The Oscillator Strength of the γ-System of NO Bands

obtained experimentally by Weber and Penner (Ref.3) is wrong, because the latter workers assumed that the γ-bands overlap very much; in fact there is very little overlap (Fig.2). Acknowledgments are made to L.M. Biberman who directed this work, and to V.A. Fabrikant for his advice. There are 2 figures, 3 tables and 12 references, of which 9 are English, 1 German, 1 French and 1 Soviet.

SUBMITTED: March 17, 1958

SOV/51-7-4-21/32

AUTHORS: Biberman, L.M., Yerzovich, S.P. and Soshnikov, V.N.

TITLE: On the Probability of a Transition in the Schumann--Runge Band System of the O_2 Molecule.

PERIODICAL: Optika i spektroskopiya, 1959, Vol 7, Nr 4, pp 562-563 (USSR)

ABSTRACT: Keck, Camm and Kivel (Ref 1) measured the absolute intensity of emission by oxygen at 4100°K at wavelengths of 3000-5000 Å. They compared the experimental data with an approximate expression for the intensity of emission given in an earlier paper (Ref 2) and concluded that the oscillator strength for the Schumann--Runge band system of O_2 is $f = 0.015$; this value is much smaller than that deduced from absorption by cold O_2, which was given as $f = 0.16$-0.26 (Refs 3, 4). Keck et al explained this large difference between the two values of the oscillator strength to be due to dependence of the probability of an electronic transition on internuclear distances. The conclusions of Keck et al are questioned by the present authors, who compare the experimental data of Keck et al with a stricter expression for the intensity of emission I_λ (Eq 3). Using the experimental values of I_λ and Eq (3), the authors calculated $R_e^2(\lambda)$, where $R_e(\lambda)$ is the electronic moment of a transition, which may depend on internuclear distance. It

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On the Probability of a Transition in the Schumann--Runge Band System of the O_2 Molecule

was found that $R_e^2(\lambda)$ falls monotonically from 1 atomic unit at $\lambda = 3000$ Å to 0.5 atomic unit at 5000 Å (see the dashed curve in a figure on p 563). These values of $R_e^2(\lambda)$ correspond to an oscillator strength f = 0.1-0.2, which agrees quite well with the values of f deduced from absorption (Refs 3, 4) and with theoretical estimates (Refs 5, 9). Using the calculated values of $R_e^2(\lambda)$ and a set of Franck--Condon multipliers $q(v', v'')$, Eq (3) was found to yield the distribution of intensities in the Schumann--Runge system between 3000 and 5000 Å at 2000, 4000, 4100 and 6000°K. These intensities are plotted as continuous straight lines in the figure on p 563. Acknowledgment is made to I.T. Yakubov who supplied his set of calculated Franck--Condon factors. There are 1 figure and 11 English references.

SUBMITTED: February 3, 1959

69834

24.6100

S/051/60/008/03/004/038
E201/E191

AUTHORS: Yerkovich, S.P., and Pisarevskiy, Yu.V.

TITLE: On the Transition Probability in the γ- and β-Systems of NO Bands

PERIODICAL: Optika i spektroskopiya, 1960, Vol 8, Nr 3, pp 303-306 (USSR)

ABSTRACT: The absolute intensities of the electron transitions to the ground level in NO molecules have recently become of great interest in connection with emission of radiation by hot air (cf Ref 1). The present paper reports calculation of the electron transition moment $R_e(r)$ for γ- and β-systems of NO bands (transition $A^2\Sigma - X^2\Pi$ and $B^2\Pi - X^2\Pi$) using the experimental data on the absorption spectra reported by Marmo (Ref 2) and Mayence (Ref 3). Calculations were carried out using the method described by Yerkovich (Ref 4), modified somewhat to allow for the strong dependence of the electron moment on internuclear distance. The electron transition moments of the β(5, 0) band (the mean internuclear distance in the v'-v" transition $\bar{r} = 1.204$ Å) were: $R_e = 0.106$-0.115 atomic units at pressures from 4 to 101 mm Hg in the case of the

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On the Transition Probability in the γ- and β-Systems of NO Bands

short-wavelength maximum of the band, and R_e = 0.109-0.120 atomic units at pressures from 4 to 101 mm Hg in the case of the long-wavelength maximum. The electron moments for the γ-system were found to be: R_e = 0.129-0.145 atomic units at p = 4-50 mm Hg in the case of the long-wavelength maximum of the γ(2, 0) band ($\bar{r}$ = 1.162 Å); R_e = 0.129-0.144 atomic units at p = 10-14.8 mm Hg in the case of the long-wavelength maximum of the γ(1, 0) band ($\bar{r}$ = 1.135 Å); R_e = 0.136-0.166 atomic units at p = 10-14.8 mm Hg in the case of the short-wavelength maximum of the γ(1, 0) band ($\bar{r}$ = 1.135 Å); R_e = 0.154 atomic units at p = 14.8 mm Hg in case of the short-wavelength maximum of the γ(0, 0) band ($\bar{r}$ = 1.108 Å).

Card 2/2

There are 1 figure, 2 tables and 11 references, of which 1 is Soviet, 6 English, 3 German and 1 Swiss.

SUBMITTED: March 24, 1959

69835

S/051/60/008/03/005/038
E201/E191

24.6200

AUTHOR: Yerkovich, S.P.

TITLE: Coefficient of Continuous Absorption of Radiation by Quasi-Molecules of Hydrogen

PERIODICAL: Optika i spektroskopiya, 1960, Vol 8, Nr 3, pp 307-311 (USSR)

ABSTRACT: On transition from the excited state $1s\sigma 2s\sigma {}^3\Sigma_g^+$ to the unstable state $1s\sigma 2p\sigma {}^3\Sigma_u^+$ a hydrogen molecule emits continuous spectrum which extends from 1800 to 4000 Å. The H_2 molecule dissociates then into two H atoms in the ground state. The converse of dissociation of an H_2 molecule, on emission of a continuous spectrum, is recombination of two H atoms on collision along the potential curve of the unstable state with absorption of light and formation of a quasi-molecule in the ${}^3\Sigma_g^+$ state. The coefficient of such continuous absorption is proportional to the number of atoms in the collision state. The present paper describes calculation of dependence of the coefficient of absorption of radiation by quasi-molecules of hydrogen as a function of temperature and the concentration of hydrogen atoms.

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69835

S/051/60/008/03/005/038
E201/E191

Coefficient of Continuous Absorption of Radiation by Quasi-Molecules of Hydrogen

It was found that in a wide range of temperatures and pressures the quasi-molecular absorption is important. Tables are constructed from which the absorption coefficient can be found under given conditions. There are 3 figures, 1 table and 10 references, of which 1 is Soviet, 1 German and 8 English.

