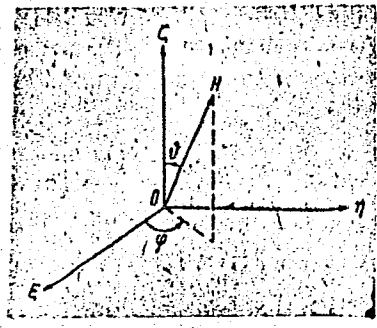
SUB CODE: 20/   SUBM DATE: 11Mar65/   ORIG REF: 002/   OTH REF: 007

Card 2/2 PB

ACC NR: AP6018535   · SOURCE CODE: UR/0181/66/008/006/1739/1752

AUTHOR: Karyagin, S. V.

ORG: Institute of Chemical Physics, AN SSSR, Moscow (Institut khimicheskoy fiziki AN SSSR)

TITLE: Intensities in the hyperfine structure of Mossbauer absorption spectra

SOURCE: Fizika tverdogo tela, v. 8, no. 6, 1966, 1739-1752

TOPIC TAGS: Mossbauer spectrum, hyperfine structure, line intensity, angular distribution, multipole order, crystal lattice structure

ABSTRACT: In view of the fact that earlier investigations of Mossbauer spectra were made under the assumption that the local field is axially symmetrical and the Mossbauer factor is isotropic, the author derives formulas for the relative intensities in the hyperfine structure and their angular distribution first for an isotropic Mossbauer factor and then with account of the anisotropy. It is assumed first that the nuclei contributing to the spectrum are in identical local fields which have identical orientations relative to the crystallographic axes of the single crystal. In the case of polycrystals, the spectrum is calculated assuming all orientations to be equally probable. The multipole radiation is assumed to be of the mixed EM type. The local field causing the asymmetry is regarded as a superposition of magnetic and quadrupole electric fields. Single crystals with several sublattices, regarded as an intermediate formation between simple single crystals and polycrystals, are discussed.

Card 1/2

L 41533-56

ACC NR: AP6018535

Tables are presented of functions for the calculation of the angular dependences in crystals when the local field is asymmetrical. Typical results of computer calculations of the effect of the anisotropy of the Mossbauer factor are given. It is concluded that the relations derived make it possible to obtain more complete information on crystals than the Mossbauer spectra afford at the present time, but in order for this information to be obtainable it is necessary to increase the accuracy with which the intensities are measured. Orig. art. has: 3 figures, 28 formulas, and 6 tables.

SUB CODE: 20/   SUBM DATE: 01Nov65/   ORIG REF: 007/   OTH REF: 012

Card 2/2

KARYAGIN, V. A.

KARYAGIN, V.A.; SOLOV'YEV, G.M.

[Textbook for the automobilist] Uchebnik avtoliubitelia. Moskva,
Gos. izd-vo "Fizkul'tura i sport," 1948. 207 p.   (MIRA 7:5)
(Automobile--Drivers)

ROSTOVTSEVA, I.; SKALINSKIY, Ye.; SHPAY, N.D.; KARYAGIN, V.I.; KADYROV, N.;
    KOPICHAY, L.S.; IBRAGIMOV, R.P.; GOLOVINOV, I.M.

    Information and brief news. Veterinariia 40 no.7:87-93 Jl '63.
                                                    (MIRA 16:8)
                (Veterinary medicine)

OSTAPENKO, K.A.; KOROPOV, V.M.; POLUKHIN, F.S.; SHUBINA, M.G.; KARYAGIN, V.I.;
ZINCHENKO, A.V.; ROSTOMASHVILI, A.; GOGILASHVILI, V.; KUPASHVILI, S.;
SIKORSKIY, A.

Information and brief news. Veterinariia 41 no.2:119-126 F '65.
(MIRA 18:3)

BORISOVICH, F.K.; PANASENKO, V.P.; KHATIN, M.G.; KARYAGIN, V.I.

Outstanding veterinarian of White Russia; 90th anniversary of the birth of E.F. Alonov. Veterinariia 42 no.12:94-95 D '65.
(MIRA 19:1)

KARYAGIN, V.I.

Protector of the Brest fortress. Veterinariia 41 no.12:90-91 D '64.
(MIRA 18:9)

KARYAGIN, YU. G.,   Cand of Agr-Sci Θ-- (diss)   "Agricultural Engineering

for the Raising of Pumpkins for Fodder in the Conditions of the

Desert-Steppe Zone of Alma-Atinskaya Oblast,"

Alma-Ata, 1959, 19 pp (Committe on Higher and Secondary Specialist

Education of the Council of Ministers Kazakh SSR. Alma-Ata Zoovetinary

Institute)   (KL, 6-60, 124)

SOV/5258

5(1)

PHASE I BOOK EXPLOITATION

Akademiya nauk Kazakhskoy SSR. Astrofizicheskiy institut

Issledovaniya, tom VIII (News of the Astrophysics Institute, Kazakh SSR Academy of Sciences, Vol. 8) Alma-Ata, Izd-vo AN Kazakhskoy SSR, 1959. 850 copies printed.

Eds.: V. A. Omelchiy, and Sh. B. Nunesbayev; Tech. Ed.; I. P. Brolina; Editorial Board: G. M. Idlis, M. G. Karimov, Z. V. Karyagina (Secretary), D. A. Rozhkovskiy, V. G. Fesenkov (Resp. Ed.).

PURPOSE: This collection of articles is intended for geophysicists and astronomers.

COVERAGE: This collection of articles in astronomy contains studies on the distribution of asteroids as revealed by radical light characteristics, the distortion of the luminosity curve of a variable star, the integrals of motion of an individual star, the electromagnetic mechanism in solar prominences, my polarization in the Libyan desert, projector research etc. English abstracts accompany each article. References follow individual articles.

Karyagina, Z. V. Transparency Coefficients of the Atmosphere in the Ultraviolet by Observing Several Stars   53

Gurtovenko, M. G. The Yellow Coronal Line 5694A From Observations Outside Eclipse   59

Gnedin, B. O. Electromagnetic Mechanism of Heating Solar Prominences   64

Karyagin, Z. V. The Low-Latitude Aurora of September 29-30, 1957   68

Gaynullina, R. Kh. Spectral Photometry in the Red Spectrum Part of the Low-Latitude Aurora on Sept 29-30, 1957   79

Dzhanumova-Chumikova, A. V. Some Data on Polarization in the Sky in Southern Kazt   82

Boyko, P. N., G. Sh. Livshits, and T. P. Toropova. Projector Studies of the Indicatrices of Light Scattering   88

Boyko, P. N. Spectroelectrophotometer Equipped with an Automatic Spectrum Recorder   108

TEPPER, Ye.Z.; KARYAGINA, L.A.

