

KAZANSKIY, D.A.

Intubation of patients with cancer of the larynx as a method of  
intratracheal inhalation of anesthesia. Zhur.ush., nos. 1 gorl.  
bol.23 no.3:47-49 My-Je'63. (MIRA 16:7)

1. Iz otorinolaringologicheskogo otdeleniya (zav.-prof.N.A.Karpov)  
Instituta onkologii AMN SSSR (dir.-deystvitel'nyy chlen AMN SSSR  
prof. A.I.Serebrov).  
(INTRATRACHEAL ANESTHESIA) (LARYNX—CANCER)

KAZANSKIY, D. I., Prof.

Harness

Veterinary-sanitary evaluation of the adjustable collar of the A. B. Voykov system.  
Konevodstvo, 22, no. 8, 1952

9. Monthly List of Russian Accessions, Library of Congress, November 1952 ~~1953~~, Uncl.

KAZANSKIY, D.I., professor, doktor veterinarnykh nauk.

Disinfection of saddles and harnesses made out of leather substitutes.  
Sbor. trud. Khar'. vet. inst. 22:137-142 '54. (MLBA 9:12)

1. Kafedra farmakologii Leningradskogo instituta usovershenstvovaniya  
veterinarnykh vrachey.

(Leather substitutes) (Disinfection and disinfectants)

KAZANSKIY, G.

It is impossible to accept this situation. Za bezop. dvizh. 5  
no.6:1-2 Je '62. (MIRA 15:10)

1. Pomoshchnik zamestitelya predsedatelya Moskovskogo gorodskogo  
ispolnitel'nogo komiteta Mosgorsoвета deputatov trudyashchikhsya.

(Moscow—Traffic accidents)

KAZANSKIY, G., direktor-podpolkovnik tyagi

All-metal passenger cars. Zhel. dor. transp. no.1:76-77 '47.  
(MIRA 13:2)

(Railroads--Passenger cars)

DADYKO, S.R.; DRAYCHIK, I.I.; KAZANSKIY, G.A., inzhener, laureat Stalinskoy  
premi, retsenzent; YOSARFSEVSKIY, N.N., inzhener, redaktor;  
SOKOLOVA, T.F., tekhnicheskiy redaktor

[Railroad car construction; handbook] Vagonostroenie; spravochnik  
posobie. Izd. 2-e, dop. i perer. Moskva, Gos. nauchno-tekhn. izd-vo  
mashinostroit. lit-ry, 1954. 564 p. (MIRA 8:4)  
(Railroads--Cars)

KAZANSKIJ, G.

Under the banner of May Day. p. 161

What kind of cars are needed for railroads? p. 196 PRZEGLAD KOLEJOWY  
(Wydawnictwa Komunikacyjne) Warszawa. Vol. 7, no. 5, May 1955

SOURCE: East European Accessions List, (EEAL), Library of Congress,  
Vol. 4, no. 12, December 1955

KAZANSKIY, G.A.

New railroad cars in the sixth five-year plan. Zhel.dor.transp.37  
no.4:30-34 Ap '56. (MLRA 9:7)

1.Zamestitel' glavnogo inzhenera Glavnogo upravleniya vagonnogo  
khozzyystva.

(Railroads--Cars)



BOYKO, Fedor Ivanovich; ~~KAZANSKIY, G.A.,~~ kand.tekhn.nauk, retsenzent;  
FOTIYEV, V.M., red.; SOKOLOVA, T.F., tekhn.red.

[Rolling stock of the industrial transportation system]  
Podvizhnoi sostav promyshlennogo transporta. Izd. 2., dop. 1  
ispr. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry,  
1958. 205 p. (MIRA 12:1)  
(Railroads--Rolling stock)

KAZANSKIY, Georgiy Alekseyevich, kand.tekhn.nauk; MIROSHNIK, Boris  
Martynovich, inzh.; LUK'YANOVSKIY, S.V., inzh., red.; VERINA,  
G.P., tekhn.red.

[Construction and repair of railroad car trucks] Ustroistvo  
i remont vagonnykh telezhek. Moskva, Gos.transp.zhel-dor.  
izd-vo, 1958. 343 p. (MIRA 11:5)  
(Railroads--Cars)

DOMAYEV, Foma Vasil'yevich; KAZANSKIY, G.A., red.; KHITROV, P.A.,  
tekhn.red.

[Construction and repair of containers] Ustroistvo i remont  
konteinerov. Moskva, Gos.transp.shel-dor.isd-vo, 1959. 122 p.  
(MIRA 12:7)

(Containers)

~~KAZANSKIY, Georgiy Aleksandrovich~~; KOSAREV, Aleksandr Aleksandrovich;  
SAMOKHVALOV, Sergey Feofilovich; URYUPIN, German Mikhaylovich;  
SHAVYRIN, M.V., inzh., red.; KHITROV, P.A., tekhn.red.

[Design and maintenance of all-metal passenger cars] Ustroistvo  
i remont tsel'nometallicheskikh passazhirsikh vagonov. Izd.2.,  
perer. i dop. Moskva, Gos.transp.zhel-dor.izd-vo, 1959. 486 p.  
(MIRA 12:12)

(Railroads--Passenger cars)

KAZANSKIY, G.A., insh.

Redesign of railroad cars during the seven-year plan. Zhel.  
dor. transp. 41 no.2:57-61 F '59. (MIRA 12:3)

1. Zamestitel' glavnogo inzhenera Glavnogo upravleniya vagonnogo  
khozyaystva Ministerstva putey soobshcheniya.  
(Railroads--Cars)

CHIRKIN, Viktor Vasil'yevich, kand.tekhn.nauk; SOKOLOV, Ivan Georgiyevich, kand.tekhn.nauk; VERSHINSKIY, Vladimir Vasil'yevich, inzh. Primamli uchastiye: BELAVENTSEV, N.V., inzh.; DOBKIN, S.Z., inzh. KAZANSKIY, G.A., inzh., retsenzent; SMIRNOV, A.V., red.; DANILOV, L.N., red.izd-va; SAFRANOVA, I.Yu., red.izd-va; UVAROVA, A.F., tekhn.red.; SOKOLOVA, T.F., tekhn.red.

[Technology of car construction] Tekhnologiya vagonostroenia.  
Pod obshchei red. V.V.Chirkina. Moskva, Gos.nauchno-tekhn.izd-vo  
mashinostroit.lit-ry, 1960. 483 p. (MIRA 13:11)  
(Railroads--Cars--Construction)

KAZANSKIY, G.A., Laureat Stalinskoy premii; KOSAREV, A.A.; SAMOKHVALOV,  
S.F.; URYUPIN, G.M.; KORSHUNOVA, V.A., red.; VERINA, G.P., tekhn.  
red.