Card 2/2

SUBMITTED: March 28, 1959

X

YERKOVICH, S.P.; PISAREVSKIY, Yu.V.

Strength of an oscillator for the δ-system of NO-bands. Opt. i spektr. 9 no.2:269-270 Ag '60. (MIRA 13:8)
(Nitrogen oxide--Spectra)

YERKOVICH, S. P.

"On the Account of Significance of Electron Transitions in Molecules at Calculation of Emissivity of High Temperature Gas Radiators."

Report submitted for the Conference on Heat and Mass Transfer, Minsk, BSSR, June 1961.

SOURCE Elektrosvyaz', no. 12 1964, 56-2

TOPIC TAGS: optical communication, laser, optical carrier

ABSTRACT: The range of a laser communication channel in outer space is

Card 1/2

L 20719-65
ACCESSION NR: AP5001370

connecting the fog diffusion factor, droplet size, and wavelength are presented; the wavelength has a decisive effect on the maximum possible range under fog conditions. Orig. art. has: 3 figures and 16 formulas.

ASSOCIATION: none

SUBMITTED: 28Feb64 ENCL: 00

SUB CODE: EC NO REF SOV: 004 OTHER: 002

Card 2/2

YERKOVICH, S.P.; PISAREVSKIY, Yu.V.; AGESHIN, F.S.

Methodology of determining the oscillator forces for electron transitions in molecules. Opt. i spektr. 17 no.1:30-34 Jl '64. (MIRA 17:9)

L 38482-66 EEC(k)-2/EWT(1)
ACC NR: AR6017254 SOURCE CODE: UR/0058/65/000/012/D071/D072

AUTHOR: Yerkovich, S. P.; Pisarevskiy, Yu. V.; Tregubov, G. A.; Ageshin, F. S.

TITLE: Optimal orientation of cubic crystals for light modulation based on the Pockels effect

SOURCE: Ref. zh. Fizika, Abs. 12D599

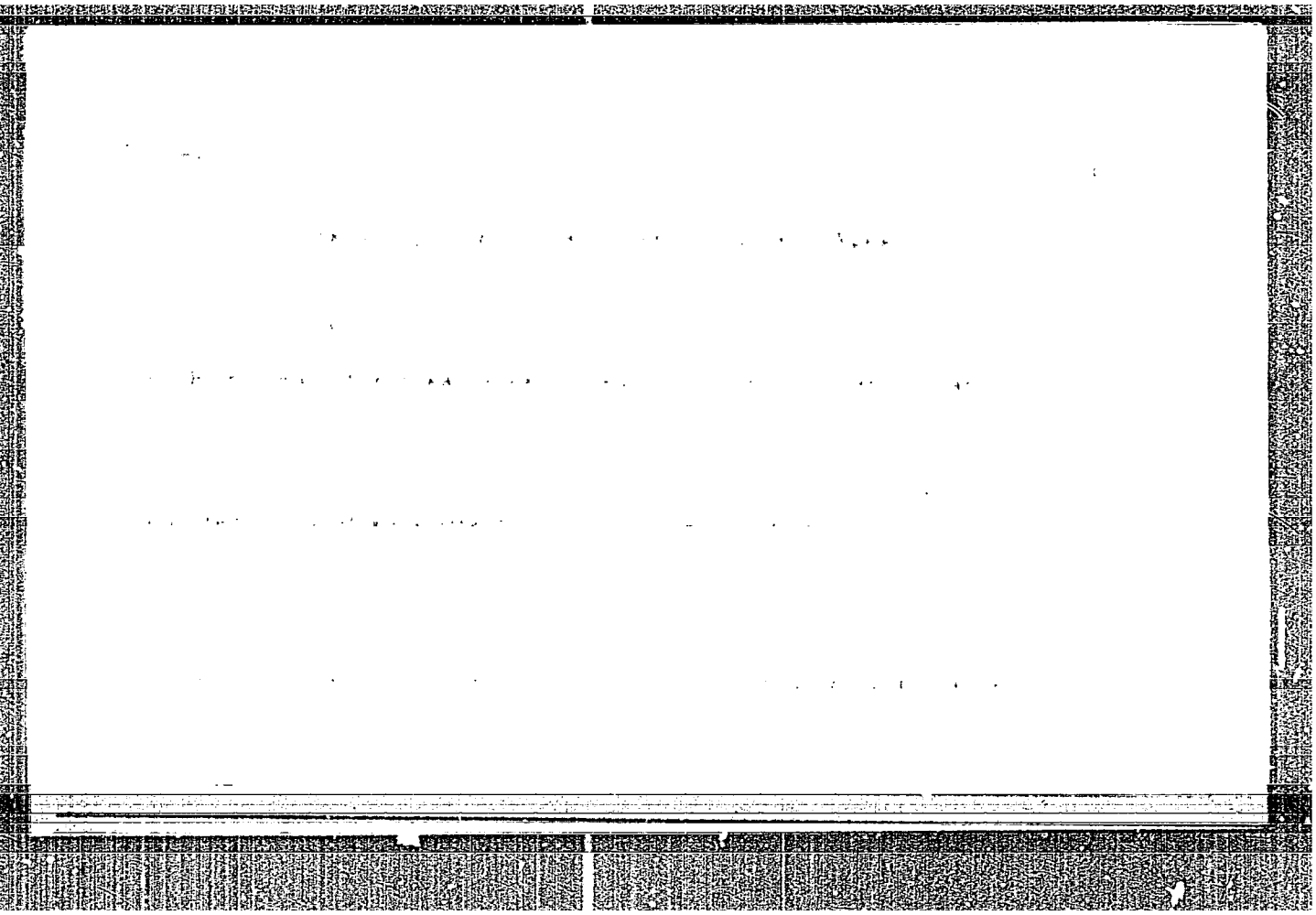
REF SOURCE: Tr. uchebn. in-tov svyazi. M-vo svyazi SSSR, vyp. 23, 1964, 103-105