Distribution of proactinomycetes in turf-Podzolic and Chernozem soils. Izv. AN SSSR. Ser. biol. no.5:772-775 S-O '65.

(MIRA 18:9)

1. Moskovskaya ordena Lenina sel'skokhozyaystvennaya akademiya im. K.A. Timiryazeva.

ACCESSION NR: AP4017623   S/0033/64/041/001/0116/0121

AUTHOR: Gindilis, L. M.; Karyagina, Z. V.

TITLE: Energy distribution in the counterglow spectrum in the region λλ3900-6500 Å

SOURCE: Astronomicheskiy zhurnal, v. 41, no. 1, 1964, 116-121

TOPIC TAGS: spectrometry, astrophysics, nebular spectrograph, counterglow, counterglow spectrum

ABSTRACT: The spectral investigations of the counterglow, which have been made over the past few years with the aid of the Pariyskiy nebular spectograph, have made it possible to determine several characteristic peculiarities of this phenomenon. Together with the conclusion regarding the absence of any intensification of primary emission lines of the night sky in the region of the counterglow, the presence of a continuous counterglow spectrum has been established. Energy distribution in the counterglow spectrum in the region λ4600-6500 Å was found to be very close to the energy distribution in the zodiacal light spectrum; however, in the 4300-4500 Å region a clearly expressed excess was detected in comparison with the spectrum of zodiacal light. It was also determined that

Card 1/4

KARYAGINA, Z.V.; KHARITONOV, A.V.

Determining the stallar magnitude of the sun in three-color
systems on the basis of absolute spectrophotometric observations.
Astron. zhur. . 40 no.6:1123-1125 N-D '63.   (MIRA 16:12)

1. Astrofizicheskiy institut AN KazSSR.

GETSEU, V.V.; KARYAGINA, A.N.

Hydrochemical characteristics of the Chirkey hydrosulfide springs.
Trudy Geol.inst.Dag.fil. AN SSSR 2:260-266 '60.   (MIRA 15:12)
    (Buynaksk District—Mineral waters—Composition)

KARYAGINA, A.V.

Care of patients in the receiving and discharge ward. Med.sestra
17 no.9:31-32 S '58   (MIRA 11:10)

1. Starshaya meditsinskaya sestra, 1-oy gorodskoy bol'nitsy, Groznyy.
      (HOSPITALS)

KARYAGINA, A.V. (Gorznyy)

Nurses' councils in Groznyy. Med.sestra 19 no.2:47-48 F '60.

(GROZNYY--NURSES AND NURSING)

(MIRA 13:5)

L 15624-66

ACC NR: AP5024154   SOURCE CODE: UR/0216/65/000/005/0772/0775

AUTHOR: Tepper, Ye. Z.; Karyagina, L. A.

ORG: Agricultural Academy im. K. A. Timiryazev (Sel'skokhozyaystvennaya akademiya)

TITLE: Distribution of Proactinomycetes in sod-podzolic and chernozem soils

SOURCE: AN SSSR. Izvestiya. Seriya biologicheskaya, no. 5, 1965, 772-775

TOPIC TAGS: soil bacteriology, soil type, agriculture science

ABSTRACT: The seasonal dynamics of Proactinomycetes and chernozem soils are stud-
ied. Proactinomycetes in plowed sod-podzolic soil number in the tens and hundreds
of thousands of cells per g of oven-dried soil but they decrease sharply with depth.
In July, when the soil is dry, their numbers decrease considerably and they are vir-
tually nonexistent in the subsoil. The relative percentage of Proactinomycetes
(16%) is highest in unfertilized soil. The predominant forms are Proact. coralli-
nus in unfertilized and Proact. citreus symbioticum in fertilized soils, respec-
tively. Proact. mucosum is abundant in all the soils during the summer. In forest
soils, as in plowed soils, Proactinomycetes populations number in the tens and hun-

UDC: 576.852

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L 15624-66
ACC NR: AP5024154

dreds of thousands per g of oven-dried soil. During the summer months, they de-
crease due to reduction of soil moisture, the minimum being in August when the soil
moisture is lowest. The absolute number of Proactinomycetes is highest in virgin
chernozem soils (millions per g of oven-dried soil in the spring and fall, hundreds
of thousands in the summer), with a sharp decrease downward in the profile. The
species isolated by the authors from chernozem soils included *Proact. corallinus,
Proact. citreus symbioticum, Proact. citreus,* and *Proact. mucosum,* the first two
groups being the most widespread. Orig. art. has: 3 figures, 3 tables.

SUB CODE: 06/   SUBM DATE: 23Feb65/   ORIG REF: 004/   OTH REF: 000

Card 2/2

KARYAGINA, Nina Stepanovna; MEDVEDEV, Valerian Vasil'yevich;
        SARANTSEV, Yu.S.; red.

[Labor protection in car operation, maintenance and re-
pair] Okhrana truda v vagonnom khoziaistve. Moskva, Izd-
vo "Transport," 1964. 207 p.   (MIRA 17:8)

YEFREMOV, G. V.; KARYAGINA, N. Ye.

Coprecipitation of thallium with a urea complex of lead. Uch. zap.
LGU no.297:71-76 '60.   (MIRA 13:11)
                    (Thallium)   (Lead compounds)

KARYAGINA, Z. V.

Defended his Candidates dissertation in the State Astronomical Institute imeni Shternberg of Moscow State University on 3 July 1952.

Dissertation: "Determination of the Stellar Magnitude of the Sun."

SO: Vestnik Moskovskogo Universiteta, Seriya Fiziko-Matematicheskikh i Yestestvennykh Nauk, No. 1, Moscow, Feb 1953, pp 151-157: transl. in W-29782, 12 April 54, For off. use only.

KARYAGINA, Z.V.

Determination of the stellar magnitude of the sun. Izv. (MLRA 9:10)
Astrofiz.Inst. AN Kazakh.SSR 1 no.1/2:85-105 '55.

(Solar radiation)

KARYAGINA, Z. V.

Spectrophotometric investigation of the intensification of the
5577 A line in zodiacal light [with summary in English].   Izv.
Astrofiz.inst. AN Kazakh.SSR   5   no.7:110-119   '57. (MIRA 10:7)
                    (Zodiacal light)

KARYAGINA, Z.V.; PARIYSKIY, N.N.

