

BELIKOVA-ALDAKOVA, V.D.I.; DODONOV, V.N.; ZHERIKOVA, A.D.; ZHOGOVA, M.A.;
KLIMENKO, Ye.P.; LEVTOVA, K.Z.; MITROFANOVA, Ye.B.; PANTELEYEVA, T.B.;
SOLOV'YEVA, N.A.

Results of smallpox vaccination in various age groups. Zhur.
mikrobiol. spid. i immun. 31 no. 10:28-32 0 '60. (MIRA 13:12)

1. Iz kafedry epidemiologii I Moskovskogo ordena Lenina
meditsinskogo instituta imeni Sechenova.

(SMALLPOX)

BELIKOVA-ALDAKOVA, V.D.; BLYUMEL', N.F.; ZHARIKOVA, A.D.; PERFIL'YEVA,
Ye.B.; SOLOV'YEVA, N.A.

Causes reducing vaccinal immunity to diphtheria. Zhur.mikrobiol.
epid. i immun. 32 no.4:14-19 Ap '61. (MIRA 14:6)

1. Iz kafedry epidemiologii I Moskovskogo ordena Lenina meditsin-
skogo instituta imeni Sechenova.
(DIPHTHERIA)

BELIKOVA-ALDAKOVA, V.D.; DODONOV, V.N. (Moskva)

Increase the role of journals for subprofessional medical workers
in their sanitary and epidemiological work. Sov.zdrav. 21 no.10:
90-92 '62. (MIRA 15:10)

(EPIDEMIOLOGY--PERIODICALS)

BELIKOVA -ALDAKOVA, V.D., dotsent; DODONOV, V.N., dotsent

"Handbook on the use of vaccines and serums" by M.I. Sokolov,
P.V. Pavlov. Sov. med. 26 no.11:152-155 N°62 (MIRA 17:3)

BELIKOVA-ALDAKOVA, V. D., dotsent (Moskva)

Preventive vaccinations and the factors determining their
effectiveness. Fel'd. i akush. 27 no.6:43-47 Je '62.
(MIRA 15:7)

(VACCINATION)

BELIKOVA-AIDAKOV, V.D., dotsent

Significance of preventive inoculations in the control of
infectious diseases. Med. sestra 22 no.5:47-50 My'63.

(MIRA 16:8)

(COMMUNICABLE DISEASES --PREVENTIVE INOCULATION)

SMIRNOV, S.M.; METELKIN, A.I.; BELIKOVA-ALDAKOVA, V.D.; SOLOV'YEVA, N.A.

Book reviews and bibliography. Zhur. mikrobiol., epid. i
immun. 40 no.3:138-142 Mr '63. (MIRA 17:2)

BELIKOVA-ALLAKOVA, V.D.; DODONOV, V.N.

Teaching epidemiology at a medical faculty. Zhur. mikrobiol.,
epid. i immun. 40 no.6:58-63 Je. '63. (MIRA 17:6)

1. Iz I Moskovskogo ordena Lenina Meditsinskogo instituta imeni
Sechenova.

ZHERIKOVA, A.D.; SOLOV'YEVA, N.A.; BELIKOVA-ALDAKOVA, V.D.

Methods of teaching epidemiology at a sanitary-hygiene faculty.
Zhur. mikrobiol., epid. i immun. 40 no.6:63-67 Je '63.
(MIRA 17:6)

1. Iz I Moskovskogo ordena Lenina Meditsinskogo instituta imeni
I.M. Sechenova.

BELIKOVICH, B.A. [Belikovych, B.O.]; VISHNEVSKIY, V.N. [Vishnevs'kyi, V.N.];
LYSKOVICH, A.B. [Lyskovych, O.B.]; PIDZYRAYLO, H.S. [Pidzyrayle, H.S.]

Investigation of the distribution of an activator in NaI - Tl
crystals [with summary in English]. Ukr. fiz. zhur. 4 no.1:108-115
Ja-F '59. (MIRA 12:6)

L'L'vskiy gosudarstvennyy universitet im. Iv. Franko.
(Sodium iodide crystals) (Thallium)

24.7100, 5.1150

78109
SOV/70-5-1-18/30

AUTHORS: ~~Belikovich, B. A.~~ Lyskovich, A. B.

TITLE: Growth of NaI(Tl) Single Crystals at Doubly Controlled Temperature

PERIODICAL: Kristallografiya, 1960, Vol 5, Nr 1, pp 126-128 (USSR)

ABSTRACT: The known methods of Kyropolous and Obreimov-Shubnikov produce cylindrical single crystals of thallium-activated sodium iodide up to 50-80 mm in diam and 35-45 mm high. The height limit is related to the temperature drop necessary in the course of crystal growth. After a certain temperature drop, NaI(Tl) crystals grow along c axis much faster than along a and b; consequently, the fast-growing faces absorb hydroxyl ions which remain in the top of the crystals turbid, leaving only about 30-40 mm of their height of good quality. To avoid this, the authors used a

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Growth of NaI(Tl) Single Crystals at Doubly
Controlled Temperature

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furnace with two heaters, one at the bottom and the other on the side. By increasing the temperature of the former and decreasing that of the latter, the rate of growth could be kept within permissible limits both vertically and horizontally; by doing so, 70 by 70 mm crystals of good quality were produced. In a cylindrical furnace, 160 mm in diam and 200 mm high, they placed a metallic beaker 3-5 mm thick, and in the latter a porcelain beaker in which highly pure NaI was molten and 1% TlI added. The temperature of the side heater was dropped without changing that of the bottom heater until the growing crystal was half the size of the beaker diameter. Then the crystal was pulled periodically for 0.5-1 mm each time until the top of the crystal was about 10 mm above the melt. At this time, the bottom heater was switched on to increase the temperature from below at the rate of 2-3° C per 1° C drop of the side heater. The bottom heater was switched on to a higher temperature to melt turbid (white) spots whenever they

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Controlled Temperature

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appeared on growing crystals. The grown crystals were annealed for a few days, cooled off slowly, given a desired shape, and kept in hermetically sealed containers. A. Ye. Glauberman is acknowledged for the review of this article. There are 5 references, 4 Soviet, 1 German.

ASSOCIATION:

L'vov State University imeni I. Franko (L'vovskiy gosudarstvennyy universitet imeni I. Franko)

SUBMITTED:

July 1, 1959

Card 3/3

BELIKOVICH, B.A.

S/058/63/000/003/063/104
A059/A101

AUTHORS: Lyskovych, O. B., Vaydanych, V. I., Spitkovskyy, I. M., Belikovych, B. A., Kulyk, L. M., Cherepelyev, V. V., Maksymovych, Kh. K.

TITLE: Growing large single crystals of NaI(Tl)

PERIODICAL: Referativnyy zhurnal, Fizika, no. 3, 1963, 49, abstract 38324
("Visnyk L'vivsk. un-tu. Ser. fiz.", no. 1(8), 117 - 119, Ukrainian)

TEXT: Temperature conditions were chosen for growing optically transparent NaI(Tl) single crystals, about 140 mm in diameter and about 100 mm long. Growing was performed by the method of Kyropoulos in a furnace with lateral and bottom heaters. Corundum slag crucibles the walls of which are not wetted by the melt are used. The rate of growth is 3 to 4 mm/hour.