[Maintenance and repair of all-metal passenger cars]Ustroistvo i  
remont tsel'nometallicheskih passazhirskikh vagonov. Moskva, Gos.  
transp. zhel.-dor. izd-vo, 1952. 274 p. (MIRA 15:1)  
(Railroads—Passenger cars)

SHADUR, Leonid Abramovich, doktor tekhn. nauk, prof.; CHELNOKOV, Ivan Ivanovich, doktor tekhn. nauk, prof.; NIKOL'SKIY, Lev Nikolayevich, doktor tekhn. nauk, prof.; KAZANSKIY, Georgiy Alekseyevich, kand. tekhn.nauk; KOGAN, Liber Ayzikovich, kand. tekhn. nauk; DEVYATKOV, Vladimir Fedorovich, kand. tekhn. nauk; CHIRKIN, Viktor Vasil'yevich, kand. tekhn. nauk; MORDVINKIN, N.A., inzh., retsenzent; BRAYLOVSKIY, N.G., red.; MEDVEDEVA, M.A., tekhn. red.

[Designs of railroad cars] Konstruktsii vagonov. Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-va putei soobshchenia, 1962. 415 p. (MIRA 15:4)  
(Railroads--Cars--Design and construction)



MOROZOV, Ivan Alekseyevich; KAZANSKIY, G.A., inzh., retsenzent;  
FILATOVA, Ye.M., inzh., red.; YEGOROV, A.A., inzh.,  
red.; SAVEL'YEV, Ye.Ya., red. izd-va; SMIRNOVA, G.V.,  
tekhn. red.

[Soviet-make passenger car trucks] Telezhki passazhirskikh  
vagonov otechestvennogo proizvodstva. Moskva, Mashgiz,  
1960. 182 p. (MIRA 15:4)  
(Car trucks (Railroads))

KAZANSKIY, G.A.; SPIVAKOVSKIY, A.L.

Improving the design of freight cars. Zhel.dor.transp. 45 no.2:61-63  
F '63. (MIRA 16:2)

1. Direktor Vsesoyuznogo nauchno-issledovatel'skogo instituta  
vagonostroyeniya (for Kazanskiy). 2. Nachal'nik otдела issledovaniya i  
sovershenstvovaniya konstruksii vagonov instituta (for Spivakovskiy).  
(Railroads—Freight cars)

ACC NR: AM5004820

(A)

Monograph

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Shadur, Leonid Abramovich (Doctor of Technical Sciences; Professor); Chelnikov, Ivan Ivanovich (Doctor of Technical Sciences; Professor); Nikol'skiy, Lev Nikolayevich (Doctor of Technical Sciences; Professor); Nikol'skiy, YEvgeniy Nikolayevich (Doctor of Technical Sciences; Professor); Proskurnev, Petr Grigor'yevich (Candidate of Technical Sciences, Docent); Kazanskiy, Georgiy Alekseyevich (Candidate of Technical Sciences); Devyatkov, Vladimir Fedorovich (Candidate of Technical Sciences)

Railroad cars; construction, theory, and design (Vagony; konstruktsiya, teoriya i raschet) Moscow, Izd-vo "Transport", 1965. 439 p. illus., biblio. 8,000 copies. printed. Textbook for railroad transportation institutes.

TOPIC TAGS: railway equipment, railway rolling stock, railway transportation, railway vehicle data

PURPOSE AND COVERAGE: The book deals with the construction, strength calculations, dynamics, choice of technical-economic parameters, and sizes of railroad cars. It is intended for courses on "Railroad Cars" (construction, theory, calculation) for those specializing in "Railroad Car Construction and Railroad Car Management" of higher technical institutes for railway transport. It is designed to be a basic course for further specialization in special-purpose cars such as refrigerator cars, electric equipment of railroad cars, technology of construction and repair of railroad cars, and other specialties. It is designed for students who have some elementary information on car construction and car strength.

UDC: 625/23/.24

Card 1/2

ACC NR: AM6004820

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Ch. XII. Freight cars - - 337  
Ch. XIII. Tank cars - - 370  
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Ch. XV. Principles of design, construction, and testing of cars - - 423

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Card 2/2

KAZANSKIY, G.S.; MIKHAYLOV, A.I.; MYZNIKOV, K.P.; TSAIENKOV, A.P.

[Methods for changing the duration of the interaction between  
the beam and the target in a synchrotron at 10 Bev] Metody  
izmeneniia dlitel'nosti vzaimodeistviia puchka s mishen'iu v  
sinkhrofazotrone na 10 Bev. Dubna, Ob"edinennyi in-t iadernykh  
issl., 1961. 17 p. (MIRA 15:1)  
(Synchrotron) (Protons)

S/120/62/000/005/002/036  
E032/E314

AUTHORS: Kazanskiy, G.S., Mikhaylov, A.I., Myznikov, K.P.  
and Tsarenkov, A.P.

TITLE: Methods of varying the time of interaction of the  
beam with the target in the 10 GeV proton synchrotron

PERIODICAL: Pribory i tekhnika eksperimenta, no. 5, 1962,  
19 - 24

TEXT: Experiments designed for the proton synchrotron at  
the Joint Institute for Nuclear Studies require the availability  
of secondary-particle pulses of different lengths. Secondary  
particles are produced by bombarding an internal target and the  
time of interaction of the beam with the target determines the  
length of the secondary-particle pulse. The authors give in  
this paper a brief summary of the various methods used to alter  
the beam-target time of interaction. The methods for increasing  
the time of interaction are as follows: 1) resonance build-up  
of oscillations in which the resonance is excited artificially  
by modulating the accelerating voltage in such a way that the  
particles leave the phase-stability region. Particles leaving  
Card 1/3

Methods of varying ....

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E032/E314

the acceleration process are deflected by the variable magnetic field onto the target and the time of interaction with the target is adjusted by adjusting the modulation amplitude. In this way, the length of the secondary-particle pulses can be increased to 250 ms. 2) Slow reduction in the amplitude of the accelerating voltage. This method is also based on the removal of the accelerated particles from synchronism by reducing the region of phase stability. The method has been discussed theoretically by V.I. Kotov and L.L. Sabsovich (PTE, 1957, no. 6, 19). However, an empirical approach was found to be more suitable. ✓

3) Slow variation in the frequency of the accelerating voltage. A change in this frequency produces a change in the radius of the equilibrium orbit. This effect has been considered theoretically by M.S. Rabinovich (Tr. FIAN SSSR, 1958, 10, 23). The rate at which the beam is displaced onto the target is proportional to the rate of change in the frequency. Linear variation in the frequency was found to be inadequate and a special feedback system which controls the relation between the frequency and the magnetic field was developed, using the radial beam-position indicator reported by F.A. Vodop'yanov et al

Card 2/3

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S/089/63/014/002/003/019

B102/B186

246730

AUTHORS: Kazanskiy, G. S., Kuznetsov, A. B., Mikhaylov, A. I.,  
Rubin, N. B., Tsarenkov, A. P.

TITLE: Investigation of the beam formation of accelerated particles  
in the proton-synchrotron by means of induction electrodes.