Spectrum of Arend-Roland's comet. Astron. tsir. no.181:2-4 Je '57.
(MIRA 13:3)

1.Astrofizicheskiy institut AN KazSSR i Gosudarstvennyy astronomicha
institut im. P.K. Shternberga.
(Comets—Spectra)

KARYAGINA, Z.V.; PARIYSKIY, N.N.

Spectroscopic observations of low-latitude aurora borealis of September 29-30, 1957. Astron.tsir. no.186:20-21 N '57.
(MIRA 11:4)

1. Astrofizicheskiy institut AN KazSSR (for Karyagina) 2. Gosudarstvenny astronomicheskiy institut im. Shternberga (for Pariyskiy).
(Auroras)

88937
S/035/61/000/001/013/019
A001/A001

3,1810

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1961, No. 1, p. 58, # 1A412

AUTHOR: Karyagina, Z.V.

TITLE: Low-Latitude Aurora of September 29-30, 1957

PERIODICAL: "Izv. Astrofiz. in-ta AN KazSSR", 1959, Vol. 8, pp. 68-78 (Engl. summary)

TEXT: The author describes results of visual and spectrographic observations of aurora of September 29-30, 1957. Observations were conducted near Alma-Ata in the vicinity of the Great Alma-Ata Lake ($43°04'N$) at an altitude of about 3,000 m above sea level. Aurora was discovered at 17^h13^m UT on the northern horizon in the form of a very bright redcrimson glow with sharply outlined boundaries. In the initial phase of its development aurora was expanding in altitude and azimuth, and its brightest parts were shifting along the azimuth. At 17^h23^m UT aurora split into 2 parts, almost symmetrical to meridian. At 18^h15^m aurora had the appearance of a diffuse arc. By 19^h29^m UT aurora considerably weakened and was observed up to 22^h03^m UT as a weak glow of various shapes (diffuse spot, dome-like

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88937

S/035/61/000/001/013/019
A001/A001

Low-Latutude Aurora of September 29-30, 1957

arc, wide pillar). Aurora was first of red color but then whitish and greenish colors began to dominate. The sky brightness in the northern and north-eastern directions remained enhanced during all the night (till dawn). Spectral observations of aurora were conducted by means of a speed nebular GAISh spectrograph with a glass low-dispersion camera. Three regions of the sky were spectrographed simultaneously. Observations started still prior to the appearance of aurora. On spectrograms taken at 16^h36^m and 16^h59^m no anomalies were discovered. In the spectrum of the sky polar region obtained at 17^h13^m UT red oxygen lines were sharply enhanced, and their brightness became considerably higher than the brightness of the green line. The brightness of red lines was growing anomalously strong with increasing zenith distance. On the spectrogram taken at 17^h31^m the line λ 5200 (NI) was discovered; changes in intensity of lines $\lambda\lambda$ 5200, 5577 and 5893 depending on the azimuth were noticed. In the violet portion of the spectrum emission lines $\lambda\lambda$ 4667, 4568, 4410, 4262, 4172, 4074 and 3875 were discovered on the background of continuous spectrum. After 19^h42^m the regions of zodiacal light and counterglow were spectrographed. It was found out that prior to dawn in the zodiacal light region was present the line λ 5200, and the bands of the first negative system of N_2^+ were enhanced so that their brightness exceeded that of the green and red lines. The intensity of the red line was close to that of the green

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Low-Latitude Aurora of September 29-30, 1957

S/035/61/000/001/013/019
A001/A001

line. No essential changes were detected in the features of the lines $\lambda\lambda 5893$ and 5577. The intensity of emission lines was expressed in absolute units by comparing with stars. The absolute intensity of N_2^+ bands and red lines (OI) was increasing in the period of aurora development. However intensities of lines $\lambda\lambda 5200$, 5577 and 5893 were practically constant.

N. Divari

Translator's note: This is the full translation of the original Russian abstract.

Card 3/3

KARYAGINA, Z.V.

PHASE I BOOK EXPLOITATION SOV/4605

Akademiya nauk SSSR. Astrofizicheskiy institut

Izvestiya, tom 10 (News of the Astrophysics Institute of the Academy of Sciences Kazakhskaya SSR) Alma-Ata, 1960. 100 p. 750 copies printed.

Editorial Board: G. M. Idlis, M. G. Karimov, Z. V. Karyagina (Secretary), D. A. Rozhkovskiy, and V. G. Fesenkov (Resp. Ed.); Eds.: L. S. Rubonikovskaya, and M. Ya. Brailovskaya; Tech. Ed.: V. P. Prokhorov.

PURPOSE: This publication is intended for astrophysicists.

COVERAGE: This is a collection of 13 articles on problems in astrophysics. Individual articles discuss: the forces of gravity, radiative pressure, and inter-reaction of heavenly bodies; the distribution of surface brightness in reflecting nebulae; the relative motion of double stars with corpuscular emission; the photographic determination of the position of the sodium cloud released by the second Soviet cosmic rocket; the relationship between the decrease in the kinetic temperature of the corona and its monochromatic emission in the region of protuberances; the relationship between the velocities of moving sunspot protuberances and variations in their brightness; the ratio of photo-emulsion density to the polarization plane of light falling at different angles; airglow emissions in the red band spectrum as observed from Alma-Ata; brightness and polarization of the daytime sky observed in the almucantar of the sun in August 1956 in Alma-Ata; the effect of aerosols in the scattering of light in the near-surface layer; the results of an investigation of the absorption function in the ρ water vapor band; the distribution of energy in the spectrum of the daytime sky. No personalities are mentioned. Each article is accompanied by a brief English summary and references.

Bugoslavskaya, Ye. Ya. (Deceased), K. G. Dzhakusheva, M. G. Karimov, A. V. Kurchakov, V. S. Matyagin, D. A. Rozhkovskiy, and M. A. Svechnikov. Determining the Coordinates of Artificial Comets 36

Obashev, S. O. On the Problem of the Relationship Between Protuberances and the Monochromatic Corona 39

Obashev, S. O. Motion of Solar Spot Type Protuberances and Variations in Their Brightness 44

Boyko, P. N. Investigation of Certain Properties of Photographic Plates 49

Gayrullina, R. Kh., and Z. V. Karyagina. Investigating the Spectrum of the Night Sky in the 6200 - 6000 Å Wavelength Band Region 52

Pyaskovskaya-Fesenkova, Ye. V. Certain Relations in the Polarization of the Firmament 64

Toropova, T. P. Measuring the Indicatrix of Light Scattering in the Near Surface Layer in Two Spectral Regions 71

Toropova, T. P. Applicability of the Exponential Law to the Water Vapor Absorption Bands 78

Boyko, P. N. Spectral Measurement of the Polarization of the Daytime Sky in the Almucantar of the Sun 83

Boyko, P. N., and V. M. Karachevskiy. Photographic Observation of Spectral Brightness of the Firmament 94

AVAILABLE: Library of Congress

3.1810

S/169/61/000/002/017/039
A005/A001

Translation from: Referativnyy zhurnal, Geofizika, 1961, No. 2, p. 32, # 2G239

AUTHOR: Karyagina, Z. V.

