"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENTON, I.B.

Engineering and efficiency indices in the plans for the electric power supply to industrial enterprises. Prom.energ. 16 no.5:38-40 My '61. (MIRA 14:7)

(Electric power distribution)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENTON, I.B., inzh.

Method for calculating reliability in electric power distribution systems design. Prom. energ. 20 no.10:35-39 O '65. (MIRA 18:10)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENTSEV, S.L.; OLENEV. V.I.; VLADIMIROV, Yu.A.

Spectrum of the action of visible-light induced phosphorescence of aromatic amino acid solutions irradiated with ultraviolet rays at 77°K. Biofizika 10 no.5:877-878 '65. (MIRA 18:10)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

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6.6000

80449
SOV/112-60-2-6.1094

Translation from: Referativnyy zhurnal Elektrotekhnika, 1960, Nr 2, p 357 (USSR)

AUTHOR: Aksentov, Yu.V.

TITLE: Phase Distortions in a Simultaneous Compatible Color Television System

PERIODICAL: Sb. tr. Leningr. elektrotekhn. in-ta svyazi, 1957, Nr 2 (32), pp 77 - 85

ABSTRACT: Cases of differential phase distortions are discussed which emerge at a diagonal cutting of sinusoids in a saturated amplifier stage with a grid current amplifier and in presence of a parasitic subcarrier signal. The magnitude of differential phase distortions can be measured with a vector meter by passing through the tested circuit a linear step signal with a superimposed subcarrier. For precise measurements of the differential phase as well as of the differential amplification, a device consisting of a special signal oscillator and a receiver can be used. They are connected to the input and output of the tested circuit respectively and produce

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APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENTOV, Yu.V.; VEREVKIN, N.S.; ZHEBEL', B.G.; ZLOTNIKOV, S.A.; KOLIN, K.T.; KONDRAT'YEV, A.G.; MINENKO, Yu.G.; ODNOL'KO, V.V.; TARANETS, D.A.; SHMAKOV, P.V., red.; VENGRENYUK, L.I., red.; KARABILOVA, S.F., tekhn.red.

[Television; general course] Televidenie; obshchii kurs. Pod red. P.V.Shmakova. Moskva, Gos.izd-vo lit-ry po voprosam sviazi i radio, 1960. 391 p. (MIRA 13:12)
(Television)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENTOV, Yu.V.; SHUMLYAYEV, V.S.

Effect of the accuracy of color signal shaping on the quality of the image. Elektrosviaz' 16 no.12:37-42 D '62. (MIRA 16:1)
(Color television)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENTOV, Yu.V.; GOL'DIN, A.A.; DZHAKONIYA, V.Ye.; DUSHKEVICH, N.I.; YERGANZHIYEV, N.A.; YEFIMKIN, V.I.; LIPAY, I.N.; MINENKO, Yu.G.; ODNOL'KO, V.V.; PEREVEZENTSEV, L.T.; TARANETS, D.A.; SHMAKOV, P.V., prof.; KUKOLEVA, T.V., red.; BELYAYEVA, V.V., tekhn. red.

[Theory and practice of color television]Teoriia i praktika tsvetnogo televideniia. Moskva, Sovetskoe radio, 1962. 661 p. (MIRA 16:1)

(Color television)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENTOV, Yu.V.; SHUMLYAYEV, V.S.

Determination of tolerances in signal brightness variations, signal color, and initial phase. Elektrosv'az' 18 no.5: 29-34 My '64 (MIRA 17:8)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENTOV, Yu.V.; KOPYLOV, P.M.

Choice of an optimum test signal form for a simultaneous color television system. Elektrosviaz' 19 no.8:24-30 Ag '65. (MIRA 18:9)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

L 16682-66 EWT(m)/EWP(j) RM

ACC NR: AP5018799 SOURCE CODE: UR/0217/65/010/004/0614/0618

AUTHOR: Vladimirov, Yu. A.; Akséntsev, S. L.; Olenev, V. I.

ORG: Institute of Biological Physics, AN SSSR, Moscow (Institut biologicheskoy fiziki AN SSSR)

TITLE: Heat and light-induced phosphorescence of proteins and aromatic amino acids subjected to ultraviolet radiation

SOURCE: Biofizika, v. 10, no. 4, 1965, 614-618

TOPIC TAGS: ultraviolet radiation, thermoluminescence, visible light, photoproducts, phosphorescence

ABSTRACT: A method of freezing UV-irradiated experimental materials at 77°K makes it possible to stop the photochemical process at the stages of the primary products and makes study of them easier. UV-irradiation at 77°K yields two photoproducts, one responsible for thermoluminescence of proteins and the other responsible for the fading of protein luminescence. The authors detected heat and visible-light-induced phosphorescence in ultraviolet-irradiated proteins and the aromatic amino acids tryptophan and tyrosine, and measured the time of fading and the spectral composition of the "induced" and also the ordinary phosphorescence

Card 1/3 UDC: 577.3

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

L 16682-66

ACC NR: AP5018799

of these compounds at 77°K. Various characteristics were subsequently studied. Light-induced phosphorescence was measured according to the sequence: ultraviolet--dimness--visible light--measurement; ordinary phosphorescence, through the sequence ultraviolet--measurement. The authors measured and tabulated the reciprocal of the "life period" of ordinary and "induced" phosphorescence, τ, for tyrosine, tryptophan and chimotrypsin. The values of τ for induced phosphorescence were, as a rule, close to the τ of ordinary phosphorescence, but always a little larger in magnitude. In addition, spectral analysis of ordinary and "induced" phosphorescence of tryptophan and tyrosine showed that the band of induced phosphorescence is shifted slightly to the longwave side as compared to ordinary phosphorescence. Because of the similarities of the afterglows, it was predicted that scintillation proceeds from the third level of the original aromatic amino acid molecule. It was found that light-induced phosphorescence differs essentially from ordinary phosphorescence; in particular, "induced" phosphorescence may be antitoxic. Heat-induced phosphorescence was studied in the sequence: ultraviolet--darkness--heat--cooling--measurement. The curves of luminescent fading follow, as in light-induced phosphorescence, in relation to a first order reaction. τ of heat-induced phosphorescence was also found to match the τ of ordinary phosphorescnece, except that in alkaline solution of

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L 16682-66

ACC NR: AP5018799

tyrosine, fading time of "induced" phosphorescence greatly exceeded that of ordinary phosphorescence. The influence of the intensity of light on the forward reaction of the accumulation of a photoproduct under the influence of ultraviolet radiation and on the reverse reaction of the destruction of this product was also studied. It was shown that the speed of the forward reaction is directly proportional to the intensity of ultraviolet irradiation. The speed of the reverse reaction is proportional to the square root of the intensity of the acting light. Thus the forward photochemical reaction proceeds according to a single quantum mechanism, but the following heating or illumination by visible light proceeds to the recombination of photoproducts and scintillation from the triplet state of the original amino acid. Orig. art. has: 3 figures, 2 tables.