PERIODICAL: Atomnaya energiya, v. 14, no. 2, 1963, 153 - 158

TEXT: The beam formation process in the first stage of acceleration at the proton-synchrotron of the Ob'yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research) in Dubna was studied with the help of electrostatic signal electrodes (Vodop'yanov, Kuzmin, et al., Proc. Intern. Conf. High-Energy Accelerators and Instrumentation, CERN, Geneva, 1959, p. 470, 477; Kazanskiy et al., Preprint OIYaI, B-50-819, Dubna, 1961). These electrodes are broad copper plates arranged to form two systems on either side of the beam. The plates of one system are arranged symmetrically to the mid-plane of the magnet (vertical electrodes), and those of the other perpendicular thereto (radial electrodes). The signal  $V(\varphi)$  induced in the vertical electrodes is proportional to the change in the

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Investigation of the beam...

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azimuthal charge density in the flying bunch:  $\tilde{V}(\varphi) \simeq \frac{q(\varphi)}{C} \frac{1}{\pi} 2\pi$ , where  $l$  is the electric length of the electrodes,  $C$  the capacitance of the plates relative to the earth, and  $\pi$  the perimeter of the equilibrium orbit.  $V(\varphi)$  is led to an integrator which yields  $V_{\text{mean}} = lQ/\pi C$ ,  $Q$  being the charge of the accelerated bunch. For the proton-synchrotron of the OIYaI the sensitivity of the vertical electrodes,  $\alpha = C/el$ , was  $1 \cdot 10^{12}$  protons/v;  $\pi = 208$  m,  $l = 0.5$  m,  $C = 400 \mu\text{mf}$ . If the output voltage  $V_{\text{out}}$  (cf. Fig. 1) is measured and the amplification factor  $K$  is known, the number of protons in the bunch,  $N = V_{\text{out}} \alpha/K$ , is determined. The signal  $U(\varphi)$  of the radial electrodes records the horizontal deviation of the beam from the equilibrium radius; the radial sensitivity is  $2\dot{v}/\text{cm}$ . The electrode installation has a pass band of  $0.1 - 3$  Mc which allows a distortion-free recording of  $V(\varphi)$  and  $U(\varphi)$  and their amplitude modulation. A consideration of the motion of the particles along the phase trajectories taking account of the free oscillations shows that the amplitude structure of the beam must be observed during  $100 - 150 \mu\text{sec}$  after the switching-on of the accelerating voltage; the beam formation takes place during the first  $1 - 1.5$  msec. The

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Investigation of the beam...

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radial phase oscillations of the beam are accompanied by the oscillations of the azimuthal density with the frequencies  $\Omega$  and  $2\Omega$ , where  $\Omega$  is the angular frequency of the phase oscillations. The amplitudes of these oscillations depend on  $\Delta M/b$ ,  $\Delta M$  being the initial energy spread and  $b$  the radial separatrix half-dimension. If  $\Delta M/b = 1$ , the oscillation with the frequency  $2\Omega$  vanishes; if  $\Delta M/b \ll 1$ , the damping of these oscillations takes place in 30 - 50 periods of the phase oscillations. The greater  $\Delta M/b$ , the more rapid is the damping. The same is true for the oscillations of the charge center. To the signal modulation with 40 - 50% depth observed at the synchrotron there corresponds a total initial energy spread of  $\sim 1.5\%$ . There are 10 figures.

SUBMITTED: April 4, 1962

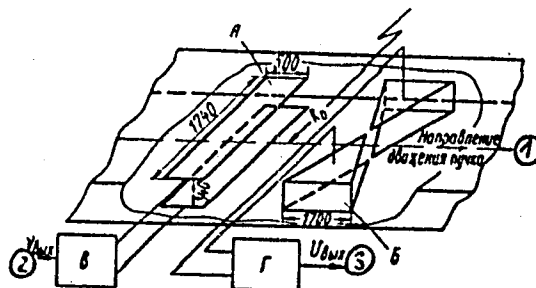
Card 3/4

Investigation of the beam...

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B102/B186

Fig. 1. System of induction electrodes.

Legend: A - vertical electrodes, Б - radial electrodes, В - amplifier for the measuring system of the beam intensity, Г - transmitter of the radial beam position; (1) beam direction, (2)  $V_{out}$ , (3)  $U_{out}$ .



Card 4/4

L 10931-65 EPA(w)-2/PAW(m)/SWA(m)-2 P-10/Pab-10 TJP(c)

ACCESS TO INFORMATION ACT

L 49256-65 EWT(m)/EPA(w)-2 (n)-2 Pub-10/Pt-7 IJP(c)

ACCESSION NO.

AUTHOR: Kazanskiy, G.S.; Mikhaylov, A.I.; Tsarenkov, A.P.

STAIRS: 821111 1000 100000 100000 100000 \*

TOPIC TAGS: synchrotron, beam control, beam instability, proton acceleration, proton beam

variation of the amplitude, frequency, and phase of the beam oscillations. The means employed for stabilization of the beam parameters are described.

variation of the amplitude, frequency, and phase of the beam oscillations. The means employed for stabilization of the beam parameters are described. The variation of the amplitude, frequency, and phase of the beam oscillations is affected by one of two general methods, depending on the type of the beam.

Card 1/2

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ACCESSION NR: AP5010794

DESCRIPTION: [Faint, illegible text]

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ASSOCIATION: None

SUBMITTED: 01Jul64

ENCL: 00

SUB CODE: [Faint]

NR REP SOW: 006

OTHER: 000

2,2

Isaevskiy, A. P. / Miroshnikov, F. V.

TITLE: Investigation of the stability of an electron beam in a  
resonant cavity with a drift tube

SOURCE: Physics of particles and experimental nuclear physics, vol. 2, 1975, 2-10

TOPIC TAGS: particle acceleration; proton synchrotron

ABSTRACT: The stability of an electron beam in a resonant cavity with a drift tube is investigated.

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1. The first acceleration stage is the

rate of acceleration in the first acceleration stage decreases by 1/2.

2. The second acceleration stage is the

rate

of acceleration

in the second acceleration stage

NO REFERENCE

OTHER USE

Card <sup>2/2</sup>  
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SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 12, 1965, 88

ABSTRACT: This Author's Certificate introduces a method for compensating resonance

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APPROVED FOR RELEASE: 06/13/2000

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KAZANSEY, G.S.; MEKHAYLOV, A.I.; RUBIN, N.B.; TSARENKOV, A.P.

Phase grouping of a beam of charged particles when captured in the  
process of acceleration in an OJAI proton-synchrotron. Atch. energ.  
18 no.6s555-559 Je '65. (MIRA 18s7)

I 1232-66 EWT(m)/EPA(w)-2/EWA(m)-2 IJP(c) OS

ACCESSION NR: AT5607970

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AUTHOR: Kazanskiy, G. S.; Kuznetsov, A. B.; Mikhaylov, A. I.; Tsarenkov, A. P.; Chekhlov, K. V.; Rubin, N. B.