[Abstractor's note: Complete translation]

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L 45739-65 EEO(b)-2/EWA(c)/EWT(l)/EWT(m)/T/EWP(b)/EWP(t) PI-A NP(a)
GG/JS/JD

ACCESSION NR: AT5009627 UR/0000/64/000/000/0073/0075

AUTHOR: Vaydsnych, V. I. (Vaydanich, V. I.); Lyskovych, O. B. (Liskovich, A. B.);
Chorniy, Z. P.; Belikovych, B. O. (Belikovich, B. A.) 36
B+1

TITLE: Investigation of the dependence of microhardness on the load in sodium and cesium iodide single crystals 27

SOURCE: L'vov. Universytet. Pytannya fizyky tverdogo tila (Problems in solid state physics). L'vov, Vyd-vo L'viv. univ., 1964, 73-75 27

TOPIC TAGS: sodium iodide, cesium iodide, single crystal, thallium activation,
microhardness, load dependence, concentration dependence 27

ABSTRACT: The purpose of the investigation was to determine the influence of activators on the microhardness of sodium and cesium iodide crystals. The single crystals were grown by the Kriopolous method, and tests were made of the microhardness as a function of the applied load and of the activator concentration (thallium iodide) in a narrow concentration interval, the interval being chosen such as to obtain maximum scintillator resolution. The crystals were grown with concentrations 0.2, 0.6, 0.8, 1.2, and 1.6 wt.% of TII in the charge, corresponding to a molar ratio of thallium to sodium iodide 12.5, 16, 19, 22, and 25 x 10⁻⁵. The microhard-

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ACCESSION NR: AT5009627

ness was measured with FMT-3 instrument. The results have shown that single crystals NaI and CsI activated with thallium have a slightly higher microhardness than pure crystals. In addition, the microhardness depends on the concentration of the hydroxyl group which enters into the crystal during the process of its growth. The variation of the microhardness with load is illustrated in Fig. 1 of the Enclosure. When the molar ratio of OH^- to NaI increased from 1.19×10^{-7} to 4.6×10^{-3} , the hardness (in g/mm^2) increased from 11.0 to 13.45. In the case of CsI, the microhardness for a content of 1% by weight of TlI was 16 g/mm^2 . Orig. art. has: 1 figure and 1 table.

ASSOCIATION: None

SUBMITTED: 21 Jun 64

ENCL: 01

SUB CODE: SS, OP

HR REF SOV: 004

OTHER: 000

Card 2/3

L 8299-66 EWT(1)/EWT(m)/EWP(t)/EWP(b) IJP(c) JD

ACC NR: AP5028922

SOURCE CODE: UR/0185/65/010/011/1215/1221

AUTHOR: ^{44, 55}Byelikovich, B. O. -- ^{44, 55}Belikovich, B. A.; ^{44, 55}Lyskovych, O. B. -- ^{44, 55}Lyskovich, A. B.; ^{44, 55}Chorniy, Z. P. -- Chorniy, Z. P.

ORG: ^{44, 55}L'vov State University im. I. Frank (L'vivs'kyi derzhuniversytet)

TITLE: Investigation of energy migration in CsI and CsI(Tl) crystals

SOURCE: ²¹Ukrayins'kyi fizychnyy zhurnal, v. 10, no. 11, 1965, 1215-1221

TOPIC TAGS: ^{21, 44, 55}luminescence, luminescence spectrum, luminescent crystal, activated crystal, crystal defect, crystal lattice vacancy, ~~x ray emission~~, free electron, EPR, ~~energy theory~~

ABSTRACT: An investigation was made of the dependence of the spectral composition and the yield of x-ray luminescence of pure CsI crystals and crystals activated with TlI, NaI, and KI on temperature in the range from 100 to 300K. In nonactivated CsI crystals at room temperature, two luminescence bands were observed at 320 and 420 nm; at low temperature, new luminescence bands appeared at 327 and 347 nm. In CsI crystals activated with NaI, the intensity of the 420 nm band increased by several orders. The spectral composition of the x-ray luminescence changed, depending on the thallium concentration in CsI crystals. In CsI crystals without thallium impurities, the luminescence with maxima at 320 and 420 nm were of the same nature. This condition can be attributed to structural distortion of the crystal or distortion of the stoichiometry of the crystal. The decrease of the luminescence yield of the 320 and 420 nm bands

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ACC NR: AP5028922

was due to the absorption of energy in the lattice by other low-temperature luminescence centers such as auto-localized holes. Recombination of a free electron with an auto-localized hole apparently produced the luminescence in the region of 347 nm. This interpretation does not contradict the generally accepted hypothesis that excitation of the 347 nm band has an exciton character, since at low temperatures excitons can disintegrate into free electrons and auto-localized holes. Investigations of electron paramagnetic resonance in alkali halide crystals showed that the thallium ion at low temperature can capture an electron and thus produce a quasi-atomic thallium. At low temperature the number of free holes decreased, due to auto-localization, and the yield of the luminescence decreased while the lattice luminescence in the 347 nm region increased. With the rise of the activator concentration the number of auto-localized holes sharply increased, causing a still larger decrease of activated luminescence. The luminescence in the region of 347 nm does not appear because of the small concentration of free electrons resulting from capture by the activator ions. Orig. art. has: 6 figures. [JA]

SUB CODE: 20/ SUBM DATE: 15Dec64/ ORIG REF: 007/ OTH REF: 010/ ATD PRESS: 4/149

OC
Card 2/2

ARTEM'YEVA, G.M.; BELIKOVICH, V.V.; BENEDIKTOV, Ye.A.; YERUKHIMOV, L.M.;
KOROBKOV, Yu.S.

Measurements of the absorption of cosmic radio emission during
the solar eclipse of February 15, 1961. Geomag.i aer. 2 (MIRA 15:11)
no.1:58-60 Ja-F '62.

1. Gor'kovskiy gosudarstvennyy universitet, Radiofizicheskiy
institut.

(Cosmic rays)

(Eclipses, Solar)

BELIKOVICH, V.V.; BENEDIKTOV, Ye.A.; YERUKHIMOV, L.M.

Results of observations of the discrete source Cygnus-A at large
zenithal angles. Izv.vys. ucheb. zav.;radiofiz. 4 no.6:993-
1003 '61. (MIRA 14:12)

1. Nauchno-issledovatel'skiy radiofizicheskiy institut pri
Gor'kovskom universitete.

(Radio astronomy)
(Ionospheric research)

42157

S/203/62/002/001/005/019
I023/I223

3.1800

AUTHORS: Artem'yeva, G.M., Belikovich, V.V., Benediktov, Ye.A.,
Yerukhimov, Z.M. and Korobkov, Yu.S.

TITLE: Measurements of cosmic radioemission absorption
during the solar eclipse on February 15, 1961

PERIODICAL: Geomagnetizm i Aeronomiya, v.2, no.1, 1962, 58-60

TEXT: During the solar eclipse of February 15, 1961 observations of the cosmic radioemission were made in Yevpatoriya at the following frequencies: 25, 18.6 and 13 Mcs, and in Gor'kiy at 25 and 13 Mcs. Such measurements were omitted during previous eclipses. The purpose of the present measurements is to discover any decrease in the absorption of cosmic radioemission caused by the solar eclipse and to differentiate between the absorption of different layers. The apparatus used in both places was identical. The receiving antennas consisted of six wave ^{dipoles} vibrators. The maximum ~~direction diagram~~ ^{direction diagram} was pointed to the zenith, and the width at half power was 30°. The measurements were conducted for 10-12

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S/203/62/002/001/005/019
I023/I223

Measurements of cosmic radioemission...

days, before and after the eclipse. Data from the five days, on which f_oF_2 was not much different from its value on the eclipse day, were used for further analysis. The variations of the absorption during the eclipse are presented graphically. In Gor'kiy at 25Mc/s no effect was observed within experimental errors. The maximum decrease of the absorption is shifted several minutes with respect to the maximum of the eclipse. The lag is near to the value of relaxation time in the D-layer. In Yevpatoriya a second, smaller maximum, lagging by approximately 30 min, was observed. This maximum is probably connected with changes in the absorption in the F-layer, where the relaxation time is much longer than in the D-layer. The ratio of the maximum changes of the absorption in Gor'kiy and in Evpatoriya is approximately equal to the ratio of the Solar zenith angles cosines. The main reason for the changes in the absorption are changes in the electron density in the D-layer. There are 2 figures and 1 table.

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S/203/62/002/001/005/019
I023/I223

Measurements of cosmic radioemission...