SUB CODE: 06/ SUBM DATE: 04Apr64/ ORIG REF: 006/ OTH REF: 007

Card 3/3

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

GRIGOR'YEV, L.; AKSENTSOVA, M.

Soviet textile industry and foreign trade in textile goods and raw materials. Vnesh.torg. 30 no.3:43-47 '60. (MIRA 13:3)

(Textile industry) (Russia--Commerce)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

VEDERNIKOV, N. L.; SAFRONOV, YU. V.; AKSENTYAN, K. B.

Cultivators

Computations for the steering pole of the KP-3 cultivator. Sel'khozmashina, No. 9, 1952.

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

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

SOV/124-58-2-2089

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 2, p 84 (USSR)

AUTHOR: ~~Aksentyan, K. B.~~

TITLE: Calculation of the Stability of the In-plane Flexure of a Strip Under Generic Conditions of Loading and Anchorage (Raschet ustoychivosti ploskoy formy izgiba polosy pri proizvol'nykh nagruzkakh i usloviyakh opiraniya)

PERIODICAL: Tr. Rostovsk.-n/D. inzh.-stroit. in-ta, 1956, Nr 5, pp 149-176

ABSTRACT: The author provides a refinement to the solution of the determination of the critical flexural loading of a strip. The solution is based on the elastic-load method with application of matrix theory. The case of a straight, rectangular beam is examined, wherein the beam is assumed to be loaded by concentrated forces that are applied to the center line of the beam and eccentrically thereto. Calculation examples are given.

V. A. Mar'in

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENTYAN, K.B., dotsent, kand. tekhn. nauk

Stability analysis of the flat curvature of variously supported bars subjected to the action of arbitrary loads. Trudy RISI no.6: 97-140 '58. (MIRA 12:6)

(Elastic rods and wires)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENT'YAN, K.B.; GLADZHEV, R.S.; MURATOV, R.B.; STROKOV, S.A.

Calculation of the strength of alternator discs. Trakt. i sel'khozmash. 31 [i.e.32] no.11:22-24 N '62. (MIRA 15:12)
(Harvesting machinery)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

S/0040/63/027/006/1057/1074

ACCESSION NR: AP4001621

AUTHORS: Aksentyan, O. K. (Rostov-na-Donu); Vorovich, I. I. (Rostov-na-Donu)

TITLE: State of stress in a small-thickness plate

SOURCE: Prikl. matematika i mekhanika, v. 27, no. 6, 1963, 1057-1074

TOPIC TAGS: plate stress distribution, stress thickness relationship, biharmonic stress distribution, rotational stress distribution, potential stress distribution, small thickness plate

ABSTRACT: The authors investigate an elasticity theory problem for a plate under stresses given on the boundary. They study the behavior of the stressed state when the thickness of the plate is decreased. The methods for constructing asymptotic processes for this problem were proposed by A. L. Gol'denveyzer in a report at the first All-Union Conference on Theoretical and Applied Mechanics in 1960, and also by several others. The method given by the authors in the present work reduces the construction of the asymptotic to sequential solution of a series of biharmonic problems, equivalent to a problem in applied theory of flexure of a plate and inversion of an infinite matrix. This matrix does not depend on the

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

ACCESSION NR: AP4001621

geometry of the plate, and its inversion may be done once for all plates and loads. Orig. art. has: 75 formulas and 4 figures.

ASSOCIATION: none

SUBMITTED: 24Jun63 DATE ACQ: 19Dec63 ENCL: 00

SUB CODE: AP NO REF SOV: 007 OTHER: 003

Card 2/2

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENTYAN, O.K. (Rostov-na-Donu); VOROVICH, I.I. (Rostov-na-Donu)

Determining the concentration of stresses on the basis of applied theory. Prikl. mat. i mekh. 28 no.3:589-596 My-Je'64. (MIRA 17:7)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENT'YANTS, A., BEYDIK, A.

[Kuban, the land of petroleum; a classified bibliographical aid for libraries] Kuban' - krai nefti; metodicheskie materialy v pomoshch' bibliotekam. Krasnodar, Sovetskaia Kuban', 1957. 15 p. (MIRA 11:10)

1. Krasnodar, Russia. Krasnodarskaya krayevaya biblioteka.
(Bibliography--Kuban--Petroleum)
(Kuban--Petroleum--Bibliography)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENT'YEV, A.D. (g.Krivoy Rog)

Lighting of scraper levels in Krivoy Rog Basin mines. Svetotekhnika 4 no.12:27-28 D '58. (MIRA 11:12)

1. Nauchno-issledovatel'skiy gornorudnyy institut.
(Krivoy Rog--Mine lighting)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

TRUSIY, V.T.; AKSENT'YEV, A.D.

Selecting efficient cutting speeds for the KMG-2 rock cutting machine as a factor affecting the dustiness of the air. Sbor. nauch. trud. KGRI no.23:118-121 '63 (MIRA 17:8)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

ABRAMOV, F.A., prof.; AKSENT'YEV, A.D., inzh.; TORGOVNIKOV, B.M., inzh.

Local transformation of a complex connecting crosscut in a ventilation system. Izv.vys.ucheb.zav.; gor.zhur. 8 no.11:66-70 '65. (MIRA 19:1)

1. Dnepropetrovskiy ordena Trudovogo Krasnogo Znameni gornyy institut imeni Artema (for Abramov). 2. Nauchno-issledovatel'skiy gornorudnyy institut, Krivoy Rog (for Aksent'yev, Torgovnikov). Rekomendovana kafedroy rudnichnoy ventilyatsii i tekhniki bezopasnosti Dnepropetrovskogo gornogo instituta. Submitted April 9, 1965.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENT'YEV, G.N.

Certain destruction processes on coasts marked by the occurrence of landslides in the northwestern part of the Black Sea. Trudy Okean. kom. 4:118-121 '59. (MIRA 13:4)

1. Odesskaya protivoopolznevaya stantsiya Ministerstva geologii i okhrany nedr SSSR.
(Black Sea--Coast changes)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

ARSENT'YEV, G.N.

Hydrologic problems in the works of G.I. Tanfil'ev. Trudy Od. un. 152. Ser. geol. i geog. nauk no.9:185-186 '62.
(MIRA 17:6)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENT'YEV, L.A.