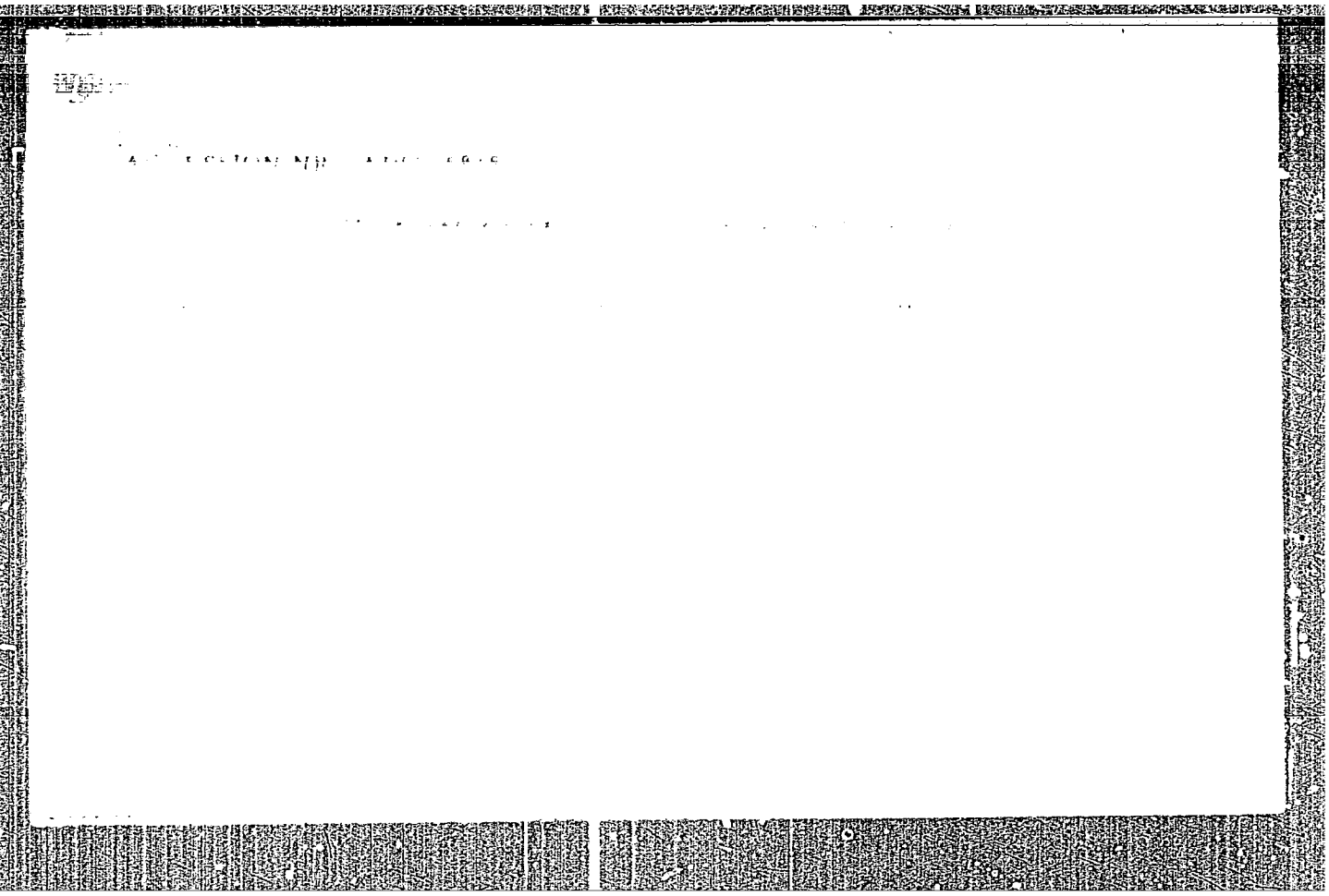
TOPIC TAGS: crystal orientation, cubic crystal, electrooptic effect, light modulation, Pockels effect

ABSTRACT: It has been shown that in electrooptical crystals of the cubic system the maximum transverse electrooptical effect takes place during crystal orientation when the vector E is perpendicular to the plane [110] and the direction of the light beam is correspondingly perpendicular to the plane [110]. [Translation of abstract] [AM]

SUB CODE: 20/ SUBM DATE: none/

Card 1/1 pb





L 2818-66 EWT(1)/T IJP(c)

ACCESSION NR: AP5016170 UR/0051/65/019/006/0979/0983
539.194.001.1

AUTHOR: Yerkovich, S. P.; Ageshin, F. S. 44,55

TITLE: Oscillater strengths for the δ, γ, and β systems of the NO bands

SOURCE: Optika i spektroskopiya, v. 18, no. 6, 1965, 979-983

TOPIC TAGS: nitrogen oxide, optic spectrum, oscillator strength

ABSTRACT: The oscillator strengths calculated by a procedure developed by the authors (Opt. i spektr. v. 9, 269, 1960 and earlier papers) are reviewed more thoroughly, as a result of a more rigorous analysis which has shown that the oscillator strength for the γ system of bands should be taken to be much lower. The new calculations were made with the experimental results published by F. F. Marno (J. Opt. Soc. Am. v. 43, 1186, 1953) and J. Mayence (Ann. Phys. v. 7, 453, 1952). Values $f_e = 0.0059$ and $f_e = 0.0058$ are obtained for the oscillator strengths in the wavelength regions corresponding to the bands δ(0, 0), γ(2, 0), and β(5, 0). The value obtained for the first band is 0.097. Orig. art. has: 27 formulas.

ASSOCIATION: none

SUBMITTED: 19Dec63 ENCL: 00 SUB CODE: OP

NR REF SOV: 004 OTHER: 010

Card 1/1

YERLEKSOVA, G.Ya.

Photographic magnitudes at maximum and minimum brightness of 109 long-period cepheids and their reference stars. Trudy Inst. astrofiz. AN Tadzh. SSR 9:66-112 '62. (MIRA 16:5)
(Stars, Variable)

SOLOV'YEV, A.V. [deceased]; YERLEKSOVA, G.Ye.

Photometric study of 26 variable stars in Orion. Biul.Inst.-astrofiz.AN Tadzh.SSR no.34:3-28 '62. (MIRA 16:5)
(Stars, Variable)

ERLEKSOVA, G. Ye.

Stars, Variable

Two new variables SPZ 1112 Oph and SPZ 1113 Oph. Per. zvezdy 8, No. 4, 1951.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

EMELYANOVA, G. Ye.

Stars, Variable

RS Leporis, Per. zvezdy 8, No. 4, 1951.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

YERLEKSOVA,G.Ye.

V 337 Aquilae. Per.zvezdy 9 no.1:86-88 S'52. (MLRA 8:10)

1. Stalinabadskaya astronomicheskaya observatoriya AN Tadzhikskoy SSR

(Stars, Variable)

ERLEKSOVA, G. Ye.

Stars, Variable

RR Leporis, Astron. tsir. No. 125, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

ERLEKSOVA, G. Ye.