TITLE: A Spectrophotometrical Investigation of the Aurora at Low Latitudes
            on September 29-30, 1957

PERIODICAL: V sb.: "Spektr. elektrofotometr. i radiolokats. issled. polyarn.
            siyaniy i svecheniya nochnogo neba". No. 2-3. Moscow, AN SSSR, 1960,
            pp. 60-62 (English summary)   √

TEXT: The author gives an account of the results of determination of the
absolute intensities of the emission lines $[O_1]$, NaD, [NI] and the bands of the
first negative system N_2^+ in the auroral spectra observed on September 29-30, 1957,
in the region of the Great Alma-Ata Lake (40°04' n.lat., 75°28' e.long.). The
observations were carried out with the aid of the nebular spectrograph of ГАИШ
(GAISh). The absolute intensities of emissions were measured on 5 spectrograms
for three points of sky, the spectra of which were obtained with the aid of a
special prismative headpiece which makes it possible to take simultaneously the
photographs of three regions of sky. For the calibration and standardization of

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A Spectrophotometrical Investigation of the Aurora at Low Latitudes on September 29-30, 1957

the spectra, phosphors of constant action were used. The absolute intensities of the lines λ 6,300 + 6,364, 5,893, 5,577, and 5,200 Å were determined by gaging them with the phosphor. When deriving the absolute intensities of the emissions, the absorption of the radiation in both prisms and atmosphere was taken into account. In consequence of the low dispersion of the nebular spectrograph, the fine structure of the bands of N_2^+ is not resolved, and the bands λ 4,709 (0.2), 4,652 (1.3), 4,596 (2.4), 4,551 (3.5), 4,278 (0.1), 4,236 (1.2), and 4,200 (2.3)Å are obtained as two wide bands with wavelengths of maximum intensity at λ 4,616 and 4,254 Å. The accuracy of determination of the wavelength amounted to ± 15 Å. Basing on the data obtained, it is concluded that the intensity of the bands of N_2^+ considerably increased with time. The intensity of the line λ 6,300 + 6,364 Å also increased. Simultaneously, the brightness of the lines λ 5,200 [NI], 5,577 [OI], and 5,893 Na remained practically constant, which is characteristical for the low latitude aurora.

L. Yerasova

Translator's note: This is the full translation of the original Russian abstract.
Card 2/2

3.9000 (1041, 1109, 1327)

Translation from: Referativnyy zhurnal, Geofizika, 1961, No. 2, p. 34, # 2G252

AUTHORS: Gaynullina, R. Kh., Karyagina, Z. V.

TITLE: The Determination of Temperature of the Upper Atmosphere From Rotation Bands of the Hydroxyl Spectrum

PERIODICAL: V sb.: "Spektr., elektrofotometr. i radiolokats. issled. polyarn. slyaniy i svecheniya nochnogo neba". No. 2-3, Moscow, AN SSSR, 1960, pp. 63-65 (English summary)

TEXT: In accordance with the program of IGY, the temperture of excitation of OH molecules was determined from the intensity distribution in the rotation bands (6.1) and (9.3) of the night sky glow spectrum. The observations were carried out in the vicinity of Alma-Ata at an altitude of 1,400 m. To obtain the spectra, the diffraction spectrograph СП-48 (SP-48) was used. For standardizing the spectra, a phosphor of constant action was used. The distribution of energy in the spectrum in absolute units was obtained by comparison with the phosphor. For six nights of observations, the intensity was determined of all components of the bands (6.1) and (9.3) in absolute units, and for two nights of observations

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89764

S/169/61/000/002/018/039 X

A005/A001

The Determination of Temperature of the Upper Atmosphere From Rotation Bands of the Hydroxyl Spectrum

in relative units in the region of the wavelengths 6,200 - 6,600 $\mathring{A}$. The intensities of the lines were determined by integration of the contour. The results of determination of the excitation temperature of the rotation bands showed that the average value, taken from all the nights, of temperature amounts to $257^{\circ} \pm 2^{\circ}C$ for both bands.

L. Ye.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

85925

3.1810
9.9841

S/169/60/000/010/010/013
A005/A001

Translation from: Referativnyy zhurnal, Geofizika, 1960, No. 10, p. 207, # 13191

AUTHOR: Karyagina, Z.V.

TITLE: The Low-Latitude Aurora Polaris on September 29-30, 1957

PERIODICAL: Izv. Astrofiz. in-ta. AN KazSSR, 1959, Vol. 8, pp. 68-70 (English summary)

TEXT: A bright aurora polaris is described in detail, which was observed on September 29-30, 1957 in the Alma-Ata region; the results of deciphering the aurora spectra are presented. The aurora spectra were obtained by means of a nebular spectrograph with a special prism mount, which made it possible to observe simultaneously three regions of the sky apart by 20^0. The lines λ 6,300-6,364 Å. λ 5,200 Å, and the bands of N_2^+ occur in the spectra. The line λ 6,300-6,364 Å is considerably intensified, its intensity attained 300.10^{-5} erg/cm^{2}sec steradian. The intensity of the N_2^+-band considerably varied during the observations, whereas the intensities of the lines λ 5,200, 5,577, and 5,893 Å were practically constant.

Translator's note: This is the full translation of the original Russian abstract.
Card 1/1

KARYAGINA, Z.V.; TULENKOVA, L.N.

Spectrophotometric investigation of the continuous and emission
spectrum of nightglow in the visual region of the spectrum. Izv.
Astrofiz.inst.AN Kazakh.SSR 9:86-95 '60. (MIRA 13:5)
          (Night sky--Spectra)

S/033/60/037/005/012/024
E032/E514

AUTHOR: Karyagina, Z.V.