Unilaminar change in the profile of a dam. Uch. zap. Kaz. un. 117 no.9:52-54 '57. (MIRA 13:1)

1.Kazanskiy gosudarstvennyy universitet im. V.I. Ul'yanova-Lenina. Kafedra differentsial'nykh uravneniy.
(Dams)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENT'YEV, L. A., Cand Phys-Math Sci -- (diss) "On ~~the~~ adequate indexes of ~~monophylly~~ one-sheetedness and their application to inverse boundary-value ~~marginal~~ problems of the theory of analytic functions." Kazan', 1958. 5 pp (Kazan' Order of Labor Red Banner State Univ im V. I. Ul'yanov-Lenin), 120 copies (KL, 18-58, 94)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AUTHOR: Aksent'yev, L.A. SOV/140-58-3-1/34

TITLE: On the Sufficient Conditions for the Schlichtness of Regular Functions (K dostatochnym priznakam odnolistnosti regulyarnykh funktsiy)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Matematika, 1958, Nr 3, pp 3-7(USSR)

ABSTRACT: Let the finite doubly connected domain G be bounded from the exterior by the convex curve L_1 and from the interior by an arbitrary curve L_2.

Let $F(z) = g(z) + f(z)$ be defined in G, where $g(z)$ is assumed to be regular in G and $f(z)$ to be regular in the interior of L_1 (domain D) and $f'(z)$ to be continuous in $\overline{D}$.

Theorem: If for an $N > 0$ it holds

(1) $\operatorname{Re} f'(z) > N$, $z \in L_1$

(2) $|g(z_1) - g(z_2)| \leqslant N|z_1 - z_2|$, $z_1, z_2 \in \overline{G}$

then $F(z)$ is schlicht in $\overline{G}$.

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Theorem: If instead of (1), (2) it holds

$$|f'(z)| < N \quad , \quad z \in L_1$$

$$|g(z_1) - g(z_2)| \geqslant N\,|z_1 - z_2| \quad , \quad z_1, z_2 \in \overline{G} \quad ,$$

then $F(z)$ is schlicht in $\overline{G}$.

Theorem: Let $F(z) = \frac{c_n}{z^n} + \dots + \frac{c_1}{z} + f(z)$, where $f(z)$ is regular in D and D is assumed to contain the circle $|z| \leqslant r$. If $f'(z)$ is continuous in $\overline{D}$ and if on the boundary of $\overline{D}$ it holds

$$\operatorname{Re} f'(z) > \frac{n|c_n|}{r^{n+1}} + \dots + \frac{|c_1|}{r^2}$$

then $F(z)$ is everywhere schlicht in $\overline{D}$ where $|z| \geqslant r$.

Theorem: Let $f(z)$ be regular in D , $D \subset (|z| < r)$ and $f'(z)$ be continuous in $\overline{D}$. If on the boundary of D

$$|f'(z)| < \frac{|c_1|}{r^2} - \frac{2|c_2|}{\varrho^3} - \dots - \frac{n|c_n|}{\varrho^{n+1}}$$

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holds for a $\rho < r$, then $F(z) = \frac{c_n}{z^n} + \ldots + \frac{c_1}{z} + f(z)$ is everywhere schlicht in $\overline{D}$ where $|z| \geqslant \rho$.

Theorem: In every finite doubly connected domain G with a non-convex external boundary L_1 there exists a nonschlicht function $F(z) = g(z) + f(z)$, so that for a given N it holds

$$|g(z_1) - g(z_2)| \leqslant N\,|z_1 - z_2| \qquad z_1, z_2 \in G$$

$$\operatorname{Re} f'(z) > N \quad , \quad z \in D$$

(D interior of L_1).

There are 4 non-Soviet references, 1 of which is Japanese, 1 French, 1 English, and 1 American.

ASSOCIATION: Kazanskiy gosudarstvennyy universitet imeni V.I.Ul'yanova-Lenina (Kazan' State University imeni V.I. Ul'yanov-Lenin)

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APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

On the Sufficient Conditions for the Schlichtness of Regular Functions SOV/140-58-3-1/34

SUBMITTED: December 17, 1957

Card 4/4

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

16(1)

AUTHOR: Aksent'yev, L.A.

SOV/140-59-4-1/26

TITLE: On the Integral Representation of Schlicht Functions

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Matematika, 1959, Nr 4, pp 3 - 8 (USSR)

ABSTRACT: Let a(t) be a real nondecreasing bounded function with at least one point of growth; $\varphi(t)$ real and $\psi(t)$ complex continuous functions.

Theorem :

$$\phi(z) = \int_a^b \frac{e^{i\varphi(t)} d\alpha(t)}{\psi(t) - z}$$ is schlicht in $|z| \geqslant R$, if

$|\psi(t)| < R \sin\alpha$, $0 < \alpha \leqslant \frac{\pi}{4}$, and $\operatorname{Var}_{a \leqslant t \leqslant b} \varphi(t) \leqslant \pi - 4\alpha$.

Theorem : $$\phi(z) = \int_a^b \frac{\psi^2(t)\, e^{i\varphi(t)} d\alpha(t)}{(t) - z}$$ is schlicht in $|z| \leqslant R$,

if $|\psi(t)| > \frac{R}{\sin\alpha}$, $0 < \alpha \leqslant \frac{\pi}{4}$, and $\operatorname{Var}_{a \leqslant t \leqslant b} \varphi(t) < \pi - 4\alpha$.

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On the Integral Representation of Schlicht Functions SOV/140-59-4-1/26

There are 3 references, 2 of which are Soviet, and 1 French.

ASSOCIATION: Kazanskiy gosudarstvennyy universitet imeni V.I. Ul'yanova-Lenina (Kazan' State University imeni V.I. Ul'yanov-Lenin)

SUBMITTED: May 16, 1958

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APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

16(1) 06300

AUTHOR: Aksent'yev, L.A. SOV/140-59-6-1/29

TITLE: Elementary Marks of Schlichtness Basing on the Behavior on the Boundary

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Matematika, 1959, Nr 6, pp 3-8 (USSR)

ABSTRACT: Theorem 1: A function $f(z)$ $(f'(0)>0)$ regular in $|z|<R$ is schlicht in $|z|\leqslant R$ if

(1) $\mathrm{Re}\left(e^{i\gamma} z \frac{f'(z)}{f(z)}\right)\geqslant 0$

for $|z|=R$ (γ- real constant), $f'(z)$ is continuous in $|z|\leqslant R$, $f'(z)\neq 0$ for $|z|=R$, and if $f(z)$ in $|z|\leqslant R$ has only one zero for $z=0$.