ASSOCIATION: Gor'kovskiy gosudarstvennyy universitet,
Radiofizicheskiy Institut (Gor'kiy State
University, Radiophysical Institute) X

SUBMITTED: October 25, 1961

Card 3/3

BELIKOVICH, V.V.; KUNILOV, M.V.

Method for the quadratic transformation of signal amplitudes.
Prib. i tekhn. eksp. 9 no.1:115-116 Ja-F '64. (MIRA 17:4)

1. Nauchno-issledovatel'skiy radiofizicheskiy institut
Gor'kovskogo gosudarstvennogo universiteta.

ARTEM'YEVA, G.M.; BELIKOVICH, Y.V.; BENEDIKTOV, Ye.A.; YERUKHIMOV, L.M.;
ITKINA, M.A.; KOROBKOV, Yu.S.

Results of observations of intensity fluctuations of discrete
sources at low frequencies. Geomag. i aer. 3 no.5:835-840 S-
0 '63. (MIRA 16:11)

1. Radiofizicheskiy institut pri Gor'kovskom gosudarstvennom
universitete.

ACCESSION NR: AP4043258

S/0203/64/004/004/0788/0791

AUTHOR: Belikovich, V. V., Itkina, M. A., Rodygin, L. V.

TITLE: Determination of the electron concentration profile in the lower ionosphere from the frequency variation of absorption

SOURCE: Geomagnetizm i aeronomiya, v. 4, no. 4, 1964, 788-791

TOPIC TAGS: aeronomy, ionosphere, ionospheric electron concentration, ionospheric absorption, radio wave absorption, radiophysics, radioastronomy

ABSTRACT: Interest recently has increased in the method of determining the $N(h)$ profile in the lower ionosphere from measurements of radio wave absorption at a number of frequencies. This method is based on the solution of an integral equation of the following form relative to $N(h)$:

$$\Gamma(\omega) = 2A \int_0^{h_0} \frac{N(h)v(h)}{v^2(h) + \omega^2} dh \quad \left(2A = \frac{4\pi e^2}{mc} \right) \quad (1)$$

where $\Gamma(\omega)$ is the integral absorption of radio waves of the frequency ω in the ionosphere to the height h_0 ; $N(h)$ is the electron concentration at height h ; $v(h)$ is the effective frequency of electron collisions at height h ; and A is a numerical

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ACCESSION NR: AP4043258

factor. The solution of equation (1) has been obtained by other authors in the form of a polynomial of h , which does not correspond fully to real electron concentration profiles. The authors of this article have inverted equation (1), that is, a general formula has been derived for finding the $N(h)$ profile from the $\Gamma(\omega)$ curve. A precise solution is obtained by use of a formula derived in the text, but an approximate formula, more convenient to use, is derived for practical purposes. Two examples of the use of this formula are given. It is noted that determination of the electron concentration in the region of heights 40-80 km requires absorption measurements in a very broad frequency range. Such measurements cannot be made by only a single method; it is desirable to make the measurements by both radioastronomical and pulse sounding methods. The radioastronomical method can be used for measurements at frequencies of > 5 Mc/s, corresponding to heights of 65 km and below. Considerable ionization at these heights arises at the time of strong ionospheric disturbances. It can be determined from data on anomalous absorption. At frequencies below 5 Mc/s absorption can be measured by the pulse sounding method. "The authors wish to thank Ye. A. Benediktov and N. A. Mityakov for criticism and useful comments." Orig. art. has: 13 formulas, 2 figures and 1 table.

ASSOCIATION: Radiofizicheskiy Institut pri Gor'kovskom gosudarstvennom universitete (Radiophysics Institute at Gor'kiy State University)

Card 2/3

ACCESSION NR: AP4043258

SUBMITTED: 04Jan64

SUB CODE: ES

NO REF SOV: 005

ENCL: 00

OTHER: 001

Card 3/3

L 23279-66 FBD/EWT(1)/FCC/EWA(h) : GW/RS-2

ACC NR: AP6011921

SOURCE CODE: UR/0141/66/009/002/0399/0400

AUTHOR: Belikovich, V. V.; Benediktov, Ye. A.

ORG: Scientific Research Institute of Radio Physics at Gorky State University
(Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete)

TITLE: Additional absorption of cosmic radio emission in the ionosphere during the ionospheric disturbance of 18 April 1965

SOURCE: IVUZ. Radiofizika, v. 9, no. 2, 1966, 399-400

TOPIC TAGS: radio wave absorption, ionospheric radio wave, cosmic radiation, ionospheric absorption

ABSTRACT: Preliminary findings on the polar-type anomalous absorption recorded at the Zimenki station on 18 April 1965 are reported. Measurements of cosmic emission intensity were made at 24.6, 13.0, 8.9, and 8.5 Mc. Antenna radiation patterns for the frequencies of 24.6 and 13.0 Mc were $25^\circ \times 18^\circ$ at the half-power points. For 8.5 and 8.9 Mc, they were $25^\circ \times 35^\circ$ and $5^\circ \times 8^\circ$, respectively. The anomalous absorption began at 0950 hours Moscow time and lasted till 1000 hours. The intensity of the anomalous absorption reached 1.5--2 db at 8.5 and 8.9 Mc; at 13 Mc it was two or three times less. At 25.0 Mc, absorption intensity was about 0.2 db. Within the limits of measurement error, these values are in accordance with the law of the inverse dependence of absorption on the square of the operating frequency. It is

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UDC: 621.371.177

L 23279-66

ACC NR: AP6011921

pointed out in conclusion that the occurrence of polar type absorption in the middle latitudes is very rare. The author is grateful to A. A. Beloborodova for her assistance in processing the data. [CS]

SUB CODE: 17/ SUBM DATE: 04Oct65/ ORIG REF: 002/ ATD PRESS: 4231

Card 2/2 *U.R.*

L 05421-67 EST(1)/FCC GW

ACC NR: AP6018928

SOURCE CODE: UR/0203/66/006/003/0600/0602

AUTHOR: Belikovich, V. V.; Benediktov, Ye. A.; Tolmacheva, A. V.

44
B

ORG: Institute of Radio Physics, Gor'kiy State University (Radiofizicheskiy institut pri Gor'kovskom gosudarstvennom universitete)

TITLE: A possible interpretation of the frequency dependence of anomalous absorption of cosmic radiation

SOURCE: Geomagnetizm i aeronomiya, v. 6, no. 3, 1966, 600-602

TOPIC TAGS: cosmic radiation, radio wave absorption, magnetic storm, ionospheric absorption

ABSTRACT: The authors have proposed their own explanation, based on a nonuniform or heterogeneous ionization region in the horizontal plane, of the test results for the anomalous absorption of cosmic radiation in the ionosphere on several fixed frequencies observed during three world-wide magnetic disturbances, cited in a previous paper (Ye. A. Benediktov, Yu. S. Korobkov, A. V. Tolmacheva. Geomagn. i aeronomiya, 1965, 5, no. 4, 698). On the assumption that the radiation is uniformly distributed over the sky and by substituting for the

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UDC: 550.388.2

L 05121-67

ACC NR: AP6018928

real radiation pattern of the antenna a certain effective pattern described only by the solid angle Ω_0 , formulas are obtained for the recorded level of cosmic radiation and for the ratio of the quantity of absorption as measured radio-astronomically to the "true" quantity. It is shown that the problem of determining the frequency dependence of anomalous radio wave absorption in the ionosphere becomes vastly more complex, unless additional information is available regarding the degree of ionization homogeneity in the horizontal direction. Using the formula obtained, an attempt is made to define the heterogeneous structure of the ionization region through a computation of the frequency function $\Gamma(\omega)$ on the basis of data from the three magnetic storms. The examples given show that the presence of a nonuniformly structured anomalous ionization region can significantly distort radio-astronomically derived information regarding the altitudes at which radio waves passing through the ionosphere are subject to maximum absorption. Orig. art. has: 2 figures and 3 formulas.