TITLE: The Energy Distribution in the Continuous Spectrum of
            Zodiacal Light

PERIODICAL: Astronomicheskiy zhurnal, 1960, Vol.37, No.5, pp.882-887

TEXT: Spectrophotometric observations of zodiacal light were
made during four nights in the Autumn of 1957 and the energy
distribution in the visible spectral region ($\lambda\lambda$ 4100-6600) was
obtained. The nebular spectrograph at the State Astronomical
Institute imeni P. K. Shternberg was used (focal ratio 1/0.7,
dispersion 1500 Å/mm at 5000 Å; Ref.5). It was found that
sufficiently strong spectra for the night sky could be obtained with
OaF plates (British Kodak) with exposures of 20 to 30 min and slit
width 0.3 cm.   The corresponding slit image on the plate was
found to be 0.004 cm or 36 Å in the region of H_γ. The spectro-
graph was set up at an altitude of about 3000 m above sea level and
the spectra of zodiacal light and the sky at an angular distance
of 20° from its axis were determined simultaneously with the aid of
a special attachment incorporating direct vision prisms (Ref.6).
The zenith distance was 70° throughout. Calibration photographs
Card 1/2

23713

S/035/61/000/004/048/058
A001/A101

3, 1540

AUTHORS: Karyagina, Z. V., and Tulenkova, L. N.

TITLE: A spectrophotometrical investigation of continuous and emission spectra of the night sky in the visual region of spectrum

PERIODICAL: Referativnyy zhurnal. Astronomiya i Geodeziya, no. 4, 1961, 70-71 abstract 4A524 ("Izv. Astrofiz. in-ta, AN KazSSR, 1959 (1960), v. 9, 86-95, Engl. summary)

TEXT: Spectra of night sky glow in region $\lambda\lambda$ 4100-6500 were photographed by means of a nebular spectrograph with a high-speed camera (1 : 0.7) and dispersion of 2,500 A/mm at λ 5600. Observations were carried out at an altitude of 3,000 m above sea level. Calibration was made by comparing with spectra of a luminophore taken at different widths of the slit, and standardization — with spectra of stars δ Cyg and β Dra; energy distribution in the spectra of the latter was determined in absolute units by comparing with energy distribution in the solar spectrum. Intensity distribution in continuous spectrum of the night sky glow in region $\lambda\lambda$ 4100-6500 was determined. Integrated brightness of the continuous background and integrated brightness of lines $\lambda\lambda$ 5577, 5893, 6300

Card 1/2

KARYAGINA, Z.V.; PARIYSKIY, N.N.

Effect of the polarization of a spectrograph on the observed
energy distribution and spectrum intensity of the zodiacal light.
Izv.Astrofiz.inst.AN Kazakh. SSSR 11:70-77 '61.   (MIRA 14:3)
(Zodiacal light)

3,5920

AUTHOR: Idlis, G.M., and Karyagina, Z.V.

32138
S/534/61/000/021/002/005
D055/D114

TITLE: The cometary nature of the Tunguska meteorite

SOURCE: Akademiya nauk SSSR. Komitet po meteoritam. Meteoritika, no. 21, 1961, 32-43.

TEXT: In conducting this study, the authors attempted to support the hypothesis that the Tunguska meteorite was the nucleus of a small comet which formed a tail before colliding with the Earth. Characteristics associated with the approach and explosion of the Tunguska meteorite are discussed and calculated. The estimated initial and final speeds of 60 km/sec and 6 km/sec indicate that the meteorite met the Earth travelling in a direction opposite to that of the Earth and the final mass of the meteorite exploded and was dispersed in the Earth's atmosphere. I.S. Astapovich (Ref.3: Priroda, no.3, 1951, 13-23) made a direct estimate of the explosive force of the meteorite at 10^{23} erg, which the authors find in agreement with their calculation figure. They estimate the change in the geomagnetic field in Irkutsk when the tail of the meteor collided with the Earth at about $3 \cdot 10^{-4}$ gauss, which agrees fairly with the direct observations of K.G. Ivanov [Abstracter's note: see abstract 004 of this set] . The geomagnetic disturbance occasioned by

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The cometary nature ...

32138
S/534/61/000/021/002/005
D055/D114

the meteor resembled an ordinary magnetic storm but was shorter. The size of the tail of the hypothetical comet was commensurate with that of the Earth, which accords with the authors' conclusion that the Earth's atmosphere captured the whole mass of the tail, consisting mainly of dust. The observed duration of the first phase of disturbance, until the horizontal component began to fall, was 32 minutes. The corresponding figure, as calculated by the authors for a hypothetical comet, is 33 mins. This disturbance has a natural explanation in a collision between the Earth and a comet and could hardly be connected with the explosion proper of the Tunguska meteorite, as K.G.Ivanov supposes. The light nights and long, bright sunsets observed in Europe and Western Siberia after the fall of the meteorite are a further indication that it was a comet. The phenomenon was not discovered before the collision with the Earth, because its tail was formed only just before the collision. Reference is made to the works of I.S.Astapovich, V.G.Fesenkov, B.Yu.Levin(Ref.9: Fizicheskaya teoriya meteorov i meteornoye veshchestvo v solnechnoy sisteme [The Physical Theory of Meteors and Meteoric Matter in the Solar System], Izd-vo AN SSSR, 1956), A.G. Kalashnikov (Ref.16: Izv. AN SSSR, seriya geofiz., no. 6, 1952, 7-20), V. Bumba(Ref.Byull. 17 astron. in-tov Chekhoslovakii, 5, no. 1, 1955, 1-5), Ye.L. Krinov (Ref. 1: Tungusskiy meteorit [The Tunguska

Card 2/3

The cometary nature ...

32138
S/534/61/000/021/002/005
D055/D114

Meteorite] Izd-vo AN SSSR, 1949) and L. Apostolov, Director of the meteor-
ological bureau of the Kubano-Chernomorskiy krayevoy institut (Kuban' and
Black Sea Regional Institute), (Ref. 24: Mirovedeniye, no. 3, 1926). There
is 1 table and 34 references, of which 27 are Soviet and 7 non-Soviet. The
3 English-language references are: F.J.W. Whipple, The Quarterly Journal of
the Royal Meteorological Society, 56, N 236, 1930, 287-304; A. Chapman and
K. Ferraro, Terrestrial Magnetism, 36, 77, 1931, 171; 37, 1932, 147;
C.W. Allen, Astrophysical Quantities, London, 1955.

Card 3/3

41161

S/169/62/000/009/108/120
D228/D307

3,5/20 '

AUTHOR: Karyagina, Z. V.