Stars, Variable

Mirida 3V Draconis. Astron. tsir. No. 131, 1952.

9. **Monthly List of Russian Accessions**, Library of Congress, May 1953. Unclassified.

ERLEKSOVA, G. Ye.

Stars, Variable

Brief notes on certain variable stars, Astron. tsir. No. 131, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

ERLEKSOVA, G. E., VASIL'IANOVSKAY, O. P.

Eclipses, Lunar - 1952

Integral photometry of the lunar eclipse of August 5, 1952. Astron. tsir. no. 131, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

ERLEKSOVA, G.

Stars, Variable

Short-period Cepheid KZP 4154, Astron. tsir. No. 131, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

YERLEKSOVA, G.Ye.

Short-period Cepheid variable KP 4154. Biul.Stal.astron.obser. no.5:22-24 '53. (MLRA 7:10)
(Stars, Variable)

YERLEKSOVA, G.Ye.

Determining the solar apex relative to clouds of interstellar calcium. Biul.Stal.astron.obser. no.5:17-21 '53. (MLRA 7:10)

1. Gosudarstvennyy Astronomicheskiy institut imeni Shternberga. (Sun)

YEHLEKSOVA, G.Ye.

V499 Scorpionis. Biul.Stal.astron.obser. no.6:21-23 '53.(MLRA 7:9)
(Stars, Variable)

YERLEKSOVA, G. Ye

Solar System, Eclipse of the Moon (4272)
Byull. Stalinabadskoy Astron. Observatorii, No 7, 1953, pp 26-28
Bakharev, A. M., and Yerleksova, G. Ye.
Observations of the Full Lunar Eclipse, 29-30 January 1953

The authors compile a table of variation of illumination by the moon depending on the phase of eclipse, by using measurements by G. Ye. Yerleksova and N. N. Suslova made with a wedge photometer during clearance of clouds.

So: Moscow, Regerativnyy, Zhurnal -- Astronomiya I Geodeziya no 7, 1954 W-31059

YERLYKSOVA, G.Ye.

Short-period Cepheid KZP 4065 Sagittari. Per.zvezdy 9 no.3: 219-221 Ja '53. (MLRA 7:7)

1. Stalinabadskaya astronomicheskaya observatoriya.
(Stars, Variable)

YERLEKSOVA, G.Ye.

TZ Aquilae. Astron.tsir. no.138:9 My '53. (MLRA 7:1)

1. Stalinabadskaya astronomicheskaya observatoriya Akademii nauk Tadzhikskoy SSR. (Stars, Variable)

YERLEKSOVA, G.Ye.

Maxima of stars of the Mira type. Astron.tsir. no.138:9 My '53.
(MLRA 7:1)

1. Stalinabadskaya astronomicheskaya observatoriya Akademii nauk Tadzhikskoy SSR. (Stars, Variable)

YERLEI'SOVA, O. Ye.

Corrections for photographic magnitudes of stars of different color in relation to type of plate used. Biul. Stal. astron. obser. no. 9:13-18 '54. (MLRA 8:1)
(Astronomical photography)

YERLEKSOVA, G.Ye.

Remarks on some stars from the Catalog of Variable Stars and maxima of Mira-type stars at 12^h - 15^h. Astron.tsir. no.148: 15-16 Ap '54. (MIRA 7:8)

1. Stalinabadskaya astronomicheskaya observatoriya Akademii nauk Tadzhikskoy SSR.
(Stars, Variable)

YERLEKSOVA, G.Ye.

Brief data on 10 stars from the Catalog of Variable Stars.
Astron.tsir. no.155:14-15 D'54. (MLRA 8:6)

1. Stalinabadskaya astronomicheskaya observatoriya AN Tadzhikskoy SSR.
(Stars, Variable)

YERLEKSOVA, G.Ye.

Maxima of five Mira variables. Astron.tsir. no.155:15 D '54.
(MLRA 8:6)

1. Stalinabadskaya astronomicheskaya observatoriya AN Tadzhikskoy SSR
(Stars, Variable)

YERLEKSOVA, G.Ye.

Cepheid SS Canis Majoris. Biul.Stal.astron.obser. no.14: 32-34 '55. (MLRA 9:10)

(Stars, Variable)

YERLEKSOVA,G.Ye.

Maxima of 4 Mira variables. Astron.tsir. no.156:18-19 Ja'55.
(MIRA 8:10)

1. Stalinabadskaya astronomicheskaya observatoriya
(Stars, Variable)

YERLEKSOVA, G.Ye.

Cepheid AY Sagittarii. Per.zvezdy 11 no.1:55-58 Ja '56.
(MLRA 10:2)

1. Stalinabadskaya astronomicheskaya observatoriya.
(Stars, Variable)

YERLEKSOVA, G.Ye.

Long-period Cepheid RV Scorpidnis. Biul.Stal.astron.obser. no.15:24-28 '56. (MLRA 9:10)

(Stars, Variable)

YERLEKSOVA, G.Ye.

New long-period Cepheid KZP 4952. Astron.tsirk. no.170:18 '56.
(MLRA 9:10)
1.Stalibabadskaya astronomicheskaya observatoriya Akademii nauk Tadzhikskoy SSR.
(Stars, Variable)

YERLEKSOVA, G.Ye.

Maxima of 17 Mira variables in Sagittarius. Astron.tsirk. no.171:23-24 Jl '56. (MLRA 9:12)

1. Stalinabadskaya Astronomicheskaya observatoriya Akademii nauk Tadzhikskoy SSR.
(Stars, Variable)

YERLEKSOVA, G.Ye.

Brief remarks on nine uninvestigated stars from the KZP.
Astron.tsirk. no.171:24-25 Jl '56. (MLRA 9:12)

1. Stalinabadskaya Astronomicheskaya observatoriya.
(Stars, Variable)

YNTLEKSOVA, G.Ye.

New long-period Cepheid KZP 4952. Biul. Stal. astron. obser. no.18: 17-19 '56. (MLRA 10:6)

(Stars, Variable)

YERLEKSOVA, G.Ye.

[redacted]

Period of QQ Cassiopeiae. Astron.tsir. no.178:24 Mr '57.
(MIRA 10:9)

1. Stalinabadskaya astronomicheskaya observatoriya Akademii nauk Tadzhikskoy SSR.

(Stars, Variable)

YERLEKSOVA, G.Ye.

V 889 Aquilae. Astron. tsir. no.181:21 Je '57. (MIRA 13:3)

1.Stalinabadskaya astronomicheskaya observatoriya.
(Stars, Variable)

YERLEKSOVA, G.Ye.