Theorem 2: $f(z)$ $(f(\infty)=\infty,\ f'(\infty)>0)$ is schlicht in $|z|\geqslant r$ if $\mathrm{Re}\left(e^{i\gamma} z \frac{f'(z)}{f(z)}\right)\geqslant 0$ for $|z|=r$, $f'(z)$ is continuous in $|z|\geqslant r$, $f'(z)\neq 0$ for $|z|=r$ and if $f(z)\neq 0$ for $|z|\geqslant r$.

Theorem 3: If a function $f(z)$ regular in $r<|z|<R$ for $|z|=r$ and $|z|=R$ satisfies the condition $\mathrm{Re}\left(e^{i\gamma} z \frac{f'(z)}{f(z)}\right)\geqslant 0$, if $f'(z)$ is continuous in the closed ring and on its boundary $\neq 0$, if $f(z)\neq 0$ in the closed ring and $\arg f(re^{i\varphi})$ changes by less than

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SUBMITTED: May 16, 1958

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

16(1),10(4)

AUTHOR: Aksent'yev, L.A. SOV/42-14-4-5/27

TITLE: Sufficient Conditions for the Schlichtness of the Solution of the Reversion Problem of the Percolation Theory

PERIODICAL: Uspekhi matematicheskikh nauk, 1959, Vol 14, Nr 4, pp 133-140 (USSR)

ABSTRACT: The considered problem consists in the determination of the dike profile out of the given velocity of percolation v(s), where s is the profile arc. Pressure and permeability are given. The author gives proofs for his results (sufficient conditions for the schlichtness of the solution) published in [Ref 5]. Besides the following theorem is proved the conclusion of which are the above mentioned results:

Theorem: In order that $z(\zeta)=\int \exp\left[\frac{i\sqrt{1-\zeta^2}}{\pi}\int_{-1}^{+1}\frac{\xi(t)}{\sqrt{1-\tau^2}}\frac{d\tau}{\tau-\zeta}\right]d\zeta+C$ is schlicht in $\operatorname{Im}\zeta\leqslant 0$ it is sufficient that F(t) does not increase or decrease and one of the following conditions is satisfied:

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Sufficient Conditions for the Schlichtness of the Solution of the Reversion Problem of the Percolation Theory SOV/42-14-4-5/27

1. $|F(t_1)-F(t_2)| \leq \left(\alpha+\beta+\pi\frac{1-\alpha-\beta}{2}\right)|t_1-t_2|$

2. $|F(t_1)-F(t_2)| \leq [\alpha+\beta+\pi(1-\alpha-\beta)]\cdot|t_1-t_2|$ $\alpha+\beta\leq 1$

Here C is a complex constant; $\sqrt{1-\zeta^2}$, $\operatorname{Im}\zeta\leq 0$, positive on $[-1,+1]$, $0\leq\alpha,\beta<1$, $\xi(t)=-\alpha\ln(1+t)-\beta\ln(1-t)+F(t)$.

The author mentions M.T.Nuzhin, V.S.Rogozhin, and S.N.Andrianov (deceased).

There are 5 Soviet references.

SUBMITTED: January 16, 1957

Card2/2

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AKSINT 1/2 V, 2 A

USSR I BOOK EXPLOITATION SOV/3921

Issledovaniya po sovremennym problemam teorii funktsiy kompleksnogo peremennogo; sbornik statey (Investigation of Modern Problems in the Theory of Complex Variables; Collection of Articles) Moscow, Fizmatgiz, 1960. 544 p. 3,000 copies printed.

Ed. (Title page): A. I. Markushevich; Eds. (Inside book): V. S. Vilunskiy and S. Ya. Khavinson; Tech. Ed.: N. Ya. Kireyeva.

PURPOSE: This book is intended for specialists in the theory of functions of a complex variable. It may also be used by advanced university students, scientific workers, and specialists in other fields of mathematics.

COVERAGE: The book contains 28 papers originally read at the Third All-Union Conference on the Theory of Functions of a Complex Variable held at Kazan University from May 28 to June 2 1957. The articles treat problems in the modern theory of functions and its applications. The book is divided into 7 parts. The first part discusses the problem of monogenity, power series, boundary and extremal properties. The second part discusses entire functions and interpolation and approximation problems. The third part discusses functions of many complex variables. The fourth part discusses conformal mapping and boundary-value problems. The [illegible] Riemann surfaces and the theory of distributions. [illegible] discusses generalized analytic functions [illegible] miscellaneous problems. [illegible]

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Fuks, B. A. (Moscow). On the Zernel Functions of a Region 287

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PART V

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENT'YEV, L.A.

Univalence of sections of power series. Izv.vys ucheb.zav.;mat. no.5:12-15 '60. (MIRA 13:10)

1. Kazanskiy gosudarstvennyy universitet im. V.I.Ul'yanova-Lenina.

(Series, Taylor's)

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S/042/60/015/006/002/004
C111/C222

AUTHOR: Aksent'yev, L.A.

TITLE: Conditions Under Which Solutions of Main Inverse Boundary Value Problems are Schlicht

PERIODICAL: Uspekhi matematicheskikh nauk, 1960, Vol.15, No.6, pp.119-124

TEXT: 1. Determine the contour and the function $w = \Phi(z)$ analytic in the interior of the contour if the boundary value $\Phi[z(s)] = u(s)+iv(s)$ is given, where s is the abscissa of arc, $0 \leq s \leq l$ (inner problem). 2. With the same boundary condition determine the function $w = \Phi(z)$ analytic outside the sought contour and having a pole of first order in the infinitely far point (outer problem). For solving these problems (cf. (Ref.1, chapter I)) at first the interior (exterior) of the curve in the w-plane is mapped onto the interior (exterior) of the circle $|\zeta| = 1$ with the aid of a function $\zeta = \zeta(w)$. The function which maps the interior (exterior) of the circle onto the sought region has the form $z(\zeta) = e^{i\beta} \int e^{k(\zeta)} d\zeta + c$, where β is a real constant, and c is a complex constant,

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Conditions Under Which Solutions of Main Inverse Boundary Value Problems are Schlicht

(1) $$\ln \frac{dz}{d\zeta} \equiv \varkappa(\zeta) = \overset{+}{(-)} \frac{1}{2\pi} \int_0^{2\pi} P(\theta) \frac{e^{i\theta}+\zeta}{e^{i\theta}-\zeta} d\theta,$$

where $P(\theta) = \ln \frac{ds}{d\theta}$. The function $s(\theta)$ is determined from $\theta(s) = \arg\zeta[u(s)+iv(s)] = \frac{1}{i} \ln \zeta$. In the case of the outer problem $P(\theta)$ must satisfy the condition

(2) $$\int_0^{2\pi} P(\theta) e^{i\theta} d\theta = 0.$$

$z(\zeta)$ denotes the solution of the reversion problems.
Theorem: The solution of the inner (outer) reversion problem is schlicht if $P(2\pi) = P(0)$ and I.