TITLE: Hydroxyl emission in the night sky spectrum according to observations at Alma-Ata

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 9, 1962, 14-15, abstract 9G122 (In collection: Polyarn. siyaniya i svecheniye nochn. neba, no. 8, M., AN SSSR, 1962, 6-8 (summary in Eng.))

TEXT: Observations of the airglow spectrum in the 6200-6600 $\overset{o}{A}$ wavelength region were carried out in the IGY period. The absolute intensities and rotational temperatures of the OH-bands (6, 1) and (9, 3) were determined from night sky spectrograms, obtained 'in the winter and the spring of 1957-1958. The rotational temperature was ascertained from the P-branch line intensities (transitions between the levels $2\Pi_{3/2}$). The results of determining the temperature and total intensities of all the band's components (P, p, Q,

Card 1/2

Hydroxyl emission in ...   S/169/62/000/009/108/120
                                             D228/D307

R) in rayleighs for 18 nights of observation are tabulated. The
average rotational temperature ascertained for both bands was
found to equal 234°K. No dependence of the OH-band intensity on
the rotation temperature was detected either for band (6, 1) or
for band (9, 3). The relative population intensity of the 9th and
6th oscillatory levels is independent of the rotational tempera-
ture in the range 200 - 250°K. /Abstracter's note: Complete trans-
lation._7

Card 2/2

S/269/63/000/004/019/030
A001/A101

AUTHOR: Karyagina, Z. V.

TITLE: Hydroxyl emission in the night airglow spectrum from observations
              at Alma-Ata

PERIODICAL: Referativnyy zhurnal, Astronomiya, no. 4, 1963, 64, abstract
              4.51.497 (In collection: "Polyarn. siyaniya i svecheniye nochn.
              neba. no. 8", M., AN SSSR, 1962, 6 - 8, English summary)

TEXT: Observations of the spectrum of night airglow in the range of wave-
lengths $\lambda\lambda$ 6,200 - 6,600 were conducted during the International Geophysical
Year. Absolute intensities and rotational temperatures of the bands of OH (6,1)
and (9,3) are determined from the spectrograms of the night airglow obtained in
winter and spring of 1957 - 1958. The rotational temperature was determined
from intensities of the P branch line (transitions between the $^2\pi_{3/2}$ levels).
The results of determinations of temperature and summary intensities of all band
components (P, p, Q, R) in rayleighs are tabulated for 18 nights of observations.
The mean value of rotational temperature, determined from both bands, turned out

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Hydroxyl emission in the night airglow spectrum...

to be 234°K. No dependence of OH band intensity on rotational temperature was discovered, either for (6,1) bands or for the (9,3) band. The relative population of the ninth and sixth vibrational levels is also independent of the rotational temperature in the range from 200 to 250°K.

N. Rudometkina

[Abstracter's note: Complete translation]

Card 2/2

KARYAGINA, Z.V.; KHARITONOV, A.V.

Use of standards in spectrophotometric observations. Energy
distribution in the spectrum of   Persei in the region
3200--J0300 Å in absolute units. Izv. AN Kazakh. SSR. Ser. fiz.-mat.
nauk no.1:32-42 '63.
(MIRA 17:4)

GINDILIS, L.M.; KARYAGINA, Z.V.

Energy distribution in the counterglow spectrum in the λ λ
3900-6500 A range. Astron.zhur. 41 no.1:116-121 Ja-F
(MIRA 17:4)
'64.

1. Astronomicheskiy institut im. P.K.Shternberga i Astrofizicheskiy
institut AN KazSSR.

KARYAGINA, Z.V.; KHARITONOV, A.V.

Energy distribution in the spectra of 17 stars expressed in
absolute energy units. Izv. AN Kazakh. SSR. Ser. fiz.-mat.
nauk no.3:10-27 S-D '64.   (MIRA 17:12)

KARYAGINA, Z.V.; MOZHAYEVA, V.Ye.

Emission spectrum of sodium in twilight. Vest. AN Kazakh.SSR 21
no.2:75-77 F '65.

(MIRA 18:3)

KARYAGINA, Z.V.; KHARITONOV, A.V.

Study on the UBV photometric system. Astron.zhur. 42 no.2:377-385
Mr-Ap '65.   (MIRA 18:4)

1. Institut astrofiziki AN KazSSR.

KAnYAKA, T.

Expansion of the building materials production base of interim building organizations. Sil'. bud. 11 no.3:10-11 Mr '61.
(MIRA 14:9)

1. Sekretar' Vasilevskogo raykoma Kommunistic'eskoy partii Ukrainy Zaporozhskoy oblasti.
   (Vesiloe District--Construction industry)
   (Collective farms--Interfarm cooperation)

KARYAKOV, YE. A.

USSR/Medicine - Fish
    Medicine - Temperature, Effects   Feb 1948

"Upper Temperature Limits of the Baykal Cottoidei," D. N. Taliyev, YE. A.
Karyakov, Baykal Limnological Sta, Acad Sci USSR, 4 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LIX, No 4

Analyses experimental study of 20 forms of Baykal Cottoidei, carried out
on 127 different fish. $T_a$bulates results for average, Maximum and minimum
temperatures. Submitted by Academician I. I. Chmal'gauzen, 10 Nov 1947.

PA 43T56

ACC NR: AP6016056   SOURCE CODE: UR/0084/65/000/011/0018/0019

AUTHOR: Belolipetskiy, A. (Engineer); Kabayev, V. (Engineer);
Karyaka, V. (Engineer)

ORG: None

TITLE: Sky giant

SOURCE: Grazhdanskaya aviatsiya, no. 11, 1965, 18-19

TOPIC TAGS: transport aircraft, turboprop aircraft, aircraft engine, /
An-22 transport aircraft, NK-12MB aircraft engine

ABSTRACT: A general description of the new transport aircraft of
An-22 type (also known as "Antey") is presented. Being designed by
O. K. Antonov's Design Office, it is considered the greatest aircraft
in the world. It is equipped with four 15000-hp turboprop engines de-
signed by N. D. Kuznetsov. Two four-blade propellers mounted on coin-
cident axes are driven by each engine. Designed for a takeoff weight
of 250 tons, the aircraft can transport a load of 80 tons over 5000 km.
Its cabin being 4.4 m high, 4.4 m wide and 35 m long is well adapted for
airlift of heavy machinery, vehicles, agricultural products and other
goods to the remotest parts of the country. The operating range of the
aircraft is 11000 km. The aircraft is provided with loading and hoist-

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BELOLIPETSKIY, A., inzh.; KABAYEV, V., inzh.; KARYAKA, V., inzh.