DR Vulpeculae - an eclipsing variable with apsidal motion. Astron. tsir. no.182:11 Je '57. (MIRA 11:3)

1. Stalinabadskaya astronomicheskaya observatoriya AN Tadzhikskoy SSR.

(Stars, Variable)

YERLEKSOVA, G.Ye.

Normal minima of XZ Aquilae. Astron.tsir. no.184:21-22 S '57.
(MIRA 11:4)

1. Stalinabadskaya astronomicheskaya observatoriya AN Tadzhikskoy SSR.
(Stars, Variable)

YERLEKSOVA, G.Ye.

Changes in the period of XZ Aquilae. Per.zvezdy 12 no.4:293-297 Je '58. (MIRA 13:4)

1.Stalinabadskaya astronomicheskaya observatoriya.
(Stars, Variable)

YERLEKSOVA, G.Ye.

DR Vulpeculae- an eclipsing variable with apsidal motion. Per. zvezdy 12 no.4:298-305 Je '58. (MIRA 13:4)

1. Stalinabadskaya astronomicheskaya observatoriya.
(Stars, Variable)

YERLEKSOVA, G.Ye.

Eclipsing variable QQ Cassiopeiae. Biul.Inst.astrofiz.AN Tadzh.SSR no.25:23-25 '59. (MIRA 13:5)
(Stars, Variable)

YERLEKSOVA, O.Ye.

Investigating the error of the field of the "Industar-17" lens of the astrograph at the Stalinabad Astrophysical Institute. Biul.astrofiz.AN Tadzh.SSR no.26:25-27 '59.
(MIRA 13:5)

(Telescope)

YERLEKSOVA, G.Ye.; LANGE, G.A., PEROVA, N.B.; SATANOVA, E.A.; KHOLOPOV, P.N.; TSAREVSKIY, G.S.

QX Cassiopeiae. Astron. tsir. no.201:12 Ap '59. (MIRA 13:2)

1.Institut astrofiziki AN Tadzh. SSR. Odesskaya astronomicheskaya observatoriya, Gosudarstvennyy astronomicheskiy institut im. P.K. Shternberga i Astronomicheskiy sovet AN SSSR.
(Stars, Variable)

YERLEKSOVA, G.Ye.

Photographic observations of seven Cepheids. Biul. Inst.astrofiz. AN Tadzh.SSR no.29:23-44 '60. (MIRA 14:2)
(Cepheids)

YERLEKSOVA, G. Ye.; LANGE, G.A.; PEROVA, N.B.; SATANOVA, E.A.; KHOLOPOV, P.N.; TSAREVSKIY, G.S.

QX Cassiopeiae. Per.zvezdy 13 no.1:41-51 Ap '60. (MIRA 14:3)

1. Institut astrofiziki AN Tadzhikskoy SSR; Odesskaya astronomicheskaya observatoriya; Gosudarstvennyy astronomicheskiy institut im. P.K. Shternberga i Astronomicheskiy sovet AN SSSR.
(Stars, Variable)

YERLEKSOVA, G.Ye.

Photographic observations of 13 long-period Cepheids. Biul.Inst.-astrofiz.An Tadzh.SSR no.30:28-61 '61. (MIRA 15:3)
(Cepheids)

YERLEKSOVA, G.Ye.

Brightness variation of Z Andromedae in 1941-1963. Biul.Inst. astrofiz. AN Tadzh.SSR no.37:43-44 '64.

(MIRA 18:1)

MIKHAYLOVICH, S.M.; YERLEKSOVA, Ye.V.

Remote results of P^{210} injury. Med.rad. 6 no.3:54-58 '61.
(MIRA 14:5)

(POLONIUM—TOXICOLOGY)

YERLEPESOV, M.N., VOLKOV, I., red.; SHERMAN, R., otvetstvennyy za vypusk, ZLOBIN, M.V., tekhn.red.

[Molotov collective farms; work practices] Kolkhoz imeni Molotova; iz opyta raboty. Alma-Ata, Kazakhskoe gos. izd-vo, 1954. 54 p. (MIRA 11:8)

(Collective farms)

YERLEPESOV, S. N.

"Agrotechnical Methods by Which to Obtain Greater and More Reliable Crops of Cotton at the 'Pakhta-Aral' Sovkhoz." Cand Agr Sci, Sci-Res Inst of Soil Science, Kazakh Affiliate of VASKhNIL, Alma-Ata, 1953. (RZhBiol, No 4, Oct 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (10)

So: Sum. No. 481, 5 May 55

YERLETSKIY, YA. P.

USSR/Theoretical Physics - Quantum Theory of Fields. B-6

Abs Jour : Ref Zhur - Fizika, No 4, 1957, 8483

Author : Ierletskiy, Ya.P.
Inst : Institute of Nuclear Problems, Academy of Sciences, USSR.
Title : The Salam-Polkinghorne Classification and the Neuteron Charge Hypothesis.

Orig Pub : Dopl. AN SSSR, 1956, 108, No 2, 236-238

Abstract : The author reformulates the classification of elementary particles by Salam and Polkinghorne (Referat Zhur Fizika, 1956, 33814) with two quantum numbers τ_3 and μ_3; the conservation of each one individually is assumed only as strong and electromagnetic interactions. With this he employs a concept of the neutron charge $\mathcal{E}$, introduced by the author earlier (Referat Zhur Fizika, 1956, 12632) with the aid of the equation $\mathcal{E} = E - 2\tau_3$, which now is written in the form $\mathcal{E} = \mu_3 - \tau_3$. The neutron charges connected with the strangeness s by the equation

Card 1/2

USSR/Theoretical Physics - Quantum Theory of Fields. B-6

Abs Jour : Referat Zhur - Fizika, No 4, 1957, 8483

s - $\mathcal{L}$ + E + N (N is the number of antinucleons minus the number of nucleons). It is assumed that the neutron charge is conserved at strong and electromagnetic interactions. In slow processes (for example in the decay of hyperons and heavy mesons) there occurs a change in the neutron charge. Classification of the processes by change in neutron charge coincides with classification by change in strangeness.

The author believes that the approximate law of conservation of neutron charge, not necessarily connected with the assumption of the existence of isotopic spins, is, along with the exact laws of conservation of electric and nuclear charges, the most general foundation for the classification of elementary particles.

Card 2/2

YERLICHENKO, M.P. [IErlychenko, M.P.]