TITLE: Certain special features governing the adjustment of the acceleration regime on the OIYaI 10-Gev synchrophasotron M

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963. Trudy. Moscow, Atomizdat, 1964, 970-975

TOPIC TAGS: high energy accelerator, proton accelerator, linear accelerator

ABSTRACT: The oscillogram form of the signals recorded by inductive electrodes in the quasi-betatron regime is due to the subsequent entrapment of the particles into acceleration. The signals are proportional to the variation in the density (e. g. of the order of  $2.5 \cdot 10^{10}$  to  $5.2 \cdot 10^{10}$  protons per pulse) of the particles in the quasi-betatron state in the case of multi-rotation injection at the azimuth of the "vertical" induction electrodes (Kazanskiy, G. S., et al. *Atomnaya energiya* 14, 153 (1963)). The oscillograms also indicate the state corresponding to particle storage in the accelerator chamber. Measurements show that a small group of particles, comprising about 0.5% ( $5 \cdot 10^9$  protons per pulse) of the total number of particles.

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ACCESSION NR: AT5007970

icles injected, takes part in the formation of the signal. The frequencies in the central part of the signal correspond to the frequency of revolution or are multiples of it. The appearance of such frequencies can explain the presence of the charge front during input of the particles into the accelerator chamber (or the formation of the drop in density at the moment of intensive losses at the beginning of injection), and also the amplitudinal nonequilibrium of the injection current from the linear accelerator, if there occur here azimuthal inhomogeneities whose extent is less than the perimeter of the equilibrium orbit. The connection between the form of the high-frequency signal under consideration and the subsequent entrapment of the particles into the synchrotron state is characteristic. If the oscillations close to the "rear" signal front formed by the particles with amplitudes of betatron radial oscillations are damped, then the effectiveness of entrapment decreases, and in the absence of such damping the effectiveness is greater, as shown by the oscillograms. In the case of the "differential" method of signal recording with induction electrodes, signals are observed whose form can be modified from sinusoidal to a series of discrete pulse-formed signals. In most cases (excluding those where the values  $n$  are resonant) the general picture represents the result of superposition of this and another group of signals, as seen on os-

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cillograms. The present report discusses the following pertinent topics: quasi-betatron state; synchrotron state; system of high-frequency accelerator supply; programming and adjustment of regimes suitable for physical experiments. The authors show that, by combining the various methods of beam output against a target and applying one or another method of selection, one can utilize intelligently the intensity in the accelerator cycle, thus ensuring a combination of different physical experiments. Orig. art. has: 6 figures, 6 formulas.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy, Dubna (Joint Institute of Nuclear Research)

SUBMITTED: 26May64

ENCL: 00

SUB CODE: NP

NO REF SOV: 004

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ACCESSION NR: AP5021327

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41  
39  
B

AUTHOR: Kazanskly, G. S.; Mikhaylov, A. I.; Moroz, V. I.

TITLE: Synchronization of the operation of two bubble chambers during a single accelerating cycle of the 10 BEV proton synchrotron

19 55

SOURCE: Pribory i tekhnika eksperimenta, no. 4, 1965, 39-42

TOPIC TAGS: bubble chamber, synchrotron, proton accelerator, particle accelerator target, BEV accelerator

ABSTRACT: This article describes a method for the joint operation of two bubble chambers during a single accelerating cycle of the synchrotron of the OIYaI. This type of simultaneous operation was first achieved in 1962 and is presently in widespread use. The problems connected with the stabilization of the given intensity levels of the proton beam incident on the targets are briefly discussed. The article contains also the pertinent data concerning the operating conditions of the two jointly acting chambers. The method outlined can be extended to an even larger number of bubble chambers. \*The authors thank Yu. A. Troyan and A. P. Tsarenkov for participating in the establishment of the joint operation of the two

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ACCESSION NR: AP5021327

2

chambers." Orig. art. has: 2 formulas and 2 figures.

ASSOCIATION: Ob'yedinennyy institut yadernykh issledovaniy, Dubna  
(Joint Institute for Nuclear Research)

SUBMITTED: 27May64

ENCL: 00

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NO REF SOV: 005

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L 2279-66 EWT(m)/EPA(w)-2/EWA(m)-2 IIP(c) DM  
ACCESSION NR: AP5016923

UR/0089/65/018/006/0555/0559  
621.384.611

AUTHOR: Kazanskiy, G. S.; Mikhaylov, A. I.; Rubin, N. B.; Tsarenkov, A. P.

TITLE: Phase bunching of a beam of charged particles during capture in the acceleration process in the OIYAI proton synchrotron

SOURCE: Atomnaya energiya, v. 18, no. 6, 1965, 555-559

TOPIC TAGS: particle acceleration, bev accelerator, cyclic accelerator, proton accelerator, proton beam

ABSTRACT: A method for increasing the capture by turning on beforehand a high-frequency accelerating field is proposed. The frequency of the accelerating field is varied to match deflection of the orbit in the "quasi-betatron" mode. The capture efficiency is thus increased by bunching the particles in an azimuthal direction. This bunching consists of drawing into the capture process some of the particles which under normal conditions would be outside the stability region. The application of the high-frequency field prior to the injection of the particles produces a phase bunching effect. The efficiency of the phase bunching depends on the width of the energy spectrum and on the angular spread of the injected beam. This phase bunching mode is relatively critical to the tuning. A frequency deviation by

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ACCESSION NR: AP5016923

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0.3% offsets any gain that can be obtained from the capture. Calculation of the bunching effect are presented, and it is concluded that the results can be employed in accelerators designed for long-duration and many-turn injection. "The authors thank A. B. Kuznetsov for a useful discussion and advice, and also G. A. Bokov, G. P. Puchkov, and S. N. Yurov of the radio division of LVE OIYAI (Laboratory of High Energy, Joint Institute of Nuclear Research) for help with the investigations of the accelerator mode." Orig. art. has: 6 figures and 6 formulas.

ASSOCIATION: none

SUBMITTED: 24 Jun 64

NR REF SOV: 003

ENCL: 00

OTHER: 000

SUB CODE: NP

Card 2/2 DP

L 23126-66 EWT(m)/EWP(1) IJP(c)

ACC NR: AP6001565

SOURCE CODE: UR/0120/65/000/006/0023/0026

AUTHOR: Issinskiy, I. B.; Kazanskiy, G. S.; Mikhaylov, A. I.; Myznikov, K. P.; Omel'chenko, B. D.; Tsarenkov, A. P.

ORG: Joint Nuclear Research Institute (Ob'yedinennyy institut yadernykh issledovaniy)

TITLE: Programing the operation of the OIYaI proton synchrotron for physical experiments

SOURCE: Pribory i tekhnika eksperimenta, no. 6, 1965, 23-26

TOPIC TAGS: synchrotron, proton beam, computer programming

51  
B

ABSTRACT: Two types of proton-synchrotron operation are usually required for physical experiments at OIYaI: (1) Short (50-500  $\mu$ sec) bursts of particles for double-chambers and (2) longer (up to 200 msec) pulses for counters. A programming system was developed which consists of a 7-channel operation-sequence unit, a command unit, a target-control unit, field sensors, a supply-control unit, and function manipulators. Several methods are envisaged for slow and fast application of the beam to various targets. Only block diagrams and short explanations are presented. Orig. art. has: 4 figures.