Sky giant. Grazhd. av. 22 no. 11:18-19 N '65   (MIRA 18:12)

ACCESSION NR: AT4041807 ·   S/2563/64/000/230/0021/0023

AUTHOR: Karyaki, Yu. Ye.

TITLE: Flow around circular lattices of circles

SOURCE: Leningrad. Politekhnicheskiy institut. Trudy*, no. 230, 1964. Tekhnicheskaya gidromekhanika (Technical hydromechanics), 21-23

TOPIC TAGS: aeromechanics, hydromechanics, hydraulics, flow, flow imposition method, circular lattice

ABSTRACT: The article evolves a complex potential for the flow around a circular lattice of circles using the flow imposition method. This is done, as shown in Fig. 1 of the En-closure, by arranging lines directed toward the origin of the coordinates, which is the source of flow, along regular lengths at some constant radius. The flow is then integrated:

$$ W = \frac{Q}{2\pi} \ln z - i\frac{M}{2\pi R} \ln \frac{R^N e^{-i\lambda V} - z^N}{R^N e^{i\lambda N} - z^N}. $$

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ACCESSION NR: AT4041807

Using polar coordinates a different expression is evolved:

$$\varphi - \frac{M}{2RQ_0} \ln \frac{R^{2N} + r^{2N} - 2R^N r^N \cos N(\lambda + \varphi)}{R^{2N} + r^{2N} - 2R^N r^N \cos N(\lambda - \varphi)} = 0.$$

In this formula N is the number of profiles in the lattice and λ is some angle. This angle may be found by using a similar solution evolved by Blokh for a straight air-foil lattice. This is done by considering that $q = \varphi_0 N/\gamma$ and $\lambda = \varphi_0 \lambda^1$; where $q = 1/t$ - the density of an equivalent straight air-foil lattice and λ^1 is one of its parameters. Calculations have shown that for a lattice density of $q = \varphi_0 N/\gamma \leqslant 0.92$, the zero flow lines may be approximated by circles with sufficient accuracy. In Fig. 2 of the Enclosure, crosses show the calculated points for a density of $q = 0.606$ (N = 20; R = 1; $r_2^* = 1.10$); a zero flow line is also shown for comparison where $q = 0.94$ (N = 20; R = 1; $r_2^* = 1.16$). This allows one to consider that formula (1) expresses the complex potential of radial flow around a circular lattice of circles with sufficient accurary. Orig. art. has: 3 figures and 2 formulas.

Card   2/5

ACCESSION NR: AT4041807

ASSOCIATION: Leningradskiy politekhnicheskiy institut im. M. I. Kalinina(Leningrad Polytechnical Institute)

SUBMITTED: 00

SUB CODE: ME .

NO REF SOV: 001

ENCL: 02

OTHER: 000

3/5

Catd

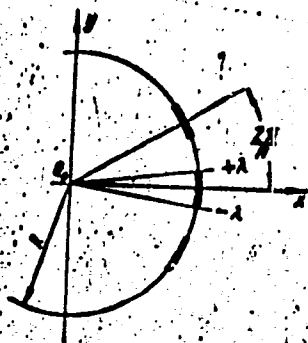Fig. 1

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ACCESSION NR: AT4041807

Fig. 2

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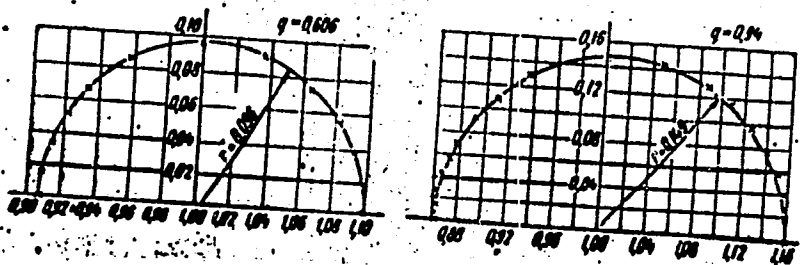Card

KARYAKIN, A. (g.Liski, Voronezhskaya oblast')

> Increased sensitivity of a transistor receiver. Radio no.2:43
> F '60.   (MIRA 13:5)
>   (Transistor radios)

KARYAKIN, A.A.; DELIYEVA, G.S.

Diagnosis of Vibrio foetus infection. Veterinariia 35 no.3:73-74
Mr '58.
                                                    (MIRA 11:3)

1. Direktor Khersonskoy oblastnoy vetbaklaboratorii (for Karyakin).
2. Zaveduyushchaya bakteriologicheskim otdelom Khersonskoy oblastnoy
vetbaklaboratorii (for Deliyeva).
          (Abortion in animals)

KARYAKIN, A. M.

36225. KARYAKIN, A. M. -- Uluchshit' ispol'zovaniye novogo oborudovaniya.
Tekstil. prom-st', 1'49, No. 11, s. 36-37.

SO: Letopis' Zhurnal'nykh Staley, No. 49, 1949

KARYAKIN, A. M.

Looms

Choice of Parameters for adjustment of looms.   Tekst. prom. no. 5, 1952

Monthly List of Russian Accessions, Library of Congress, August, 1952. UNCLASSIFIED.

KARYAKIN, A. M.

Time Study

Organize the work of time-study engineers correctly.   Tekst. prom. 12 no. 8, 1952

Monthly List of Russian Accessions, Library of Congress, November 1952. UNCLASSIFIED.

KARYAKIN, A.M., inzh.

One of the causes of stripe in woven fabrics. Tekst. prom. 25
no.7:44-45 Jl '65.   (MIRA 18:8)

KARYAKIN, A.M., dotsent   (Leningrad, Lesnoy pr. d.4, kv.22)

Perforated ulcer in the adducent loop of gastrointestinal
anastomosis. Vest. khir. 91 no.8:118-119 Ag'63
(MIRA 17:3)

1. Iz 2-y khirurgicheskoy kliniki usovershenstvovaniya vrachey
(nachal'nik - prof. I.D. Zhitnyuk) Voyenno-meditsinskoy ordena
Lenina akademii imeni Kirova.

KARYAKIN, A.M., mayor meditsinskoy sluzhby

Course and treatment of peritonitis in acute radiation sickness.
Voen.-med.zhur. no.9:79-90 S '59.   (MIRA 13:1)
         (PERITONITIS)   (RADIATION SICKNESS)

KARYAKIN, A.M.