Painstaking care of machinery as a guaranty of success. Mekh. sil'. hosp. 14 no.11:9-10 N'63. (MIRA 17:2)

1. Inspektor gosudarstvennogo tekhnicheskogo nadzora Zuyskogo otdeleniya "Sil'gosptekhniki" Krmyskoy oblasti.

YERLIN, S.

Creative cooperation. Sov. profsoiuzy 17 no. 5:28-29 Mr '61.
(MIRA 14:2)

(Leningrad--Shipping)

BURLOVA, L.Ya.; YERLIZAROV, V.A.

Results of the study of cardiovascular diseases in industrial workers; data on morbidity with a temporary loss of work ability. Trudy LSGMI 72:5-10 '63. (MIRA 17:4)

1. Kafedra gigiyeny truda (zav. kafedroy - prof. Ye.TS. Andreyeva-Galanina) i kafedra organizatsii zdravookhraneniya (ispolnyayushchiy obyazannosti zaveduyushchego kafedroy - dotsent A.P. Mokhnenko) Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta.

YERLYKIN, A.

Experience of technical propaganda. Prof.-tekh. obr. 14 no.2:31 F '57. (MLRA 10:4)

1. Direktor tekhnicheskogo uchilishcha no.1, Petrozavodsk.
(Petrozavodsk--Technical education)

YERIKINA, N.I.

Proteins in the blood serum of rabbits and dogs affected by plutonium. Radiobiologiia 2 no.6:834-837 '62
(MIRA 16:11)

SOV/120-59-1-32/50

AUTHORS: Goryunov, N. N., Yerlykin, A. D.

TITLE: An Ionisation Chamber for Cosmic Ray Studies (Ionizatsionnaya kamera dlya issledovaniya kosmicheskikh luchey)

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 1, pp 130-131 (USSR)

ABSTRACT: A brief description is given of an ionisation chamber with a working volume in the form of a cube. In order to calculate the main parameters of the chamber it is necessary to know the distribution of the electrical field within its working volume. Since a mathematical solution of the problem is difficult the field distribution was found by means of a model. The model consists of a large number of points connected with each other, each point being common to six identical ohmic resistances r as shown in Fig 1. The working volume of the chamber is divided into 1000 cells which corresponds to 1000 model points. In this way the field may be found with an accuracy of 10%. The electric field is determined by voltmeter measurements of the voltage at the various points. Having found the resistance

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An Ionisation Chamber for Cosmic Ray Studies

between two boundary surfaces of the model the capacitance of the chamber may be found from the formula

$$C = kr/4\pi R$$

where R is the measured resistance and k is the scale factor. The chamber is shown in Fig 2. Its working volume is 25 x 25 x 25 cm^3 bounded by thin stainless steel walls 1 . The collecting electrode 2 is made of brass and is in the form of a cylinder 1 cm in diameter and 10 cm long. The collecting electrode is introduced through the ceramic insulator 3 . The chamber was filled with a mixture of 98% argon (spectroscopically pure) and 2% of nitrogen (technical) at a pressure of 830 mm Hg. The effective volume of the chamber is not less than 95% of the geometrical volume. The capacitance of the chamber found by means of the above model was

An Ionisation Chamber for Cosmic Ray Studies

found to be 2,4 pF. There are 2 figures and 3 Soviet references, 1 of which is a translation from English.

ASSOCIATION: Nauchno-issledovatel'skiy institut yadernoy fiziki MGU (Scientific Research Institute for Nuclear Physics of the Moscow State University)

SUBMITTED: January 22, 1958.

GORYUNOV, N.N.; YERLYKIN, A.D.

Wide-range discrete time-delay pulse-height converter. Prib. i tekh. eksp. 10 no.1:90-94 Ja-F '65. (MIRA 18:7)

31521
S/627/60/002/000/003/027
D299/D304

3 2410 (1559, 2705, 1805)

AUTHORS: Goryunov, N. N., Yerlykin, A. D., Zatsepin, G. T., and Kamnev, A. B.

TITLE: Study of cores of individual air showers

SOURCE: International Conference on Cosmic Radiation. Moscow, 1959. Trudy. v. 2. Shirokiye atmosfernyye livni i kaskadnyye protsessy, 71-79

TEXT: The experimental setup is described; the results of the experiments are given. The principal apparatus consists of a system of ionization chambers which operated in conjunction with the complex setup of Moscow State University (see article on p. 5, same Trudy). The ionization chambers were disposed in two rows of 60, respectively 64 chambers each. The large number of chambers made it possible to obtain a continuous pattern of ionization distribution in space. The lower row was shielded by a triple layer Pb-C-Pb. The graphite layer acted like a converter of energy (of nuclearactive particles into electron-photon energy). The energy fraction

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Study of cores ...

imparted to π^0-mesons was estimated; it was found to be approx. 0.2 to 0.37. In processing the results, the main attention was devoted to the case when the shower axis passed through the ionization chamber system. According to cascade shower theory, the axis of high-energy showers can be localized in a small region. It was found that this holds also in practice. The position of the axis was determined by two independent methods, without any discrepancy. The showers recorded during a certain time interval were represented as a "point field", whose abscissas and ordinates give the total number of particles in the shower and the energy flux in the core, respectively. In order to ascertain the relationship between the number of particles N and the corresponding mean energy flux E, the various points were averaged. It was found that for $N = 10^5$, $E = 10^4$ relativistic particles. To one and the same intensity of shower there corresponds a whole range of values E, whereby the spread of the points increases with decreasing intensity of shower. The character of the ionization distribution in the vicinity of the shower core varies. In the majority of cases, the shower has an

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elementary structure, i.e. the ionization density has one sharp maximum. In some cases, a broadening of the core was observed; thus, out of 39 showers with N 10^5, one third belong to complex-structure showers. It was found that the ionization-density distribution can be expressed (in the majority of cases) by a power law of type $\rho(r) \sim 1/r^n$, up to $r \cong 1.5$ m and various n. The lateral distribution function of the energy flux of the nuclearactive component was constructed. The mean energy flux of the nuclearactive component was found to be $4.6 \cdot 10^3$ rel. particles = $2.3 \cdot 10^{12}$ ev. This was compared with the mean energy of the electron-photon component: $2.8 \cdot 10^4$ rel. particles = $2.8 \cdot 10^{12}$ ev. Integrating the lateral-distribution function of high-energy nuclearactive particles over a radius of 2.5 m about the axis, it was found that such a circle contains 0.9 particles with an energy $>5 \cdot 10^{11}$ ev. (for showers with N = 10^5). Further, the energy spectra of nuclearactive particles in the central regions of showers of various intensity were con-

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Study of cores ...

sidered. Finally, the observed energy flux of the electron-photon component was compared with that calculated according to cascade theory. It was found that the calculated energy-flux exceeded the observed one by a factor of 3 (for r = 1.5 m), and by a factor of 8 (for r = 12 cm). There are 9 figures and 12 Soviet-bloc references.