SUB CODE: 18, 09 / SUBM DATE: 20Oct64 / ORIG REF: 006

Card 1/1 PB

UDC: 621.384.66

L 39640-66 ENT(m)/I GD-2

ACC NR: AP6002891

SOURCE CODE: UR/0286/65/000/024/0048/0048

INVENTOR: Kazanskiy, G. S.; Mikhaylov, A. I.; Chekhlov, K. V. 10

ORG: none

TITLE: Induction electrodes for determining the position of a beam of charged particles. Class 21, No. 177000 [announced by Joint Institute for Nuclear Research (Ob'yedinennyy institut yadernykh issledovaniy)] 19

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 24, 1965, 48

TOPIC TAGS: conductor, acceleration, charged particle, electrode, particle beam, particle acceleration, particle accelerator component, alternating magnetic field

ABSTRACT: The induction electrodes for determining the position of a beam of charged particles, made in the form of a parallelepiped and set in the aperture of an accelerating chamber, are characterized by the fact that they are produced in the form of a metallic grid with conductors insulated from each other, inserted between two dielectric plates of the parallelepiped walls, and connected to each other at one point. These characteristics were incorporated into the design in order to distribute the induction electrodes over any bearing of an accelerator orbit in an alternating magnetic field.

SUB CODE: 20, 09/ SUBM DATE: 24Jul64

Card 1/1 P. 2

UDC: 621.384.6

L. 02/19-67 (m) IJP(e)  
ACC NR 176035869

SOURCE CODE: UR/0413/66/000/020/0087/0087

INVENTOR: Kazanskiy, G. S.; Tsarenkov, A. P.

ORG: none

TITLE: A method of dynamically controlling parameters of an accelerated particle beam in the acceleration stage. Class 21, No. 187180. [announced by the Joint Institute of Nuclear Research (Ob"yedinnenny institut yadernykh issledovaniy)]

SOURCE: Izobreten'ya, promyshlennyye obraztsy, tovarnyye znaki, no. 20, 1966, 87

TOPIC TAGS: particle acceleration, particle accelerator, plasmoid acceleration, particle beam

ABSTRACT: An Author Certificate has been issued for a method of dynamically controlling the parameters of an accelerated particle beam during the acceleration cycle by using inductive electrodes. To continuously observe both the phase size of the accelerated charged particle bunch and the degree of energy homogeneity of the beam of charged particles trapped under synchrotron conditions, signals from transducers are passed through a system of slotted-type wideband amplifiers tuned to a voltage which approaches the pulse base. The pulses reflect the phase size and keep the pulse amplitude constant through an input unit containing an automatically controlled wideband amplifier which restores pulse amplitude when the intensity is varied.

SUB CODE: <sup>20/</sup>02/ SUBM DATE: 26Apr63/ ATD PRESS: 5105

Card 1/1

UDC: 621.384.66

KAZANSKIY, I., inzh.

Improving electric equipment. Za rul. 18 no. 12:3 D '60.

(Motorcycles—Electric equipment) (MIRA 14:1)

KAZANSKIY, I., inzh. (Chekhoslovakiya)

Results of measuring the velocity curves of pulp on the basis  
of experiments. Rech. transp. 24 no.7:41-43 '65.

(MIRA 18:8)



KAZANSKIY, I. (UA3FT); STEPANOV, B. (UA3AX)

Radio amateurs continue their conversation. Radio no.4:14-15  
Ap '64. (MIRA 17:9)

1. Chleny obshchestvennogo soveta zhurnala "Radio" po radiosportu.

SAKHAROV, P.P.; GUMKOVA, Ye.I.; KAZANSKIY, I.A.; PATYAKINA, O.K.;  
SHISHOVA, N.I.

Specific prophylaxis and treatment of tonsillitis and its  
complications. Trudy gos. nauch.-issl. inst. ukha. gorla  
i nosa no.11:147-164 '59. (MIRA 15:6)  
(TONSILS--DISEASES)

KAZANSKI, I. A.

Kazanski, I. A. "Gravity and Its Anomaly in the Region of Moscow." Trudy Astronomo-Geodeticheskogo Instituta, Moscow, vol. 2, No. 3, 1926, pp. 43-82.

KAZANSKIĬ, I. A.

Kazanskii, I. A. and Faritskii, N. M., "Determination of Gravity in 6 Points along Sternberg's Traverse in the Region of the Moscow Gravitational Anomaly." *Astronom. Zhurnal*, Leningrad, vol. 9, No. 3/4, 1932, pp. 238-239.

HAZANSKII, I. A.

Kazanskii, I. A. "The Conditions of Gravimetric Work and the Problems of its Development in the U.S.S.R. *Mirovedenie*, Moscow-Leningrad, vol. 21, No. 6, 1982, p. 34-40.

KAZANSKIY, I. A. (Prof.)

"Present Status and Prospects of a Gravimetric Study of the World," Works of  
the Central Scientific-Research Institute of Geodesy, Aerial Surveying, and Cartography.  
No 51. Gravimetric Studies, 1948, p. 3.

Abstract, W-13387, 7 Sep 50

KAZANSKIY, I. A. (Prof.)

"Establishment of an Average Value of Absolute Gravitational Force for a World Gravimetric Survey," Works of the Central Scientific-Research Institute of Geodesy, Aerial Surveying, and Cartography. No 51. Gravimetric Studies, 1948, p. 61.

Abstract, W-13387, 7 Sep 50

1. KAZANSKIY, I. A., Prof.
2. USSR (600)
4. Astronomy, Spherical and Practical
7. Editor's foreward. Trudy Tanigaik No. 64 , 1949

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



KAZANSKIY, I.B.

Using induction methods for measuring hydrodynamic parameters of  
a hydraulic pressure conveying system. Za tekh.prog. 3 no.10:  
32-34 0 '63. (MIRA 16:12)

1. Institut gidrodinamiki Akademii nauk Chekhoslovatskoy  
Sotsialisticheskoy Respubliki.

KAZANSKIY, Ivan Ivanovich

1963/6

DECREASED

B Veterinary Medicine

KAZANSKIY, I.I., prof.; KARNEYEVA, V.Ye., starshiy nauchnyy sotrudnik;  
DERYABINA, Z.I., kand.biolog.nauk

Gamma globulins used in the prophylaxis and treatment of foot-  
and-mouth and Aujeszky's disease in animals. Veterinariia 37  
no.7:35-39 J1 '60. (MIRA 16:2)

1. Vsesoyuznyy institut eksperimental'noy veterinarii.  
(Gamma globulin) (Foot-and-mouth disease)  
(Pseudorabies)

KAZANSKIY, I.L.