SUB CODE: 04/^{03/} SUBM DATE: 28Oct65/ ORIG REF: 002/ OTH REF: 002

Card 2/2 *fh*

ACC NR: AP6032699

SOURCE CODE: UR/0203/66/006/005/0940/0942

AUTHOR: Belikovich, V. V.; Benediktov, Ye. A.

ORG: Radiophysical Institute of Gor'ki State University (Radiofizicheskiy institut pri Gor'kovskom gosudarstvennom universitete)

TITLE: Frequency dependence of additional absorption of cosmic radio waves during sudden ionospheric disturbances

SOURCE: Geomagnetizm i aeronomiya, v. 6, no. 5, 1966, 940-942

TOPIC TAGS: ionospheric disturbance, ionospheric propagation,
COSMIC RAY, IONOSPHERIC ABSORPTION

ABSTRACT: Absorption of cosmic radiation in the ionosphere during magnetic storms at frequencies of 5.7, 8.7, 13.2, 18.6, and 25 Mc has been studied in previous papers. This paper describes an additional study of absorption at the above frequencies during sudden ionospheric disturbances. Absorption was measured in sets of two frequencies during 1959-1960 25 Mc and 18.6 Mc and on all five frequencies in 1963 near Gor'ky. The antennas used had similar directivity characteristics ($25^\circ \times 35^\circ$ at half power points) with a maximum at the zenith, except in 1963, when antenna aperture areas for 13.2 and 25 Mc were doubled. The measuring equipment consisted of P-250 high-frequency amplifiers and output and recording circuits. Output circuits noise-limited and

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UDC: 550.388.2

ACC NR: AP6032699

used square-law detection of the signal, which was then recorded by EPP-09 automatic tape recorders at speeds of 240 and 120 mm/hr. Hourly calibration of the measuring equipment was made using a noise generator. Absorptions for the two received frequencies were plotted (absorption of higher frequency as abscissa and that of the lower as ordinate) on the same graph as the calculated value. A comparison of the experimental curves with the calculated ones indicates that no additional absorption occurs at altitudes of 50—60 km and below during sudden atmospheric disturbances. Orig. art. has: 4 figures and 1 formula.

SUB CODE: 04, 20/ SUBM DATE: 17May65/ ORIG REF: 007/ OTH REF: 002

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10

L 65295-65 EWT(d)/EWT(1)/FS(v)-3/PSS-2 TT/AST/OW

ACCESSION NR: AP5021255

UR/0293/65/003/004/0618/0629
629.195.2:621.39

AUTHORS: Getmantsev, G. G.⁴⁴; Kalashnikov, N. I.⁴⁴; Bykov, V. I.⁴⁴; Banadiktov, Ya. A.⁴⁴
Yerukhinov, B. M.⁴⁴; Belikovich, V. V.⁴⁴; Bakhnin, V. M.⁴⁴; Kantor, L. Ya.⁴⁴; Korobkov,
Yu. S.⁴⁴; Kunilov, H. V.⁴⁴; Mityakov, N. A.⁴⁴; Puzylev, I. M.⁴⁴; Rapoport, V. O.⁴⁴; Sigalov,
A. G.⁴⁴; Cherepovitskiy, V. A.⁴⁴; Akim, E. A.⁴⁴

TITLE: The results of an experiment on radio communications⁵⁵ via "Echo 2"⁴⁴ and the moon at a frequency of 162.4 megacycles between the observatories of Jodrell Bank and Zimenki

SOURCE: Kosmicheskiye issledovaniya, v. 3, no. 4, 1965, 618-629

TOPIC TAGS: moon, satellite communication⁵⁵, radio telescope, radio transmission, satellite tracking, scientific research coordination / Jodrell Bank radio telescope, Zimenki observatory radio telescope, BESM 2 electronic computer

ABSTRACT: During February-March 1964 the Academy of Sciences of the SSSR, NASA of the USA, and the General Post Office Department of Great Britain conducted an experiment to establish one-way radio communication at 162.4 megacycles via the passive satellite "Echo-2" and the moon. Echo-2 was used for 34 communication

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ACCESSION NR: AP5021255

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tests of 10-15 minutes (the time interval permitted by Echo's orbit), and the moon was used for 15 test runs between the Echo tests. The transmitting equipment at Jodrell Bank and the receiving unit of the Zimenki Observatory are described in detail. Echo orbit information furnished by NASA, visual observations, and radio tracking data from fixed stations were fed to a BESM-2 electronic calculator which provided programmed tracking control. The received signal exhibited strong fluctuations separable into two periods: 1) a 1-2 minute fluctuation associated with Echo-2 distortion from a sphere and with tracking errors; 2) a 3-10 second period associated with small surface irregularities. The rapid fluctuations varied with each test. Voice signals, slowed by a factor of 8, were barely intelligible. Telegraph, teletype, and photofacsimile transmission, in general, were unsatisfactory, but in periods of high signal-to-noise ratios intelligible messages were received. The moon transmissions were not as clear but did furnish scientific information. Unexpected transmission losses included 3-5 db for polarization losses and 1-2 db for unknown causes. The international cooperation was excellent, with the Soviet submitting a complete report. Offers for further cooperation have been extended. Orig. art. has: 3 tables, 7 figures, and 4 formulas.

ASSOCIATION: none

SUBMITTED: 18Apr65

NO REF SOV: 000

Card 2/276

ENCL: 00
OTHER: 002

SUB CODE: AA, EC

BELILOVSKIY, M.A.

Reciprocating motor for medical apparatus. Trudy VNIMIO no.3:
182-191 '63 (MIRA 18:2)

BEILLOVSKIY, M.A.; GAL'PERIN, Yu.Sh.; SOMS, M.K.

Analysis of activating devices used in biologically controlled
artificial respiration. Nov. med. tekhn. no.3:125-133 '65.

(MIRA 19:1)

BELIKOVSKIY, Ye.S., gornyy inzh.; DOLGIY, N.N., gornyy inzh.; KOSTIN, G.P.,
gornyy inzh.; PARFENENKO, Ye.P., gornyy inzh.; KHOR'KOV, gornyy inzh.

Multichannel industrial television on a cage hoist. Ger. zhur. no.3:
61-63 Mr '62. (MIRA 15:7)

1. Nauchno-issledovatel'skiy gornorudnyy institut, Krivoy Rog.
(Industrial television) (Mine hoisting)

ACC NR: AP6018717

SOURCE CODE: UR/0193/66/000/004/0038/0040

AUTHOR: Balilovskiy, Ye. S.; Potorocha, G. T.

ORG: none

TITLE: Device for automatic control of the movement of information carrying tapes
on an "Ural-2" digital electronic computer 160

SOURCE: 'Byulleten' tekhniko-ekonomicheskoy informatsii, no. 4, 1966, 38-40

TOPIC TAGS: digital computer, ~~computer~~, electronic computer, ~~computer center~~,
magnetic tape, automatic control, automatic control design, control circuit, computer
storage device

ABSTRACT: This device was developed at the computer center of the Scientific Research Institute of Mining (Nauchno-issledovatel'skiy gornorudnyy institut). It can be used on ETsVM "Ural-2" computers as well as on other computers utilizing perforated tapes as information carriers. Its circuit is quite simple, it has no movable electromechanical contacts, and it operates efficiently at considerable fluctuations in feed voltage. The principle of its operation is based on the fact that continuous reading of the perforations is the source of information on the tape movement. This discrete information is converted to a control signal which stops the

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UDC 681.142.62

ACC NR: AP6018717

tape-winding mechanism at tape break. The device controls the operation of the tape-winding mechanisms, it sends the signal for switching on the tape-winding mechanism as well as for switching off after tape breaks or completion of information transcriptions. Application of this device drastically reduced the idleness of computers resulting from information failure during tape breaks, and improved the operating conditions of the computers. The principal circuit of the device and a detailed description of its operation are included in this article. Orig. art. has: 1 figure.