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Sovrp. F Pribory i tekhnika eksperimenta, no. [illegible]

[illegible] pulse ionization chamber [illegible]

ABSTRACT: [illegible] a wide dynamic range of input-pulse heights are [illegible] converters with [illegible] the United States [illegible] M. F. Crouch et al. (INSJ, 1958, 8) and K Suga et al. (Rev. Sci. Instr., no. 11, 1187) is seen in the fact that they require a rigidly stabilized amplifier gain and discriminator threshold. A simpler system free from these limitations and suitable for operation with a pulse ionization chamber is suggested in the present article. This system has a dynamic range of 2000. The error of pulse-

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height determination [illegible] 10% in the [illegible] range and 20% or better for wider ranges.

SUBMITTED [illegible]

NO REF SOV. 003 OTHER. 002 ATD FREQ. 3221

L 4486-66 EWT(m)/FCC/T IJP(c)

ACC NR: AP5024654 SOURCE CODE: UR/0048/65/029/009/1757/1760

AUTHOR: Yerlykin, A.D.

ORG: none

TITLE: Energy loss by ultrarelativistic muons in electromagnetic interactions /Report, All-Union Conference on Cosmic Ray Physics held at Apatity 24-31 August 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 9, 1965, 1757-1760

TOPIC TAGS: secondary cosmic ray, muon, pair production, bremsstrahlung

ABSTRACT: The energy loss in earth (Z = 10, A = 20; Z = 13, A = 26) and water of high energy (10^{10}-10^{13} eV) muons due to bremsstrahlung and pair production has been calculated numerically with "all the corrections that are now well understood" (but not "radiative" corrections or direct interactions with atomic electrons) taken into account. One of the corrections, that for the finite size of the nucleus and screening by the atomic electrons, is discussed in some detail and it is shown that the best value of this correction for Pb^{208} is 30 % less than that found by R.F.Christy and S.Kusaka (Phys. Rev., 59,414 (1941)). Screening by atomic electrons leads to considerable energy depeudence of the bremsstrahlung loss; it is suggested that differences in calculating the screening effect may account for the discordance of the values of bremsstrahlung loss that are found in the literature. Taking proper account of high energy

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ACC NR: AP5024654

pairs and pairs in which the electron and the positron have greatly different energies leads to considerably greater pair production energy loss than has been previously assumed. The energy loss d log E/dx (E is the muon energy and x is the depth in the absorber) of 10^{12} eV muons in water due to bremsstrahlung is 10^{-6} cm^2/g, and that due to pair production is 1.36×10^{-6} cm^2/g. Orig. art. has: 11 formulas, 1 figure, and 1 table.

SUB CODE: NP/ SUBM DATE: 00/ ORIG REF: 002/ OTH REF: 007

Card 2/2

ACC NR: AP6037038 SOURCE CODE: UR/0310/66/000/011/0029/0031

AUTHOR: Yerlykin, I. (Deputy chief designer)

ORG: TsKB for Hdyrofoils (TsKB po sudam na podvodnykh kryl'yakh)

TITLE: Fundamental trends in designing hydrofoil river craft

SOURCE: Rechnoy transport, no. 11, 1966, 29-31

TOPIC TAGS: hydrofoil, shipbuilding engineering, marine engine, gas turbine ~~inland waterway transportation~~

ABSTRACT: Fundamental trends in the development of high-speed ships are discussed on the basis of recent design experience, in particular that relating to hydrofoils. The hydrofoils of the "Raketa" and "Meteor" types and of the "Burevestnik" and "Belorus" are discussed in detail, and their vital statistics are given. Further developments foresee an increase in speed to around 60 km/hr by the use of aviation gas-turbines, water-jets, and half-submerged propellers. New projects also provide for 2000 hours of service without overhaul, the increased corrosion resistance of propellers, higher strength of the hull, foils, and shafting, and improved measures against noise. Orig. art. has: 6 figures and 2 tables.

SUB CODE: 13/ SUBM DATE: none

Card 1/1 UDC: 629.124.9.040.001.2*

YERLYKIN, Lyudvig Andreyevich; SHAROGORODSKIY, S.G., red.

[Practical advice to radio amateurs] Prakticheskie sovety radioliubiteliu. Moskva, Voenizdat, 1965. 239 p.
(MIRA 18:7)

SIROTINA, Galina Nikolayevna; YERLYKINA, Irina Semenova; KALIKHMAN, L.Ye., retsenzent; SOLODKIN, V.K., redaktor; VINOGRADOVA, N.M., redaktor izdatel'stva; KRASNAYA, A.K., tekhnicheskiy redaktor

[Book of problems in hydromechanics] Zadachnik po gidromekhanike. Moskva, Izd-vo "Rechnoi transport," 1956. 132 p. (MLRA 9:10)
(Fluid mechanics--Problems, exercises, etc.)

FILIPPOV, Vladimir Grigor'yevich; YERLYKIN, L.A., red.

[Displacement digitizers] TSifratory peremeshchenii. Moskva, Voenizdat, 1965. 143 p. (MIRA 18:4)

ALFER'YEV, Mikhail Yakovlevich, prof., doktor tekhn. nauk; VELEDNITSKIY, I.O., retsenzent; YERLYKINA, I.S., red.; SHLENNIKOVA, Z.V., red. izd-va; BODROVA, V.A., tekhn. red.

[Hydromechanics] Gidromekhanika. Izd.2., perer. i dop. Moskva, Izd-vo "Rechnoi transport," 1961. 326 p. (MIRA 15:2)
(Hydraulics)

DROZDOV, Yevgeniy Afanas'yevich, kand. tekhn. nauk, dots.;
PROKHOROV, Vadim Ivanovich, kand. tekhn. nauk, dots.;
PYATIBRATOV, Aleksandr Petrovich, kand. tekhn. nauk,
dots.; YERLYKIN, L.A., red.

[Fundamentals of computer technology] Osnovy vychislitel'-
noi tekhniki. Izd.2., perer. Moskva, Voenizdat, 1964.
463 p. (MIRA 17:9)

SUPRYAGA, N.P.; YERLYKIN, L.A., inzh.-mayor, red.; MURASHOVA, L.A., tekhn. red.

[Continuous wave radar] Radiolokatsiia s nepreryvnym izlucheniem. Moskva, Voenizdat, 1963. 121 p. (MIRA 17:2)

YEVDOKIMOV, B.I.; YERLYKIN, L.A., inzh.-mayor, red.; SOKOLOVA, G.F., tekhn. red.