(3) $$|P'(\theta_1)-P'(\theta_2)| \leqslant \frac{1}{2 \ln 2} |\theta_1-\theta_2|$$

or II.

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Conditions Under Which Solutions of Main Inverse Boundary Value Problems are Schlicht S/042/60/015/006/002/004 C111/C222

$$(4)\quad |P(\theta_1)-P(\theta_2)| \leq \frac{1}{2\ln 2} \arccos \frac{\exp \frac{1}{2\pi}\int_0^{2\pi}\left[\max P(\theta)-P(\theta)\right] d\theta}{2} |\theta_1-\theta_2|$$

or III. for a $\theta = \gamma$ the continuous function $P(\theta)$ satisfies the conditions:

$$(5)\quad \int_0^{2\pi} P(\theta)\sin n(\theta-\gamma)d\theta = 0; \qquad \int_0^{2\pi} P(\theta)\cos n(\theta-\gamma)d\theta \geqslant 0, \quad n=1,2,\ldots$$

$$(6)\quad P(\gamma)-\frac{1}{2\pi}\int_0^{2\pi} P(\theta)d\theta \leqslant \ln 2.$$

There are 5 Soviet references.

[Abstracter's note: (Ref.1) concerns a paper of G.G.Tumashev and M.T. Nuzhin in Uchen. zap. KGU, 1955, Vol.115, kn.6]

SUBMITTED: March 17, 1959

Card 3/3

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S/140/61/000/004/001/013
C111/C222

AUTHOR: Aksent'yev, L. A.

TITLE: On the schlichtness of the solution of the reversion problem of hydrodynamics

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Matematika, no. 4, 1961, 3-7

TEXT: Given the velocity distribution $v(s)$, $0 \leq s \leq 1$, $v(0) = v(1)$ on a piecewise smooth profile which is smoothed at the one end and at the other end it has the inner angle $2\beta\pi$, $0 \leq \beta \leq 1/2$. Determine the profile and the complex potential of the plane ideal incompressible flow. By a reduction of the problem to the construction of a function which maps the region $|\zeta| > 1$ onto the exterior of the sought profile, where $s = s(\theta)$ and θ is the polar angle of $|\zeta| = 1$, and by a consideration of a schlicht variation of the profiles the author proves under the assumption that the circulation Γ and

$$u_0 = v_\infty \exp \frac{1}{2\pi} \int_0^{2\pi} P(\theta)\, d\theta, \quad P(\theta) = \ln \frac{ds}{d\theta}$$ remain invariable:

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Theorem 2: The reversion problem for the profile is schlichtly solvable if the condition

$$|p'(\theta_1) - p'(\theta_2)| \leq \frac{1+2\beta}{4 \ln 2} |\theta_1 - \theta_2| ,$$

is satisfied, where

$$p(\theta) = \ln \frac{v(\theta)(1-\cos\theta)^{\frac{1}{2}-\beta}}{\left|2u_o \sin(\theta - \theta_o) + \frac{\Gamma}{2\pi}\right|} ,$$

$$v(\theta) = v[s(\theta)], \quad \sin\theta_o = \frac{\Gamma}{4\pi u_o} \qquad \left(|\theta_o| < \frac{\pi}{2}\right) .$$

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENT'YEV, L.A.; KUZ'MINA, A.A., red.; SAMAROV, K.A., red.

[Problems in the theory of functions of complex variables and operational calculus] Sbornik zadach po teorii funktsii kompleksnogo peremennogo i operatsionnomu ischisleniiu. Kazan', Izd-vo Kazanskogo univ., 1961. 49 p. (MIRA 18:7)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENT'YEV, L.A.

Indices of functions on Riemann surfaces. Dokl. AN SSSR 152 no.1: 9-12 S '63. (MIRA 16:9)

1. Kazanskiy gosudarstvennyy universitet im. Ul'yanova-Lenina. Predstavleno akademikom N.I.Muskhelishvili.
(Functions, Automorphic) (Riemann surfaces)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

NUZHIN, Mikhail Tikhonovich; IL'INSKIY, Nikolay Borisovich; BYK, T.N., red.; AKSENT'YEV, L.A., red.

[Methods for constructing the underground outline of hydraulic structures; inverse boundary problems in flow theory] Metody postroeniia podzemnogo kontura gidrotekhnicheskikh sooruzhenii; obratnye kraevye zadachi teorii fil'tratsii. Kazan', Izd-vo Kazanskogo univ., 1963. 136 p. (MIRA 17:11)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENT'YEV, L.A. (Kazan')

Indices of functions on Riemann surfaces and their applications. Izv. vys. ucheb. zav.; mat. no.4:3-8 '64. (MIRA 17:9)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

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L 46119-66 EWT(d) IJP(c)

ACC NR: AR6017332 SOURCE CODE: UR/0044/66/000/001/B031/B032

AUTHOR: Aksent'yev, L. A.

27
B

REF SOURCE: Tr. Seminara po obratn. krayev. zadacham. Kazansk. un-t, vyp. 2, 1964, 3-11

TITLE: The construction of a Schwarz operator by the symmetry method

SOURCE: Ref. zh. Matematika, Abs. 1B126

TOPIC TAGS: boundary value problem, conformal mapping

TRANSLATION: The concept of symmetry relative to an analytic curve, introduced first by D. A. Grave (On Basic Problems of the Mathematical Theory of Geographical Maps, St. Petersburg, 1896), is used to find a function conformally mapping the region D, bounded by an algebraic curve L, on the unit circle. Let the equation of curve L be $\phi(x,y) = 0$. Then a point z^* symmetrical to point z relative to the curve is defined by the equation

$$\varphi\left(\frac{z^*+\bar{z}}{z}, \frac{z^*-\bar{z}}{2i}\right)=0. \qquad (1)$$

Any solution of this equation $z^*=\Phi_k(\bar{z}),\ k=1, 2, \ldots, r,$ (2)

for any point near L presents a corresponding point symmetrical to it on the other

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ACC NR: AR6017332

side of L. Taking any pair of symmetrical points and transforming them by all the functions (2), one obtains a complete system of pairs of symmetrical points z, z'; z_1, z_1'; z_2, z_3';... . This system may be finite or infinite. All points symmetrical to points in the region D are located on a certain Riemann surface R. It is proved that if R is a plane (with a possible section), then the function $f(\zeta)$ conformally mapping D on the unit circle is expressed by the formula

$$f(\zeta, z) = \prod \frac{\zeta - z_k}{\zeta - z_k'} \prod \frac{t_0 - z_k'}{t_0 - z_k}, \quad z_0 = z, \quad t_0 \in L, \tag{3}$$

where the expansion of the product is made for all symmetrical points. If their number is infinite, it is proved that the expansion of (3) always converges. If R is not a plane, then it is first necessary to carry out the mapping of R on the plane. With function f it is easy to construct a Schwarz operator with which one may define a function analytic in D by the values of its real part given in L. Examples are given. F. Gakhov.