SUB CODE: 09/ SUBM DATE: none

Card 2/2

BELILOVSKAYA, K. I., kand. tekhn. nauk; NAUMENKO, V. S., inzh.

Comprehensive mechanization of the operations in laying
streetcar tracks and making major repairs on them. Nov.
tekh. zhil.-kom.khoz.:Gor.dor.-most.khoz. 1 transp. no. 2:
64-78 '63. (MIRA 17:5)

BELILOVSKIY, M.A.

New method for obtaining several ranges in measuring electric current.
Izm.tekh. no.12:40-41 D '61. (MIRA 15:1)
(Electric measurements)

BELILOVSKIY, Ya.Ye.; MOTORKINA, Ye.G.

Refractometric method of determination of the alcohol concentration
in pharmaceutical preparations. Ayt. de' o. 11 no.5:64-66 S-0 '62.
(MIRA 17:5)

1. Bryanskaya kontrol'no-analiticheskaya laboratoriya.

BELILOVSKIY, Ya.Ye.

Mercurimetric titration in pharmacy internal control. Apt.
delo 12 no.2374-75 Mr-Ap '63. (MIRA 17:7)

1. Kontrol'no-analiticheskaya laboratoriya Bryanskogo aptech-
nogo upravleniya.

ACC NR: AP5023272

UR/0302/05/000/003/0031/0033
681.142.004:681.142.652.35

AUTHOR: Bellilovskiy, Ye. S.⁴⁴; Potorocha, G. T.⁴⁴

42
03

TITLE: A device for automatic arrest of the tape-advancing mechanism of the "Ural-2" electronic digital computer

SOURCE: Avtomatika i priborostroyeniye, no. 3, 1965, 31-33

TOPIC TAGS: punched paper tape, digital computer, computer circuit, electric relay

ABSTRACT: During introduction of data into computers by means of perforated tape one often encounters breaks followed by unreeling and partial destruction of the tape. To avoid such extended damage, the authors developed a device which automatically stops the perforated tape in case of breaks. Its operation is based on a tape motion control by continuous information recording from its perforation. An interruption of pulse arrivals from the photodiode actuates a relay which stops the tape-advancing mechanism. The article describes the circuitry as well as the operation of the entire device. The article developed in conjunction with the "Ural-2" computer but may be used with any other machine using a 35-mm perforated tape. Orig. art. has: 2 figures.

ASSOCIATION: none

Card 1/2

L 4498-66

ACC NR: AP5023272

SUBMITTED: 00

ENCL: 00

SUB CODE: DP, EC

NO REF SOV: 000

OTHER: 000

Card 2/2

BELILOVSKIY, Yefim Solomonovich; BOGUSLAVSKIY, Eduard Yelizarevich;
FINUS, Mark Semenovich; VOLOPIN, Aleksey Pavlovich; KUNIN,
Iziaslav Kopelovich, SELEKTOR, Spartak Mikhaylovich; CHUB,
Vasiliy Fedoseyevich; YANKOVOY, Grigoriy Tikhonovich; DMITRIYEV,
A.P., otv. red.; KOVAL', I.V., red. izd-va; MAKSIMOVA, V.V., tekhn. red.

[Improvement of underground mining methods and equipment in the
Krivoy Rog Basin] Sovershenstvovanie tekhniki i tekhnologii pod-
zemnoi dobychi rudy v Krivorozhskom basseine. [By] E.S. Belilov-
skii i dr. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po gornomu
delu, 1961. 238 p. (MIRA 15:3)

(Krivoy Rog Basin--Iron mines and mining)
(Automatic control)

33216

S/141/61/004/006/001/017
E032/E114

3,1730 (1126, 1127, 1128)

AUTHORS: Belikovich, V.V., Benediktov, Ye.A., and
Yerukhimov, L.M.

TITLE: Results of observations of the discrete source
Cygnus-A at large zenith angles

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy,
Radiofizika, v.4, no.6, 1961, 993-1003

TEXT: This paper was first read at a conference of
MV i SSO SSSR on radioelectronics at Khar'kov in 1960.
The authors report results of measurements of the relative
intensity of the radio emission due to the Cyg-A source on
29.7 Mc/sec which were carried out at Gor'kiy in 1959-1960. The
results correspond to zenith angles of the order of 80°. The
interferometer employed had a base length of 20λ , and a beamwidth
at half power points was 11° and 13° in the horizontal and
vertical planes respectively. Signals from the rhombic antennas
were passed through a pre-amplifier and separate mixers with a
common heterodyne operating on a frequency of 6.5 Mc/sec. One
of the heterodyne channels contained an electronic phase
Card 1/3

f

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Results of observations of the ...

S/141/61/004/006/001/017
E032/E114

reversing switch (operating at 29 cps). The mixers were followed by an i.f. amplifier with a passband of 10 Kc/sec, a square law detector and a heterodyne filter linked with the phase reversing switch. The signals were recorded by a pen recorder with a time constant of 3 sec and a chart speed of 720 mm/r. Fig.3 shows the results obtained during the entire period of observations. Arrows indicate those cases where the radio rise of the source was noted during the observations. The arrows pointing in the downward direction represent radio setting of the source. It is clear from Fig.3 that there is a very considerable spread in the intensity of the source. Analysis of these results has shown that the reduction in the signal level during magnetically quiet days was due to the usual absorption mechanism involving electron-ion and electron-molecule collisions. The reduction in the intensity is well correlated with the degree of magnetic disturbance, particularly at night during winter months. During this period considerable phase distortions were also observed. The variation in the intensity is closely related to the scattering of radio waves by electron density irregularities in the upper layers of Card 2/8 3

Results of observations of the ...

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S/141/61/004/006/001/017
E032/E114

the ionosphere. It is suggested that the explanation of the anomalous effects during magnetoactive days should be sought in the interaction between corpuscular streams and the ionosphere near and above the F-layer maximum.

Acknowledgments are expressed to G.G. Getmantsev for interest and assistance.

There are 8 figures, 3 tables and 5 references; 3 Soviet-bloc and 2 non-Soviet-bloc. The English language reference reads as follows: Ref.1: H.I.A. Chivers, I.S. Greenhow.

J. Atm. Terr. Phys., v.17, 1, 1959.

ASSOCIATION: Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete
(Scientific Research Radiophysics Institute at Gor'kiy University)

SUBMITTED: March 8, 1961

Card 3/0 3

BELIKOVSKIY, A. S., PROF

USSR/Petroleum - Analysis

Jun 1947

"Conditions Governing the Production of Sulfurous Compounds and Sulfur in Petroleum,"
Ye. F. Rubakova, Prof A. S. Belikovskiy

"Neftyanoye Khozyaystvo" Vol 25, No 6

Tables showing the sulfuring of unstaured hydrocarbons (polymers) by hydrogen sulfide gas and the sulfuring of methane hydrocarbons by H₂S. Tables showing the sulfuring of benzol by H₂S and the sulfuring of isooctane by H₂S in the presence of Tavtimonovsk clay.

PA 9T86

SOSYANTS, Vasilii Georgiyevich; BELILOVSKAYA, Kseniya Iosifovna;
NAUMENKO, Valentin Sergeyevich; PROKHOROV, Aleksandr
Nikolayevich; LUCHAY, G.A., red.; RACHEVSKAYA, M.I.,
red.isd-va; SALAZKOV, N.P., tekhn. red.

[Over-all mechanization of labor-consuming processes in
the construction and overhauling of streetcar tracks] Kom-
pleksnaia mekhanizatsiia trudoemkikh protsessov pri
stroitel'stve i kapital'nom remonte tramvainykh putei. Mo-
skva, Izd-vo M-va kommun.khoz.RSFSR, 1963. 78 p.

(MIRA 16:8)

(Street railways--Track)

BELILOVSKIY, Ye.S., inzh.