Improvement of soil berings. Meteor.i gidrol.no.6:47-48 Jo 156.  
(Berings) (Soils) (MIRA 9:9)

KAZANSKIY, I.L.

Methods for agrometeorological observations of winter crops.  
Sbor. rab. Mosk. gidromet. obser. no.1:44-50 '60.

(MIRA 14:11)

(Meteorology, Agricultural)  
(Wheat)

1941, I. V.

MAKAROV, I. V. -- "Skin Tests as Indicators of the Reactivity of a Child's Organism in Certain Diseases. Oct 27 Oct '42, Leningrad State Medical Institute I. V. Stalin. (Dissertation for the degree of Candidate in Medical Sciences.)

SC: Vechnaya Moskva January-December 1942

~~KAZANSEFF, T.V.~~

Cutaneous tests as index of reactivity of the organism in children in various diseases. *Pediatriia*, Moskva no.5:59-62 Sept-Oct 1953.

(GIML 25:5)

1. Candidate Medical Sciences. 2. Of the Clinic for Children's Infectious Diseases (Director -- Prof. D. D. Lebedev) of the Pediatric Faculty of Second Moscow Medical Institute imeni I. V. Stalin (Director -- Docent S. I. Milovidov).

KAZANSKIY, I.V., kandidat meditsinskikh nauk

Problem of rheumatism in infancy. *Pediatrics* 39 no.2:67-70 Mr-Apr '56.  
(MLBA 9:8)

1. Iz kafedry detskikh infektsionnykh bolezney (dir. prof. D.D. Lebedev) II Moskovskogo meditsinskogo instituta imeni I.V.Stalina  
(RHEUMATISM, in infant and child,  
case reports (Rus))



KAZANSKIY, I.V., ANAN'YEVA, V.N.

Treating acute dysentery in children by blocking intestinal  
interoreceptors. Vop.okh.mat. i det. 3 no.6:80-81 N-D '58

(MIRA 11:12)

1. Iz kliniki detskikh infektsiy II Moskovskogo gosudarstvennogo  
meditsinskogo instituta imeni I.I. Pirogova i gorodskoy detskoy  
bol'nitsy No.11.

(DYSENTERY)

(INTESTINES—INNERVATION)

KAZANSKIY, I.V.

~~Non~~specific reactivity of the body in practically healthy preschool children. *Pediatrics* 36 no.10:770 '58 (MIRA 11:11)

1. Iz kliniki detskikh infektsionnykh bolezney II Moskovskogo meditsinskogo instituta.  
(INFLAMMATION)

KAZANSKIY, I.V.

Features of pneumonia in infants with whooping cough. *Pediatria*  
38 no.6:53-56 Je '60. (MIRA 13:12)  
(PNEUMONIA) (WHOOPIING COUGH)  
(INFANTS--DISEASES)

KAZANSKIY, I.V.

Tenth International Congress of Pediatricians. *Pediatrics* 42  
no.1:94-95 Ja'63. (MIRA 16:10)

1. Iz II Moskovskogo meditsinskogo instituta imeni N.I.  
Pirogova.

(PEDIATRICS—CONGRESSES)

KAZANSKIY, I.V., dotsent; USPENSKAYA, M.D.

Recurrence of measles in children. *Pediatrics* 42 no.8:51-55  
Ag'63 (MIRA 17:4)

1. Iz kliniki detskikh infektsiy ( zav. - zasluzhennyy deyatel' nauki prof. D.D. Lebedev) II Moskovskogo meditsinskogo instituta imeni Pirogova.

ACC NR: AP6019439 (N) SOURCE CODE: UR/0308/66/000/002/0020/0021

AUTHOR: Kazanskiy, K. (Candidate of naval sciences)

39  
E

ORG: None

TITLE: Correction for inclination of visible horizon in nautical astronomy

SOURCE: Morskoy flot, no. 2, 1966, 20-21

TOPIC TAGS: practical astronomy, celestial navigation, ship navigation

ABSTRACT: The present state of the art of accounting for errors caused in nautical measurements by horizon inclinations is critically reviewed. Errors in determining a ship's position can reach values up to 20 miles by using nautical tables and up to 7 miles by using inclinometers. The use of the empiric formula  $d = 1.927 \sqrt{e(1-k)}$  is recommended in Nautical Tables where  $d$  expresses the inclination of horizon,  $e$  denotes the elevation of observer's eye, and  $k$  is the coefficient of earth refraction (in Soviet Union  $k = 0.16$ ). The author also discusses the application of a formula defining the correction of tabulated inclinations in relation to air and water temperatures  $t_a$  and  $t_w$ . This formula (published in "Morskoy flot" no. 8, 1964 in A. Tarasov's paper

Card 1/2

UDC: 656.605:527

KAZANSKIY, K., kandidat voyenno-morskikh nauk.

Systemic errors in the apparent horizon dip measured by inclinometer  
and their effect on the accuracy of a vessel's astronomical position.  
Mor. flot 16 no.7:20-21 J1 '56. (MIRA 9:11)  
(Nautical astronomy)

KAZANSKIY, F. A.

5297. Kak proyektiruyut avtomobil'nyye dorozh. k. avtotransport, 1958, No 5  
s ill. 20sr. (Formul. tekhn. B-chika Rabochego dorozhnikki) 5.000 bks. 1r (58-1245)

p 625.72

SO: Knizhnaya, Letopis, Vol. 1, 1955



KAZANSKIY, Konstantin Alekseyevich; PLOTNIKOV, S.A., redaktor; KOGAN, F.L.,  
tekhnicheskiiy redaktor

[How highways are planned] Kak proektiruiut avtomobil'nye dorogi.  
Moskva, Nauchno-tekhn. izd-vo avtotransportnoi lit-ry, 1954. 57 p.  
[Microfilm] (MLRA 8:2)  
(Roads)

KAZANSKIY, K.

Experience with planning automobile highways in two stages. Avt.  
transp. 32 no.2:20-21 F '54. (MLRA 7:6)  
(Roads--Design)

*M.S. Kazanskiy K.A.*

BABKOV, V.F., BELEN'KIY, I.I., BIRULYA, A.K., prof. doktor tekhn. nauk,;  
BIRULYA, V.I., DADENKOV, Yu. N., ZAMAKHAYEV, M.S., KAZANSKIY, K.A.,  
KROBOD, L.L., KUDRYAVTSEV, A.S., TERENETSKIY, K.S., MAL'KOVA,  
N.V., tekhn. red.

[Handbook for road construction engineers; planning highways]  
Spravochnik inzhenera-dorozhnika; proektirovanie avtomobil'nykh  
dorog. Moskva, Nauchno-tekhn. izd-vo avtotransp. lit-ry, 1958. 438 p.  
(MIRA 11:10)

(Roads)

KAZANSKIY, Konstantin Alekseyevich; ZUBKOVA, M.S., red.; MAL'KOVA, N.V.,  
~~tekhn.red.~~

[Highway design] Kak proektiruiut avtomobil'nye dorogi. Izd.2.  
Moskva, Nauchno-tekhn.izd-vo M-va avtomobil'nogo transporta i  
shosseinykh dorog RSFSR, 1959. 60 p. (MIRA 13:3)  
(Roads--Design)

KAZANSKIY, K.A.