SUB CODE: 12/ SUBM DATE: none

Card 2/2

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENT'YEV, S.B.

LOSYURA, V.Ya; AKSENT'IEV, S.B.

Vascular reflexes in cerebral regional hypotonia.
1. Unconditioned reflexes. Zh. nevropat. psikhiat., Moskva 53 no.12:951-956 December 1953. (CIML 25:5)

1. Odessa Psychoneurology Institute and Department of Nervous Diseases of Odessa Medical Institute.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENT'YEV, S.B.

USSR/Human and Animal Physiology - Internal Secretion. V-7

Abs Jour : Ref Zhur - Biol., No 2, 1958, 8784

Author : S.B. Aksent'ev

Inst : -

Title : A Study of the Reflex Reactions of the Hypophysis to Light in a Chronic Experiment on Animals. I. The Effect of the Light Factor on the Secretion of Oxytocin and the Melanophore Hormone in Dogs.

Orig Pub : Fiziol. Zhurnal, 1955, 1, No 2, 36-46

Abstract : In protracted experiments on dogs it was established that when light was used as a reflex stimulus in 53% of all the experiments the oxytocin and melanophore hormone content of the spinal fluid increased when the animals were moved from darkness into light, and decreased when they were placed in darkness. The changes indicated are primarily observed within the regular period of conducting the experiments and are absent or of a negative character when the

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AKSENT'YEV, S.B.

AKSENT'YEV, S.B.; YERMULOVICH, Ya.V.; ZHMUDSKAYA, L.F.; REZNICHENKO, L.G.

Studying conditioned and unconditioned vascular reflexes as a method for analyzing corticovisceral relations in various diseases. [with summary in English]. Zhur.vys.nerv.deiat. 7 no.1:49-57 Ja-F '57. (MIRA 10:10)

1. Odesskiy meditsinskiy institut im. N.I.Pirogova i Odesskiy nauchno-issledovatel'skiy psikhonevrologicheskiy institut.

(BLOOD VESSELS, physiology
conditioned & unconditioned vasc. reflexes in analysis of cortico-visceral relations in various dis. (Rus))
(REFLEX, CONDITIONED,
vasc. reflexes in analysis of cortico-visceral relationship in various dis. (Rus))
(REFLEX,
unconditioned vasc. reflexes in analysis of cortico-visceral relationship in various dis. (Rus))
(CEREBRAL CORTEX, physiology,
cortico-visceral relationships, determ. i various diseases by conditioned & unconditioned vasc. reflexes (Rus))

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENT'YEV, S.B.

SOSYURA, B.Ya.; AKSENT'YEV, S.B.

Vascular reflexes in general and regional (cerebral) arterial hypotension. Zhur.nevr. i psikh. Supplement:8 '57. (MIRA 11:1)

1. Iz kafedry nervnykh bolezney (zav. - prof. B.I.Sharapov) Odesskogo meditsinskogo instituta imeni Pirogova i patofiziologicheskoy laboratorii (zav. - kandidat meditsinskikh nauk K.A.Yelizarova) Odesskogo nauchno-issledovatel'skogo psikhonevrologicheskogo instituta.
(REFLEXES) (BLOOD PRESSURE)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

Aksent'yev, S.B.

AKSENT'YEV, S.B.

Method for an electrophysiological study of the cardiac and vascular function. Terap.arkh. 29 no.11:54-58 N '57. (MIRA 11:2)

1. Iz Odesskogo nauchno-issledovatel'skogo psikhonevrologicheskogo instituta.

(PLETHYMOGRAPHY,
electroplethysmography (Rus))

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

LEVINA, TS.A., prof., AKSENT'YEV, S.B., ROMANOVSKAYA, A.M. (Odessa)

Rheocardiographic method of studying patients with coronary insufficiency. Klin.med. 36 no.8:105-111 Ag '58 (MIRA 11:9)

1. Iz kafedry propedevtiki vnutrennikh bolezney Odesskogo meditsinskogo instituta imeni N.I. Pirogova i Odesskogo nauchno-issledovatel'skogo piskhonevrologicheskogo instituta.
(CORONARY DISEASE, physiol.
rheocardiography in insuff. (Rus))

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENT'YEV, S.B.

Syncopes and syncopelike seizures in children with various forms of neuropsychic diseases. Zhur. nevr. i psikh. 65 no.7:1082-1085 '65. (MIRA 18:7)

1. Odesskiy nauchno-issledovatel'skiy psikhonevrologicheskiy institut (dir. A.G.Leshchenko).

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

OSU-A246

AKSENT'YEVA, Z. N.

O Priplivi na Baykali za Sposterezhennyam V Bukhte Pishchana i Tankhoyi—
On Tides on Baykal according to observations in bays Peschanaya and Tankhoy.
Dopovidi Akademii Nauk URSR, 1946, No. 1-2
Ohio State University, AS262-K82
Ukrainian Text, Abstract in Russian
Bibliography: 4 Titles.
Tides measures for the bays Peschanaya (52°15'N.,105°40'E.) and Tankhoy (51°34'N., 105°08'E.).
Amplitudes are 6.2 mm. for first bay, 6.8 mm. for second.

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENT'YEVA, Z. N. Dr. Physicomath Sci.

Dissertation: "Determination of Weak Tides." Geophysics Inst., Acad. Sci. USSR, 24 Dec 47.

SO: Vechernyaya Moskva, Dec 1947 (Project #17836)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENT'YEVA, Z.N.

Tides on Lake Baikal. Trudy Polt.grav.obser. 2:106-120 '48.
(MIRA 8:1)

(Baikal, Lake--Tides)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENT'YEVA, Z.N.

Results of a 13-year series of observations (1930-1941) of oscillations of the plumb bob at Poltava. Trudy Polt.grav.obser. 2:121-138 '48. (MLRA 8:1)

(Tides) (Pendulum)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENT'YEVA, Z.N.