[Antitank rocket weapons] Protivotankovoe reaktivnoe oruzhie. Moskva, Voenizdat, 1964. 91 p. (MIRA 17:2)

ZAKHAROV, Yu.K.: YERLYKIN, L.A., red.; MEDNIKOVA, A.N., tekhn. red.

[Transistorized voltage converters] Preobrazovateli napriazheniia na poluprovodnikovykh triodakh. Moskva, Voenizdat, 1964. 101 p. (MIRA 17:3)

YERLYKINA, M.Ye.; STEPANOV, N.F.

Additivity of the π-electron energy of condensed aromatic hydrocarbons calculated by the free electron method. Zhur.strukt.khim. 4 no.1:84-90 Ja-F '63. (MIRA 16:2)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.
(Hydrocarbons) (Chemical structures)

AUTHORS: Diogenov, G. G., Yerlykov, A. M. SOV/156-58-3-3/52

TITLE: The Reciprocally Reversible System of the Acetates and Iodides of Sodium and Potassium (Obratimo-vzaimnaya sistema iz atsetatov i iodidov natriya i kaliya)

PERIODICAL: Nauchnyye doklady vysshey shkoly, Khimiya i khimicheskaya tekhnologiya, 1958, Nr 3, pp. 413 - 416 (USSR)

ABSTRACT: The reciprocal system Na, K ‖ CH_3COO, J was investigated by the visual-polythermal method. (vizual'no-politermicheskim metodom). Since the melting points of NaJ and KJ are comparatively high, only that range of the system which is close to the binary system CH_3COOK - CH_3COONa was investigated. The authors investigated: The binary system CH_3COONa - NaJ (Table 1, Diagram 1). It has a eutectic point at 23 mole% NaJ. The sodium acetate has two polymorphous modifications with the transformation point at 326°C. The binary system CH_3COOK - KJ (Table 1, Diagram 1) was also investigated. It is analogous to the former system in many respects. Potassium acetate has two modifications, its point of transformation being at

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296°C. The binary system CH_3COONa - CH_3COOK (Table 2, Diagram 1) and the binary system NaJ-KJ have been investigated by a number of authors. The diagonal sections were also investigated below the temperature of decomposition of the acetates (360° - 380°): CH_3COONa - KJ (Table 1, Diagram 2A), CH_3COOK - NaJ (Table 1, Diagram 2A). In addition , 12 different sections were investigated (Tables 2,3 and 4, Diagrams 2B, 2C and 3). Diagram 4 shows the projection of the liquidus system Na, K ‖ CH_3COO, J to the ground square; the single sections are discussed briefly. The eutectic point is at 220°, 38,5% CH_3COONa, 8% NaJ and 53,3% CH_3COOK. Another triple point is a point of passage (prokhodnaya tochka): 301°, 74% CH_3COONa, 13% CH_3COOK and 13% NaJ. There are 4 figures, 4 tables, and 7 references, which are Soviet.

The Reciprocally Reversible System of the Acetates and Iodides of Sodium and Potassium

SOV/156-58-3-3/52

ASSOCIATION: Kafedra khimii Irkutskogo gornometallurgicheskogo instituta (Chair of Chemistry of the Irkutsk Mining and Metallurgical Institute)

SUBMITTED: October 30, 1957

Card 3/3

ACC NR: AR6018962 SOURCE CODE: UR/0271/66/000/002/A009/A009

AUTHOR: Tatkin, L. Z.; Yerlykov, N. S.

TITLE: A multicircuit time delay relay using contactless elements

SOURCE: Ref zh. Avtomat telemekh i vychisl tekhn, Abs. 2A59

REF SOURCE: Tr. N.-i. proyektno-konstrukt. in-ta tekhnol. mashinostr., no. 1, 1965, 44-51

TOPIC TAGS: time relay, delay circuit, electric relay

ABSTRACT: A time delay relay using contactless circuits is described. It was developed at the NIIT mash. The relay is capable of generating sequentially up to 25 time delays from 1 sec up to 16 hr. The time delay relay is based on the pulse counter principle utilizing the MKO-LC ferrite-diode cells. The utilization of these cells assures a maximum noise immunity under workshop operating conditions. The 50 cps power frequency serves as a choke. The pulse counter counts down from the preset time interval corresponding to specific number of pulses. The desired time delay is set up by means of switches. These are calibrated to read directly in seconds, minutes, and hours facilitating easy manipulation. The relays have a relative error of 0.5%. Tests have shown them to be highly reliable. [Translation of abstract] 7 illustrations and bibliography of 4 titles. T. R.

SUB CODE: 09

Card 1/1 UDC: 621.318.563.5

YERLYKOV, S. N.

"On the Determination of Temperature Stresses in Bridge Spans of Steel Beams Joined to Reinforced Concrete Plates." Cand Tech Sci, Leningrad Order of Lenin Inst of Railroad Transport Engineers imeni Academician V. N. Obraztsov, Min of Transportation USSR, Leningrad, 1954. (KL, No 8, Feb 55)

SO: Sum. No. 631, 26 Aug 55-Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14)

GARANINA, O.P.; YEFLYKOVA, A.Ye.; GUSEV, N.K.

Antibiograms of dysenteric bacilli based on data of the Krasnoiar Territorial Sanitary Epidemiological Station. Antibiotiki 10 no.5:465-466 My '65. (MIRA 18:6)

1. Krasnoyarskiy meditsinskiy institut.

YERLYKOVA, K.L. (Krasnoyarsk)

Muskrats in captivity. Priroda 54 no.8:125 Ag '65.
(MIRA 18:8)

YERLYSHEV, P.A., podpolkovnik med. sluzhby

Treating lacrimation in pathology of the puncta lacrimalia. Voen.-med. zhur. no.11:81 N '56. (MIRA 12:1)
(LACRIMAL ORGANS--DISEASES)

YERLYSHEV, P.A. (Leningrad)

Activation of the upper lacrimal duct in an irremediable function disorder of the lower lacrimal duct. Vest.oft. 71 no.1:36-39 Ja-F '58. (MIRA 11:3)

(LACRIMAL APPARATUS, dis.
surg. of upper duct in funct. disord. of lower duct)

YERLYSHEV, P.A.

Use of elastic plastic sounds in stenosis of the lacrimal canals and the nasolacrimal duct. Vest. oft. 74 no.2:31-34 '61.
(MIRA 14:4)

(LACRIMAL ORGANS—DISEASES)