Peculiarities of the course and treatment of diffuse peritonitis
in acute radiation sickness. Zdrav.Turk. 3 no.3:7-9 My-Je
'59.   (MIRA 12:11)

1. Iz kafedry khirurgii usovershenstvovaniya vrachoy No.2
(nachal'nik - prof.I.D.Zhitnyuk) Voyenno-meditsinskoy ordena
Lenina akademii im. S.M.Kirova.
                (RADIATION SICKNESS)
                (PERITONITIS)
                (ANTIBIOTICS)

KARyAKiN, A.M.

A.M. Maryakin, Major of the Medical Service — Course and Treatment of Peritonitis in Acute Radiation Sickness.

Experiments were performed on 202 animals (rabbits, dogs). Radiation sickness was produced by a total-body single X-irradiation; peritonitis was produced by means of infecting the abdominal cavity with the contents of a large intestine.

The treatment of the peritonitis was conducted with anti-biotics (penicillin, streptomycin) in novocaine solution. The antibiotics and the novocaine were injected into the abdominal cavity through a thin elastic rubber drain in a dose of 12,500 units of each antibiotic and 10 cubic centi-meters of 0.25 percent novocaine solution per kilogram of weight of the animal for five days three times a day (every eight hours).

Infecting the abdominal cavity with the contents of the large intestine led to the development of a diffuse perit-onitis which ended in the death of all the animals of the control groups. The microflora of the peritoneal exudate was polymorphic with a predominance of the colon bacillus.

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The early (6 and 12 hours after infection of the abdominal cavity) repeated, intraperitoneal injection of antibiotics with novocaine solution during the initial period of acute radiation sickness led to a considerable reduction in the mortality rate of the animals from peritonitis.

When the antibiotics in novocaine solution were injected into the abdominal cavity for peritonitis the penicillin and streptomycin were found in the blood for the next eight hours. The highest concentration of antibiotics in the blood was found one-half and two hours after the time of their injec-tion. The intraperitoneal injection of antibiotics in novocaine solution exerted a favorable effect on the course of radiation sickness, improving its outcome.

Voyenno-Meditsinskiy Zhurnal, No 9, 1959.

Chair of Surgery, Advanced Training of Physicians #2
Mil O.L. Med. Acad im. S.M. Kirov

KARYAKIN, A.M.

Analysis of mortality in acute diffuse peritonitis as revealed
by clinical data. Zdrav. Turk. 4 no.6:19-24 N-D '60.
(MIRA 14:1)
1. Iz kafedry khirurgii usovershenstvovaniya vrachey No.2 (nachal'nik -
prof. I.D. Zhitnyuk) voyenno-meditsinskoy ordena Lenina akademii
imeni S.M.Kirova.
(PERITONITIS)

KARYAKIN, A.M.

Absorption of antibiotics and novocaine in normal and inflamed
peritcneum. Vest.khim. 84 no.3:34-39 Mr '60.   (MIRA 13:12)
     (PERITONITIS)   (ANTIBIOTICS)   (NOVOCAINE)

KARYAKIN, A.M., dotsent

Deaminating and urea-forming function of the liver in acute
diffuse peritonitis. Vest. khir. no.10:123 '64.

(MIRA 19:1)

1. Iz 2-y khirurgicheskoy kliniki usovershenstvovaniya vrachey
(nachal'nik - prof. I.D. Zhitnyuk) Voyenno-meditsinskoy ordena
Lenina akademii imeni Kirova.

L 15737-65   EWT(m)/EWA(d)/EWP(t)/EWP(b)   MJW/JD
ACCESSION NR: AP4045656   S/0133/64/000/009/0809/0812

AUTHOR: Shved, F. I.; Khasin, G. A.; Dolinin, D. P.; Karyakin, A. P.; Veksler,
G. D.; Bakhtiarov, N. F.

TITLE: Crystallization and structure of vacuum-arc-melted ingots

SOURCE: Stal', no. 9, 1964, 809-812

TOPIC TAGS: steel, ShKh15 steel, steel vacuum arc melting, heat resistant alloy
melting, alloy vacuum arc melting, vacuum arc melting

ABSTRACT: To determine optimal conditions for vacuum-arc melting of steel and
alloys, the crystallization and structure of ShKh15 steel ingots melted in a mold
280 mm in diameter have been studied. It was found that the temperature of the
metal bath surface depends upon the current and can vary from 1540C at 3.3 kamp to
1720C at 5.6 kamp. The excess of heat dissipates rapidly from the surface into a
layer 40—60 mm thick which corresponds to the part of the ingot in contact with
the mold. Therefore, the temperature of the metal bath remains roughly constant.
Only the depth of the bath increases with increased current. In ingots 250—280 mm
in diameter melted with a current of 3—6 kamp, two structural zones were found:
a peripheral zone with fine oriented dendrites and a central zone with large

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L 15737-65
ACCESSION NR: AP4045656

oriented dendrites. The distance between dendrites, the dendritic inhomogeneity, and the content of sulfide and nitride inclusions increase with prolonged crystallization time, i.e. the time during which metal remains in the two-phase region. Nitrides and sulfides are formed as a result of dendritic segregation of impurities (titanium and nitrogen). Formation of various ingot defects is associated with a prolonged duration of the two-phase state which occurs under the effect of a sudden current drop. Dense and uniform steel and alloy ingots are obtained only with a current maintained within certain limits. Melting of ShKh15 steel in a mold 280 mm in diameter should be done with a current of 4 kamp max; melting of a heat-resistant alloy in a mold 380 mm in diameter, with a current of 4.5 kamp max. Orig. art. has: 6 figures.

ASSOCIATION: none

SUBMITTED: 00   ENCL: 00   SUB CODE: MM

NO REF SOV: 005   OTHER: 002

Card 2/2

SHVED, F.I.; KHASIN, G.A.; DOLININ, D.P.; KARYAKIN, A.E.; VEKSLER, G.R.;
     BAKHTIAROV, N.F.

Crystallization and structure of an ingot made by vacuum arc melting.
Stal' 24 no.9:809-812 S '64.   (MIRA 17:10)

KARYAGIN, A.V.; SOLOV'YEV, G.M.; TABACHNIKOVA, A.Ya., redaktor; MALYSHEVA,
Z.G., tekhnicheskiy redaktor

[Textbook for automobile enthusiasts] Uchebnik avtoliubitelia.
Izd. 7. Moskva, Gos. izd-vo "Fizkul'tura i sport," 1953. 273 p.
(MLRA 7:10)

     (Automobiles--Design and construction)
     (Automobile drivers)