Vibration proofing of forging-hammer foundations. Kuz.-  
shtam. proizv. 5 no.9:26-30 9 '63. (MIRA 16:11)

KAZANSKIY, K. M.

"The Influence of the Leakage of Internal Compartments of Condensers  
on the Vacuum," Elek. stan., No.2, 1949

KAZANSKIY, K. M.

USSR :

Dependence of steam quality on salt content of feed water.  
Y. V. Kulyabtsy and K. M. Kazanskiy. *Elek. Stantsii*  
23, 13, 14 (Mar., 1962); *Eng. Abstr.*, 13, No. 5, 99-1 (1953). —  
Deterioration in steam quality is not caused by deterioration  
in the quality of the softened water. As shown by alkyl  
and sulfamer readings, only an increase in the NH<sub>4</sub> con-  
tent is involved in such cases. K. L. C. /ka0

KUDRYAVTSEV, I.V., KAZANSKIY, K.M.

Steam Turbines

"Strengthening a turbine rotor shaft and redesign of its end packing, Elek.sta.  
23 no. 3, 1953.  
Prof.

Monthly List of Russian Accessions, Library of Congress, July 1952. Unclassified.



27917

S/096/61/000/011/002/006

E194/E155

11.0910

AUTHORS: Ivanov, K.I., Doctor of Chemical Sciences,  
Vilyanskaya, Ye.D., Candidate of Chemical Sciences,  
Kazanskiy, K.M., Engineer, Shilankov, B.F., Engineer,  
and Fedorova, I.V., Engineer

TITLE: Service test results with fire resistant turbine oil  
"Ivviol' 1A"

PERIODICAL: Teploenergetika, <sup>8</sup>no. 11, 1961, 27-29

TEXT: Work on fire-resistant hydraulic fluids and lubricants  
for turbines is proceeding in several countries. For example,  
Pydraul F-9 is suitable as a hydraulic fluid but not as a bearing  
lubricant. In 1958-59 the Laboratoriya nefi (Petroleum  
Laboratory) of VTI developed a fire-resistant substitute for  
turbine oil, grade Ivviol' 1A, intended for use both as hydraulic  
fluid and lubricant. Laboratory test results were published by  
two of the present authors (Ref.3; K.I. Ivanov, Ye.D. Vilyanskaya,  
Teploenergetika no.9, 1959) and then an experimental batch of the  
material was made for field tests. The viscosity of the material  
was 20 centistokes at 50 °C, the flash point was 238 °C, open cup,  
Card 1/3

Service test results with fire .... S/096/61/000/011/002/006  
E194/E155

and the fire point in air 740 °C. The specific gravity at 20 °C is 1.17. The material meets the requirements of the conventional turbine oil specification in respect of stability and neutrality. Before the charge was put in the turbine certain changes were made: the cylindrical filters in the oil tank were replaced by gauze screens which could be cleaned during operation of the turbine; the design of one of the main glands was improved. In the early period of operation with Ivviol<sup>1</sup> 1A, foaming was observed but was cured by the addition of a silicone anti-foam agent to the amount of 0.1% by weight. After two or three months' service the brass gauze screens in the oil tank were attacked by the fluid. During the entire service period the make-up of fire-resistant fluid was 200 kg, whereas the amount of oil that had been required in a corresponding period was 800 kg. The difference is presumably due to the lower volatility of the fire-resistant material. After a period of service the viscosity and neutrality of the fluid were unchanged and all parts of the turbine, which were carefully examined, were in good condition. The fluid was on test for 5400 hours, during which the turbine ran without stopping for 120 days, at 18 hours a day for 110 days, ✓

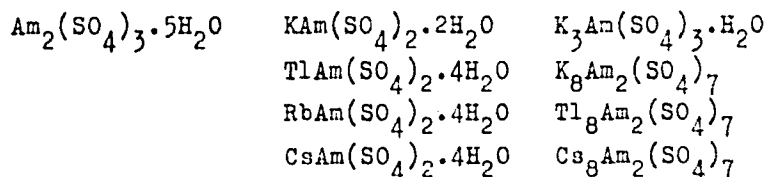
Card 2/3

AUTHORS: Yakovlev, G. N., Gorbenko-Germanov, D. S., SOV/79-28-10-2/60  
Razbitnoy, V. M., Kazanskiy, K. S., Zenkova, R. A.

TITLE: Investigation of the Double Sulfates of Americium According  
to the Absorption Spectra in the Crystals (Izucheniye dvoynykh  
sul'fatov ameritsiya po spektram pogloshcheniya v kristallakh)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 10,  
pp 2624 - 2637 (USSR)

ABSTRACT: In the present paper the normal sulfate and the double  
sulfate of americium with potassium, thallium, rubidium and  
cesium were investigated. The normal sulfate as well  
as the following double sulfates of americium were  
identified:



Card 1/3

As it is known, the double sulfates of the rare earths

Investigation of the Double Sulfates of Americium  
According to the Absorption Spectra in the Crystals

SOV/79-28-10-2/60

and of the alkali metals are difficult to solve and, therefore, are of importance for the analytical chemistry of these elements. (According to the actinide theory, the transuranic elements are analogs of the rare earths, and in their case the analogy of the chemical properties of many compounds also plays a role, especially the similarity of the double sulfates with the alkali metals). The absorption spectra of the polycrystalline samples of these compounds were taken within the range of 4000-8500 Å at 300, 200 and 80° K (Figs 3-11). Phase diagrams were taken for the synthesis  $R_2SO_4-Am_2(SO_4)_3-H_2O$

(R=K, Tl and Rb) (Figs 1, 2). The split of the electron band  $Am^{+++}5030 \text{ Å}$  in the crystals of the compounds to be investigated was studied. The group of electronically oscillating "bands" within the range of 4500 Å were identified which are not observed in solutions and which are in a high degree sensitive to a change of the composition of the compound. The influence of the temperature and the amount of crystal water on the character of the split of the electron band  $Am^{+++}5030 \text{ Å}$  and the combination

Card 2/3

Investigation of the Double Sulfates of Americium  
According to the Absorption Spectra in the Crystals

SOV/79-28-10-2/60

of the above mentioned "bands" within the range of  
4500 Å were investigated. There are 11 figures, 6 tables,  
and 13 references, 3 of which are Soviet.

SUBMITTED: August 16, 1957

Card 3/3

5(4)

SOV/76..33-6..37/44

AUTHORS: Kazanskiy, K. S., Entelis, S. G., Chirkov, N. M.