Final results in determining the M_2 waves in the vibrations of a plumb weight at Tomsk from 1912 to 1920. Trudy Polt.grav.obser. 4:3-87 '51.
(MLRA 6:6)
(Gravity)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENT'YEVA, Z.N., redaktor; MATIYKO, N.M., redaktor; RAKHLINA, N.P., tekhnicheskiy redaktor.

[Transactions of the Third All-Union Conference on Latitude; Poltava, May 27-31, 1952] Trudy konferentsii...27-31 maia 1952 g. Kiev, Izd-vo Akademii nauk Ukrainskoi SSR, 1954. 145 p. (MIRA 8:4)

1. Chlen-korrespondent Akademii nauk USSR (for Aksent'yeva). 2. Vsesoyuznaya shirotnaya konferentsiya. 3d, Poltava, 1952.
(Latitude variation)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENT'YEVA, Z. N.

Excerpt from Tr. Vses. astrometricheskoy konferentsii, Leningrad-Pulkovo, 1954, pp 43-45
Works of Poltava Gravimetric Observatory, Academy of Sciences Ukrainian SSR in 1951 and 1952

Observations of fluctuations of latitude were carried out for the study of mutation. The observations were carried out on two zenith telescopes, particularly observing alpha-Persei and star eta in the Great Dipper, which are zenithal stars for Poltava. These observations allowed detection of a semimonthly latitude fluctuation, which may be explained by the inaccuracy of short-lived terms of nutation. (RZhAstr, No 6, 1955)

SO: Sum. No. 639, 2 Sep 55

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENT'YEVA, Z.N.; FEDOROV, Ye.P.

A.IA.Orlov; obituary. Astron.tsir. no.146:1 F '54. (MLRA 7:6)

1. Poltava, Observatoriya. (Orlov, Aleksandr Iakovlevich, 1880-1954)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENT'YEVA, Z.N.

AKSENT'YEVA, Z.N.

Preliminary report on observations of the total solar eclipse of June 30, 1954, at Poltava. Astron.tsir. no.151:20-21 Jl '54. (MLRA 8:3)

1. Poltavskaya gravimetricheskaya Observatoriya AN SSSR. 2. Chlen-korrespondent AN USSR. (Eclipses, Solar--1954)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENT'YEVA, Z.N.

Aleksandr IAkovlevich Orlov; obituary. Trudy Polt.grav.observ. 5: 3-16 '55. (MLRA 9:9)

1.Chlen-korrespondent AN USSR.
(Orlov, Aleksandr IAkovlevich, 1880-1954)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENT'YEVA, Z. N.

FILIPPOV, A.Ye.; AKSENT'YEVA, Z.N., otvetstvennyy redaktor; SOKOLOVSKIY, L.I. redaktor; ZHUKOVSKIY, A.D., tekhredaktor.

[Comparison of latitude observations at Pulkovo and Johannesburg] Sravnenie pulkovskikh i iogannesburgskikh nabliudenii shiroty. Kiev, Izd-vo Akad.nauk Ukr.SSR.1956. 198 p. (Poltava, Gravimetrychna observatoriia. Trudy, vol.6) (MIRA 10:1)
(Latitude)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENT'YEVA, Z.A.

AKSENT'YEVA, Z.A.

Gravimetric observatory of the Academy of Sciences of the Ukrainian S.S.R. in Poltava. Visnyk AN URSR 28 no.11:42-51 N '57. (MIRA 10:12)

(Poltava--Gravimetral observatory)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

FEDOROV, Yevgeniy Pavlovich; AKSENT'YEVA, Z.N., otvetstvennyy red.; LABINOVA, N.M., red. izd-va; YURCHISHIN, V.I., tekhn. red.

[Nutation and forced motion of the earth's poles based on data from observations of latitude] Nutatsiia i vynuzhdennoe dvizhenie poliusov zemli po dannym shirotnykh nabliudenii. Kiev, Izd-vo Akad. nauk USSR, 1958. 142 p. (MIRA 11:8)

1. Chlen-korrespondent Akademii nauk USSR (for Aksent'yeva).
(Nutation) (latitude variations)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

SOV-21-58-9-5/28

AUTHOR: Aksent'yeva, Z.N., Corresponding Member of the AS UkrSSR

TITLE: Comparative Results of the Determination of the M_2 Terrestrial Tidal Wave From Two Long Series of Observations of Vertical Deviations In Poltava, 1930-1941 and 1948-1952 (Sravnitel'-nyye rezul'taty opredeleniya prilivnoy volny M_2 iz dvukh dli-tel'nykh tsiklov nablyudeniy nad kolebaniyami otvesa v Pol-tave, 1930-1941 i 1948-1952 godakh)

PERIODICAL: Dopovidi Akademii nauk Ukrains'koi RSR, 1958, Nr 9, pp 933 - 936 (USSR)

ABSTRACT: It was already known that the value of γ, which is the ratio of the observed terrestrial tidal wave to the theoretical one (assumed for the absolutely rigid Earth) as revealed by vertical deviations, is different in different locations. In order to determine whether the local γ-values are preserved with the passage of time, the Poltava Gravimetrical Observa-tory carried out a long series of observations from 1948 to 1952. The article presents the results of harmonic analysis of terrestrial tide observations performed with the aid of two different pairs of horizontal pendulums in Poltava in 1930-1941 and 1948-1952. The results for the monthly M_2

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SOV-21-58-9-5/28

Comparative Results of the Determination of the M_2 Terrestrial Tidal Wave From Two Long Series of Observations of Vertical Deviation in Poltava, 1930-1941 and 1948-1952

terrestrial tidal wave are as follows:

	$\alpha = 77^\circ$ component	$\alpha = -13^\circ$ component
	γ close to the prime vertical	γ close to the meridian
Series 1930-1941	0.662 ± 0.016	0.730 ± 0.020
Series 1948-1952	0.660 ± 0.022	0.728 ± 0.015.

Thus the second decimal figure in the γ-value is derived from two very long series of observations. It is shown that one year's series of observations cannot ensure such a high precision when the pendulums are not installed deep under the

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SOV-21-58-9-5/28

Comparative Results of the Determination of the M_2 Terrestrial Tidal Wave From Two Long Series of Observations of Vertical Deviation in Poltava, 1930-1941 and 1948-1952

ground. In view of this, the Poltava Gravimetrical Observatory will organize a number of stations for terrestrial tide observations at great depths. There are 3 references, 2 of which are Soviet and 1 Belgian.