Television set on rolling mills. Stal' 20 no.9:834-835 S '60.
(MIRA 13:9)

1. Nauchno-issledovatel'skiy gornorudnyy institut.
(Rolling mills) (Industrial television)

BELIMA, A.S. [Belima, O.S.] (Kiyev)

Probability criterion of the evaluation of the error of quantization
in respect to time for discrete adaptive information gathering and
processing systems. Avtomatyka 7 no.5:14-26 '62. (MIRA 15:11)
(Information theory) (Automatic control)
(Electronic calculating machines)

BELIMA, A.S. [Belima, O.S.] (Kiyev)

Rule for the back conversion of codes and its application to the
construction of digital code converting systems. Avtomatyka 7
no.3:72-80 '62. (MIRA 15:6)

(Information theory)

BELIMA, A.S. [Belima, O.S.] (Kiyev)

Some problems concerning the analysis and synthesis of centralized
control systems for detecting deviations beyond permitted limits.
Avtomatyka no.5:69-72 '61. (MIRA 14:10)
(Automatic control)

BELIMA, A.S. [Belima, O.S.]

Economical electronic commutator with a large number of switch points.
Avtomatyka no. 5:51-55 '60. (MIRA 14:4)

1. Institut avtomatiki Gosplana USSR.
(Commutation (Electricity)) (Electric switchgear)

BELIMA A.S.; SAMOYLOV, V.D.

Computer for converting analog binary code to a parallel
binary-decimal code. Avtom. i prib. no.2:37-39 Ap-Je '63.

(MIRA 18:8)

1. Institut avtomatiki Gosplana UkrSSR.

L 8609-66 EWT(d)/EWP(1) IJP(c) BB/GG

ACC NR: AR5014362

SOURCE CODE: UR/0271/65/000/005/B045/B045

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika.
Svodnyy tom, Abs. 5B330

AUTHOR: Belima, A. S.⁴⁴; Gzhivnovich, Ye.⁴⁴; Podgurskiy, G. S.⁴⁴

41
B

TITLE: Manual data-input device 160,44

CITED SOURCE: Sb. Ustroystva i elementy prom. telemekhan. Kiyev, 1964,
87-91

TOPIC TAGS: information storage, digital computer

TRANSLATION: A manual device is used for transmitting sporadic information from various process stations to a dispatcher's station and for harmonizing the information-transmission time with the cyclic operation of the system. The manual device intended for the dispatcher's station of a blast-furnace department

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UDC: 681.142.62
2

L 8609-66

ACC NR: AR5014362

is described. An operator records data in the manual-device storage by means of a keyboard, after which automatic readout from the storage becomes possible. The manual device includes an information-recording assembly, a storage device of 12 four-digit decimal-number capacity, and a readout assembly which transmits data to the dispatcher's office. Principal diagrams of the recording assembly, the storage device, and of some other elements are presented. Designed with ferrites, the storage device is subdivided into 12 groups, four digits in each (each digit includes 4 ferrites). In addition, the storage device includes some common elements intended for signaling the presence of information and for intermediate storage of the information during readouts. Figs. 5.

SUB CODE: 09

Card 2/2 *pu*

S/102/62/000/003/004/005
D234/D308

6.9500

AUTHOR: Belima, O.S. (Kiyev)

TITLE: The rule of backward code conversion and its use in designing digital code converters

PERIODICAL: Avtomatyka, no. 3, 1962, 72-80

TEXT: The author offers the following rule: If there is a direct converter of the set of codes A into a set of codes B, then for converting a given code b - B into a - A it is sufficient to feed codes belonging to A into the direct converter until the code obtained at the output of the latter coincides with b. A general diagram of a converter is constructed on the basis of this rule and one of the possible programs of conversion is given. Examples of the application of the rule in design of converters of binary codes into decimal codes etc. are given. The disadvantage of this method of conversion is that more elements are required in some cases for each digit; its advantage is the possibility of direct and back- 18

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The rule of backward code ...

S/102/62/000/003/004/005
D234/D308

ward conversion by the same device. There are 6 figures and 1 table.

SUBMITTED: January 15, 1962

Card 2/2

HELIMA, N. I., Cand Agr Sci -- (diss) "Effect of fertilizers upon the yield and quality of potatoes using the check row method of planting." Kiev, 1958, 16 pp. (Min of Agriculture, UkSSR), Ukrainian Acad Agr Sci, Ukrainian Sci-Rese. Inst of Physiology of Plants), 150 copies (KL, 41-58, 121)

28

S/102/60/000/005/004/008
D251/D305

9.7300

AUTHOR: Belima, O. S.

TITLE: Economic electronic commutator with a large number of switching points

PERIODICAL: Avtomatyka, no. 5, 1960, 51-55

TEXT: The author describes a multi-point commutator, suitable for use in automatic control circuits. The block diagram is given in Fig. 2. The impulse generator IG produces impulses which are calculated by the decadal reckoners. The decadal reckoners have outputs corresponding to the numbers 0,1,2,3,4,5,6,7,8,9 in the form of negative or positive potentials. At a given moment the potential proceeds only along one of the schemes of action and the output impulse or potential varies with its load. The decadal reckoners and schemes of action may be constructed of various contactless elements. The principles of the decadal reckoner are also shown. The decadal reckoners operate on a binary decimal diodal matrix, to whose output a suitably chosen negative potential is applied. A formula is

Card 1/32

Economic electronic commutator ...

S/102/60/000/005/004/008
D251/D305

given for the necessary number of triodes in the scheme of operation, and a table for the number of elements required for commutators with different numbers of switching points. There are 4 figures, 2 tables and 2 Soviet-bloc references. ✓
C

SUBMITTED: June 1, 1960

Card 2/3 2

ACCESSION NR: AP4013546 S/0102/64/000/001/0019/0028
AUTHOR: Belima, O. S. (Belima, A. S.) (Kiev)
TITLE: Investigation of a discrete centralized information-collecting system with cyclo-sporadic action
SOURCE: Avtomaty*ka, no. 1, 1964, 19-28
TOPIC TAGS: information collection, information collecting automatic system, cyclo sporadic system, embedded Markov chain
ABSTRACT: An information-collecting system with random cycle duration is theoretically investigated. The system, called "cyclo-sporadic," serves s continuously time-variable processes and m sporadic (Poisson's) flows of information. The embedded Markov chain method is used in the investigation. Formulas are developed that present the fundamental characteristics of the above system. Orig. art. has: 2 figures and 30 formulas.
ASSOCIATION: none
SUBMITTED: 10Dec62 DATE ACQ: 14Feb64 ENCL: 00
SUB CODE: CG, IE NO REF SOV: 010 OTHER: 002

1/1
Card

BELINGOTOV, B.Kh. (poselok Terek, Kabardino-Balkarskoy ASSR, ul. Pushkina, 122)

Torsion of the greater omentum. Vest. khir. 92 no.5:78 My '64.
(MIRA 18:1)

1. Iz Terskoy rayonnoy bol'nitsy (glavnyy vrach - V.A. Yaroshok)
Kabardino-Balkarskoy ASSR.

L 27949-66

ACC NR: AP6017707

SOURCE CODE: UR/0105/66/000/001/0085/0085

AUTHOR: Belimov, A. G.; Ikhteyman, F. M.; Kaporulin, K. N.; Kashkarov, G. E.;
Koval'chuk, P. A.; Levit, G. O.; Strelkovskiy, S. A.; Chernozubov, K. P. 48
B

ORG: none

TITLE: Professor A. K. Darmanchev (on his 70th birthday)

SOURCE: Elektrichestvo, no. 1, 1966, 85

TOPIC TAGS: electric engineering personnel, academic personnel, electric power plant, electric motor

ABSTRACT: Aleksey Konstantinovich Darmanchev graduated from the electromechanical faculty of the Leningrad Polytechnical Institute in 1925. He developed new rules for the connection of asynchronous motors to power supplies and investigated the loading conditions of power stations and systems between then and 1931. From 1935-1946, he was the head dispatcher of Lenenergo. He was the chief of the Moscow Combined Dispatcher Administration of Central Power Systems in 1946-7. He has also been active in higher education teaching, and is the author of an authoritative book on operative control of power systems. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 10 / SUBM DATE: none

Card 1/1

BHG

UDC: 621.311.1

GELIN, B.