TITLE: Solubility of Gaseous Isobutylene in Water (Rastvorimost' gazoobraznogo izobutilena v vode)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 6, pp 1409--1413 (USSR)

ABSTRACT: The solubility of isobutylene (I) in water (0 .. 70°C) and aqueous NaCl-solutions (0 to - 5°C) at 1 atm pressure was investigated. The quantity of dissolved (I) was determined by the pressure drop in an accurately measured gas volume as in the experiments (Ref 2). The vessel (Fig 1), in which the measurements were made, had an oblong shape, and was placed, during the measurements, into a thermostat, where the intermixture was effected by shaking. The Henry constant was computed from the experimental results by an equation (3) (Table 1), and it was ascertained that the heat of solution  $\Delta H_s$  rises with a reduction of temperature. The experimental results obtained .. in contrast to other publication references on the water solubility of gases - cannot be described by

Card 1/3

SOV/76-33-6-37/44

## Solubility of Gaseous Isobutylene in Water

the classic equation according to Valentiner (Ref 6). In the temperature interval  $70 - 25^{\circ}\text{C}$ ,  $\Delta H_s$  is constant and amounts to  $4620 \pm 40$  cal/mol; a further reduction of temperature leads to a rise of the heat of solubility (Fig 3). It is assumed that in the (I)-dissolution in water, two processes go on in parallel - one can be regarded as a physical disintegration, the other as a formation of an (I)-hydrate - so that the solubility as a function of temperature can be expressed by the sum of two exponential quantities (Equation (6)). The determination of the Henry constant for (I) in  $\text{NaCl-H}_2\text{O}$  mixtures at  $0^{\circ}\text{C}$  (Table 2) and  $-5^{\circ}\text{C}$  (Table 3) shows that at  $-5^{\circ}\text{C}$  the equation according to Sechenov cannot be applied. There are 4 figures, 3 tables, and 10 references.

ASSOCIATION: Institut khimicheskoy fiziki  
(Institute of Chemical Physics)

Card 2/3

KAZANSKIY, K.S.; ENTELIS, S.G.

Kinetics and mechanism of dimerization of 1,1-diphenylethylene in the  $H_2SO_4 - H_2O$  system. Part 1: Ionization of 1,1-diphenylethylene in aqueous sulfuric acid. *Kin.i kat.* 3 no.1:36-41 '62.  
(MIRA 15:3)

1. Institut khimicheskoy fiziki AN SSSR.  
(Ethylene) (Ionization)



ENTELIS, S.G.; KAZANSKIY, K.S.; KOGAN, G.A.

Kinetics of styrene dimerization in aqueous sulfuric acid.  
Part 1: Ionization of styrene in the  $H_2SO_4 - H_2O$  system.  
Kin.i kat. 4 no.2:277-281 Mr-Ap '63. (MIRA 16:5)

1. Institut khimicheskoy fiziki AN SSSR.  
(Styrene) (Ionization) (Sulfuric acid)

ENTEELIS, S.G.; KAZANSKIY, K.S.

Kinetics and the mechanism of 1,1-diphenylethylene dimerization  
in aqueous sulfuric acid. Part 2: Kinetic regularities and  
the reaction mechanism. Kin. i kat. 4 no.5:713-722 S-0 '63.  
(MIRA 16:12)

1. Institut khimicheskoy fiziki AN SSSR.

KAZANSKIY, K. S.; KOROVINA, G. V.; VAYNSHTOK, B. I.; ENTELIS, S. G.

Polymerization of ethylene oxide on strontium carbonate and the effect of water adsorption on catalytic activity. Izv AN SSSR Ser Khim no. 4:759-761 Ap '64. (MIRA '7:5)

1. Institut khimicheskoy fiziki AN SSSR.

S/020/60/132/05/49/069  
B004/B011

AUTHORS: Entelis, S. G., Kazanskiy, K. S., Chirkov, N. M.

TITLE: Thermodynamics of Isobutylene Protonization

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 5,  
pp. 1152-1155

TEXT: The authors wanted to make a direct determination of the equilibrium constants of olefin protonization, as well as of the heat and entropy of this reaction. They investigated the system isobutylene - sulfuric acid - water in which connection the conversion of iso-C<sub>4</sub>H<sub>8</sub> in the liquid phase was measured spectrophotometrically at 210 mμ (Fig. 1). In order to obtain measurable reaction rates, it was necessary to work at -15 to -35°C. Fig. 2 shows the dependence of log D<sub>210</sub> on the reaction time τ (D<sub>210</sub> = optical density at 210 mμ). Fig. 3 illustrates the dependence of the molar extinction coefficient ε on temperature. The basicity constant pK

Card 1/3

✓B

Thermodynamics of Isobutylene Protonization

S/020/60/132/05/49/069  
B004/B011

PRESENTED: January 19, 1960, by V. N. Kondrat'yev, Academician

SUBMITTED: January 15, 1960

√B

Card 3/3

Thermodynamics of Isobutylene Protonization

S/020/60/132/05/49/069

B004/B011

was calculated (Table 1) whose dependence on  $1/T$  is shown in Fig. 4. The heat  $\Delta H_R = 4.3 \pm 4$  kcal/mole was found for the protonization of iso-C<sub>4</sub>H<sub>8</sub>, and  $\Delta S = +8.20$  e.u. for the entropy. Moreover, the value for  $\Delta H_S(\text{tert-C}_4\text{H}_9^{\oplus})$  equal to  $(-64 \pm 4)$  kcal/mole was calculated from equation

$$(8) \Delta H_S(\text{tert-C}_4\text{H}_9^{\oplus}) + \Delta H_S(\text{H}_2\text{O}) - \Delta H_S(\text{iso-C}_4\text{H}_8) - \Delta H_S(\text{H}_3\text{O}^{\oplus}) = 33 \text{ kcal.}$$

The authors discuss the paper by V. N. Kondrat'yev and N. D. Sokolov (Ref. 7). They assume two types of interaction of the carbonium ion with water: solvation, or donor-acceptor interaction under the formation of an alkoxonium ion, which two interactions are separated by a potential barrier. The authors refer to a paper by A. I. Gel'bshteyn, G. G. Shcheglova, and M. I. Temkin (Ref. 3). There are 4 figures, 1 table, and 8 references: 4 Soviet, 3 British, and 1 American.

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AUTHOR: Kazanskiy, K. V.

TITLE: Dependence of the Refractive Index of Air on Humidity  
(Zavisimost' pokazatelya prelomleniya vozdukhha ot vlazhnosti)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya,  
1959, Nr 2, pp 332-334 (USSR)

ABSTRACT: In many problems where refraction of light in the atmosphere is involved, it is necessary to know the refractive index of air  $\nu$ . In order to relate the refractive index with the state of the medium (air) its value is expressed as a function of the air density  $\rho$  (Refs 1, 2), using the following formula:

$$\nu = 1 + c_1 \rho \quad (1)$$

or as a function of the atmospheric temperature  $T$  and pressure  $P$  (Refs 3, 4):

$$\nu = 1 + c_2 \frac{P}{T} \quad (2)$$

Card 1/5 where  $c_1$  and  $c_2$  are certain constants which can be