Technique of high-frequency apparatus and domestic industry. p. 170.
(ELEKTROPRIVREDA, Vol. 7, no. 4, July/Aug. 1954, Beograd, Yugoslavia)

SO: Monthly list of East European Accessions, (EEL), EC, Vol. 4, no. 1
Jan. 1955, Uqcl.

L 40919-66 EWP(e)/EWT(m)/EWP(t)/ETI/EWP(k) IJP(c) JD/JG 5

ACC NR: AP6020738

SOURCE CODE: UR/0136/66/000/006/0065/0067 67

AUTHOR: Kolchin, O. P.; Chuveleva, N. P.; Sumarokova, N. V.; Filipenko, V. V.;
Men'shchikov, V. A.; Kadyshevskiy, V. S.; Belimov, N. I.; Abramovich, E. B. 8

ORG: none

TITLE: Manufacture of powdered niobium and its alloys by hydrogenating compacted metals and alloys 16 27

SOURCE: Tsvetnyye metally, no. 6, 1966, 65-67

TOPIC TAGS: metal powder, powder metal production, niobium, powder metallurgy, hydrogenation, niobium alloy

ABSTRACT: The report presents a method for manufacturing high purity powders by hydrogenating niobium or its alloys at lower temperatures (360 to 400C) and lesser excess hydrogen pressures (up to 0.7 atm) than those commonly required. The process is even faster at the reduced temperature levels. Hydrogenation and milling techniques are given in detail for source materials derived by electron beam smelting or carbide heating processes. For the latter, direct yield of dehydrogenated powder was 91.4%, total yield 98.3%, unaccountable losses 1.1%. The impurity content in niobium powders obtained from different compacted metals is

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UDC: 669.293-492.2

L 40919-66

ACC NR: AP6020738

given in Table 1.

Table 1. Impurity content (% by man) in niobium powders obtained from different compacted metals.

Initial material			Powder (-0.147 mm)		
N	O	C	N	O	C
Reduced Metal					
0.04	0.27	0.15	0.04	0.24	—
0.05	0.27	0.08	0.05	—	—
0.05	0.20	0.09	0.05	—	0.11
0.05	0.20	0.10	0.03	—	—
0.04	0.23	0.07	0.06	—	—
0.04	0.13	0.06	0.09	—	—
0.07	0.24	0.05	0.05	0.32	—
0.05	0.20	0.07	0.04	0.30	—
0.05	0.15	0.06	0.05	—	—
Ends of rods of a sintered Metal*					
0.05	—	0.12	0.08	0.16	0.15
0.04	0.45	0.20	0.02	0.46	0.26
0.05	0.25	0.12	0.05	—	0.11
0.04	0.27	0.08	0.05	0.30	0.11
—	—	—	0.05	0.35	0.06
0.05	—	—	0.06	0.40	0.20

*The sintered rods contain 0.01-0.03% C; 0.02% N; 0.02% O; <0.01% Ti & Si; 0.01-0.03% Fe; 0.15-0.25% Ta; ~ 89.9% Nb (+Ta).

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L 40919-66

ACC NR: AP6020738

Orig. art. has: 2 figures and 1 table.

SUB CODE: 11,13/ SUBM DATE: 00/ ORIG REF: 001/ OTH REF: 002

Card 3/3 11b

28(5)
AUTHORS:SOV/32-25-5-46/56
Malyusov, V. A., Malafeyev, N. A., Umnik, N. N., Glazunov, D. N.
Belin, B. S.

TITLE: :

Multistage Column for Molecular Distillation (Mnogostupen-
chataya kolonna dlya molekulyarnoy distillyatsii)

PERIODICAL:

Zavodskaya Laboratoriya, 1959, Vol 25, Nr 5, pp 629-630 (USSR)

ABSTRACT:

A multistage horizontal column of glass with a metallic condenser was constructed and tested (Fig 1). The lower part of the column is divided into individual step-like segments; each segment contains a small shovel blade set up at an angle of 45° which acts as a condenser for each individual segment. The vacuum unit consists of a rough-vacuum oil pump of the type VN-461-M and a diffusion oil pump of the type MM-40-AM. The column was tested with binary mixtures of octoyl-octoyl S and dibutylphthalate-dibutylacetate. The efficiency of the column depends on the charging and the dimension of the step-like segments and increases with the length of the column. With a medium charge of $7-10 \text{ g/cm}^2$, columns with step-like segments 17 mm long have an efficiency of 0.5, columns with step-like segments 34 mm long an efficiency of 0.6. The diagram shows the distillation of a quaternary mixture in a column with 11 step-like segments (Fig 2). There are 2 figures and 1 Soviet reference.

Card 1/2.

Multistage Column for Molecular Distillation

SOV/32-25-5-46/56

ASSOCIATION: Nauchno-issledovatel'skiy fiziko-khimicheskiy institut im.
L. Ya. Karpova (Scientific Research Institute of Physical
Chemistry imeni L. Ya. Karpov)

Card 2/2

BELIN, F.T., inzh.; SHAPIRO, S.Ya., inzh.

Experimental study of free turbulent superheated steam
jets. Teploenergetika 11 no.5:35-38 My'64. (MIRA 17:5)

1. Ukrenergochermet.

BELIN, Ivo, dr. (Zagreb)

International market of textile raw materials. Tekstil Zagreb
13 no.3:208-215 Mr '64

BELIN, Ivo, dr (Zagreb)

International textile market. Tekstil Zagreb 13 no.4:293-299
Ap '64.

Clothing industry in the countries of the European Common
Market. Ibid.:299-302

Future of the textile industry. Ibid.:302-305

1. Economic and Legal Consultant.

BELIN, Ivo, dr.

Reconstruction, rationalization, and rehabilitation of the cotton industry. Tekstil Zagreb 13 no.5:398-401 My '64.

Textile industry of the U.S.S.R. Ibid.:396-397

International textile market. Ibid.:383-390

1. Economic and Legal Consultant, Zagreb.

BELIN, Ivo, dr

International market of textiles. Tekstil Zagreb 13 no.6:463-471
Ja '64.

Conditions in the textile industries in various countries. Ibid.:472-
475

BEI, in, ar, ekonomsko-pravni stručnjak (Zagreb)

International market of textiles. Tekstil Zagreb 13 no.9:792-802
S. 16..

Production of synthetic fibers in the last 10 years. ILL.: 803-807

BELIN, Ivo dr.

International market of textile fabrics. Tekstil Zagreb 13 no.10:
888-897 0 '64.

Equipment for textile industry. Ibid.: 898-900

BELIN, Ivo, dr, ekonomsko-pravni strucnjak (Zagreb)

International market of textiles. Tekstil Zagreb 13 no.11:
960-963 N '64.

BRIJUN, Ivo, dr, ekonomsko-pravni stručnjak

International textile market. Tekstil Zagreb 13 no.17:1040-1048 D '64.

Cotton supply and demand. Ibid .1049-1050.

BELIN, M.K.

Awards for the best mechanization promoters. Put' 1 put.
khoz. 8 no.7:16 '64. (MIRA 17:10)

BELIN, M.K.

A man of working fame. Put' i put. khos. 9 no.3:10 '65.
(MIRA 18:6)

BELIN, P.; BENCKO, V.; PETRAN, J.

Air pollution in Svit during 1962. Source of pollution, its characteristics and degree in relation to environment. Cesk. hyg. 9, no. 2: 73-77 Mr '64

1. Okresna hygienicko-epidemiologicka stanica, Poprad.

X

ZIOLKOWSKI, Zdzislaw; BELINA, Danuta

Heights of the transfer unit for the aqueous solution of sodium sulfate and sulfite - phenol - benzene system. Chemia stosow 6 no.2:167-190 '62.

1. Zaklad Inzynierii Chemicznej i Konstrukcji Aparatury, Polska Akademia Nauk, i Katedra Inzynierii Chemicznej, Politechnika, Wroclaw.

BELINA, L. V. Cand Ped Sci -- (diss) "~~The~~ Enrollment of the
^{Adolescent}
~~Teen-Age Child~~ in the Komsomol Organization as a Factor in His
Moral Education." Mos, 1957. 12 pp 21 cm. (Min of Education R
RSFSR, Mos Oblast Pedagogical Inst), 100 copies (KL, 16-57, 101)

-22-

ACC NR: AP5026754

SOURCE CODE: UR/0286/65/000/017/0028/0028

INVENTOR: Belina, M. T.; Orlov, V. N.; Paranin, V. A.

TITLE: A diode switch, Class 21, No. 174234 [announced by the Enterprise of the State Committee on Radio Electronics SSSR (Predpriyatiye Gosudarstvennogo komiteta po radioelektronike SSSR)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 17, 1965, 28

TOPIC TAGS: switching circuit, electronic commutator

ABSTRACT: This Author's Certificate introduces a diode switch which contains four commutating elements interconnected in a ring circuit. Connected to the switch unit are controlling voltage sources and the channels to be switched. The number of channels which can be switched is increased by connecting these channels to the common points between the arms of the ring circuit which contain the commutating elements. These elements are connected to independent controlling voltage sources and two isolation capacitors are connected in each of the arms.

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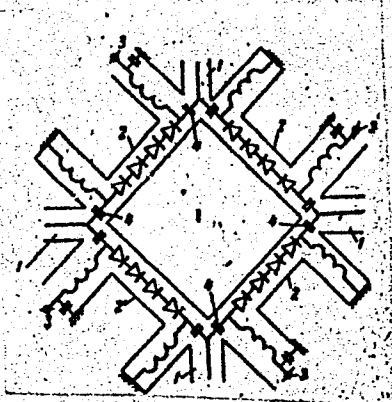


Fig. 1. 1--channels to be switched; 2--arms of the ring circuit; 3--terminals for connection of the controlling voltage sources; 4--isolation capacitors

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AUTHOR: Vasil'yeva, V. Ye.; Belina, O. N.; Vasil'yeva, T. D.

ORG: none

TITLE: Vascular tonus changes in hypodynamia [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24 to 27 May 1966.]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 92-93

TOPIC TAGS: hypodynamia, cardiovascular system, electrocardiography, human physiology, space physiology

ABSTRACT: The present study was made in collaboration with the Physiology Section of the Central Scientific Research Institute of Physical Culture (Section Head, Professor A. V. Korobkov, Lab Chief Candidate of Biological Sciences A. A. Korobova), where the hypodynamia experiments, in which highly-trained young athletes were kept 10 days in a horizontal position without movement, were set up.

In order to determine the effect of prolonged hypodynamia on vascular tonus, a pre-experimental study was made in which simultaneous recordings were made using a "Kardireks" polycardiography system of the 2d

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standard EKG lead and sphygmograms of the radial artery and the artery of the tip of the middle finger with the subjects in a state of rest; from the known speed of the recording tape it was possible to compute the pulse wave propagation rate (PWPR) in elastic and muscular vessels.

An identical study was made, using the same method, after the subjects had remained motionless for 10 days.

Analysis of the data obtained showed that the rate of pulse wave propagation along elastic vessels was not noticeably changed by 10 days of hypodynamia.

At the same time, purely muscular vessels (the arteries of the hand) changed considerably in their elastic-plastic properties, as shown by sharp change in the rate of propagation of pulse waves along muscle-type vessels.

Earlier investigations had shown that in highly-trained athletes the speed of propagation of pulse waves along muscle-type vessels was high, considerably exceeding (sometimes by a factor of two) the pulse wave propagation rate seen in the muscular vessels of persons of the same age but not participating in sports. We also established that athletic training

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noticeably increases the rate of pulse wave propagation along muscular vessels.

In the present subjects, who were in a good state of training and were athletes of high accomplishments, we also found high values for pulse wave propagation along muscle-type vessels at the beginning of the experiment, from 630 to 880 cm/sec and averaging 746 cm/sec.

Immediately following hypodynamia, the same subjects showed a pulse wave propagation rate along muscle-type vessels of 430 to 730 cm/sec, averaging 518 cm/sec. This considerable decrease in pulse wave propagation rate along muscle-type vessels was observed in all 8 subjects exposed to hypodynamia.

Decreased speed of propagation of pulse waves along muscle-type vessels due to hypodynamia is fully to be expected, since heightened physical activity in man requires increased tonus of the muscular elements of vascular walls as a physiological mechanism enhancing movement of the pulse flow of blood during intensive physical activity. Since tonus here means the dynamic phenomenon associated with high activity of the contractile elements of vessel walls, considerable decreases in

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the tonus of the muscular elements of the vessels can be regarded as
the logical result of prolonged hypodynamia. / W. A. No. 22; ATD Report 66-116 /

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Organization of the work of adolescents in a shortened workday. Sots.
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(Shoe industry) (Children--Employment)

BELINA, T.G.; NOZDRIN, A.A.; PRASOLOV, M.A.; SERGEYEV, S.A., ROGUSKAYA,
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[Experience in closer loading of railroad cars; accounts by young weighers] Opyt uplotnennoi zagruski vagonov; rasskazy molodykh vesovshchikov. Moskva, Gos. transportnoe shel.-dor. izd-vo, 1954.
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HELINA, T. N.

Dissertation: "Kinetics of Electrochemical Processes of the Ionization of Oxygen and Hydrogen Under Different Pressures." Cand Chem Sci, Inst of Physical Chemistry, Acad Sci USSR, Moscow, 1953.

W-30928

SO: Referativnyy Zhurnal, No. 5, Dec. 1953, Moscow, AN USSR (~~1953~~)

Kinetics of the electrochemical reduction of oxygen. J. N. Beling and A. I. Krasil'shchikov. *Zhur. Fiz. Khim.* 46, 1261 (1972); *cf. C.A.* 47, 9825b. The potential of a Ag cathode in N KOH satd. with H_2O_2 at c.d. $i = 10^{-4}$ amp./sq. cm. was not affected by H_2O_2 ; this proved that the rate of reaction was detd. by electrochem. polarization and that the addn. of an electron to an adsorbed O mol. was the slow step. The H overvoltage, η , in NH_4SO_4 or N KOH satd. with O at $i = 10^{-4}$ amp./sq. cm. on smooth or platinized Pt or on Pd was independent of pH, and in the equation $\eta = \text{const.} + b \ln i$, b was 0.03-0.06 v.; hence, the polarization had a chem. nature and the reaction between dissolved O mols. and adsorbed H atoms was the limiting step. J. J. B.

U S S R .

✓ Kinetics of the electrochemical ionization of hydrogen.
D. N. Belina and A. I. Krasil'shchikov. *Zhur. Fiz. Khim.*
~~1934~~ (1934); cf. *C.A.* 47, 4767c. -- A Ag electrode in
N KOH in compressed H (e.g., at 34 atm.) was polarized.
In cathodic polarization i was a linear function of voltage
 φ , and the slope was 0.11 v., i.e. near $2 RT/F$, while in
anodic polarization i was a linear function of φ to 1.18 v.,
when formation of Ag_2O started and i rapidly increased with
 φ ($i = c.d.$). Also, in the anodic polarization of an Fe-Ni
alloy i was a linear function of φ (up to $\varphi = 0.14$ v.) in H
under 1-71 atm., but the behavior was not reproducible
because of impurities in the alloy. To account for the linear
dependence of i on φ it was assumed that the amt. of OH^-
adsorbed by the electrode was a linear function of φ .

J. J. Bikerman