ASSOCIATION: Poltavskaya gravimetricheskaya observatoriya AN UkrSSR (Poltava Gravimetrical Observatory of the AS UkrSSR)

SUBMITTED: May 5, 1958

NOTE: Russian title and Russian names of individuals and institutions appearing in this article have been used in the transliteration.

1. Earth waves--Statistical analysis

Card 3/3

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSENT'YEVA, Z.M. [Aksent'ieva, Z.M.; MATVEYEV, P.S. [Matvieiev, P.S.]

Observations with tiltmeters at Krivoy Rog. Visnyk AN URSR 30 no.1:24-29 Ja '59. (MIRA 12:4)

1. Chlen-korrespondent AN USSR (for Aksent'yeva).
(Krivoy Rog--Tides)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

3(6) SOV/21-59-1-8/26

AUTHOR: Aksent'yeva, Z.N., Corresponding Number of the Academy of Sciences of the UkrSSR

TITLE: Preliminary Data on the Tidal Variations of the Value of Gravity in Poltava (Predvaritel'nyye dannyye o prilivnykh variatsiyakh velichiny sily tyazhesti v Poltave)

PERIODICAL: Dopovidi Akademii nauk Ukrains'koi RSR, 1959, Nr 1, pp 29-31 (USSR)

ABSTRACT: The article presents the results of the harmonic analysis of an 87-day series of observations of the tidal gravity variations in Poltava, carried out with the use of an old-system Askania Werke gravimeter, set for a sensitivity of about 0.014 milligal per millimeter on the shaft of the recording device, rotating at a rate of 1 rpd. Lunar tide waves M_2, O_1 and N_2 were determined, and a mean value of the factor $\beta = 1 - 3/2\, k + h$ was deduced and found to be 1.17. The Love's numbers, derived with the use of the

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SOV/21-59-1-8/26

Preliminary Data on the Tidal Variations of the Value of Gravity in Poltava

value γ=0.70 (found in 11-year observations with horizontal pendulums in Poltava) were found: k =0.26 h =0.56. The obtained results are considered only as preliminary. More accurate measurements would only be possible if modern highly-sensitive gravimeters were made available in Poltava. There are 3 Soviet references.

ASSOCIATION: Poltavskaya gravimetricheskaya observatoriya AN UkrSSR (Poltava Gravimetric Observatory, AS Ukr SSR)

SUBMITTED: October 16, 1958.

Card 2/2

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

ORLOV, Aleksandr Yakovlevich, zasl. deyatel' nauki USSR [1880-1954]; AKSENT'YEVA, Z.N., otv. red.; LAVRENT'YEVA, Ye.V., starshiy nauchnyy sotr., red.; POPOV, N.A., starshiy nauchnyy sotr., red.; FEDOROV, Ye.P., starshiy nauchnyy sotr., red.; ORLOV, B.A., starshiy nauchnyy sotr., red.; LABINOVA, N.M., red.izd-va; RAKHLINA, N.P., tekhn. red.

[Selected works in three volumes] Izbrannye trudy v trekh tomakh. Kiev, Izd-vo Akad. nauk USSR. Vol.1. 1961. 353 p. (MIRA 14:10)

1. Deystvitel'nyy chlen AN USSR i chlen-korrespondent AN SSSR (for Orlov). 2. Chlen-korrespondent AN USSR (for Aksent'yeva). 3. Poltavskaya gravimetricheskaya observatoriya (for Lavrent'yeva, Popov, Fedorov). 4. Glavnaya astronomicheskaya observatoriya v Pulkove (for Orlov, B.A.).

(Astronomy) (Earth) (Latitude)
(Orlov, Aleksandr IAkovlevich, 1880-1954)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

ORLOV, Aleksandr Yakovlevich (1880-1954); AKSENT'YEVA, Z.N., otv. red.; LAVRENT'YEVA, Ye.V., starshiy nauchnyy sotr., red.; POPOV, N.A., starshiy nauchnyy sotr., red.; FEDOROV, Ye.P., starshiy nauchnyy sotr., red.; ORLOV, B.A., starshiy nauchnyy sotr., red.; LEPKIY, S.D., red. izd-va; RAKHLINA, N.P., tekhn. red.

[Selected works in three volumes] Izbrannye trudy v trekh tomakh. Kiev, Izd-vo Akad. nauk USSR. Vol. 2. 1961. 317 p. (MIRA 14:12)

1. Chlen-korrespondent AN USSR (for Aksent'yeva). 2. Poltavskaya gravimetricheskaya observatoriya (for Lavrent'yeva, Popov, Fedorov). 3. Glavnaya astronomicheskaya observatoriya v Pulkove (for Orlov). (Astronomy) (Geophysics) (Orlov, Aleksandr IAkovlevich, 1880-1954)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

ORLOV, Aleksandr Yakovlevich, zasl. deyatel' nauk USSR; AKSENT'YEVA, Z.N., otv. red.; LAVRENT'YEVA, Ye.V., starshiy nauchnyy sotr., red.; POPOV, N.A., starshiy nauchnyy sotr., red.; FEDOROV, Ye.P., starshiy nauchnyy sotr., red.; ORLOV, B.A., starshiy nauchnyy sotr., red.; LABINOVA, N.M., red. izd-va; RAKHLINA, N.P., tekhn. red.

[Selected works in three volumes] Izbrannye trudy v trekh tomakh. Kiev, Izd-vo Akad. nauk USSR. Vol.3. 1961. 242 p. (MIRA 15:1)

1. Deystvitel'nyy chlen AN USSR, Chlen-korrespondent AN SSSR (for Orlov). 2. Chlen-korrespondent AN USSR (for Aksent'yev). 3. Poltavskaya gravimetricheskaya observatoriya (for Lavrent'yeva, Popov, Fedorov). 4. Glavnaya astronomicheskaya observatoriya v Pulkove (for Orlov).

(Geophysics)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

S/035/62/000/002/030/052
A001/A101

AUTHOR: Aksent'yeva, Z. N.

TITLE: On the activity of the Poltava Gravimetric Observatory, AS UkrSSR, during IGY and IGC

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 2, 1962, 1, abstract 2G1 ("Mezhdunar. geofiz. god. Inform. byul.", 1961, no. 3, 88-91, English summary)

TEXT: The author characterizes the activity of the Poltava Gravimetric Observatory as a leading institution in the USSR in the field of "Variations of latitude and motion of the Earth's poles". Over 9,000 observations of star pairs were carried out with two parallel-mounted zenith-telescopes to determine variations in Poltava latitude. Preliminary research was performed for the study of pole motion on the basis of simultaneous latitude and azimuthal observations. Much research was done to find the best methods for calculations of pole coordinates from observations at the stations of the International Latitude Service and at individual observatories. During the reported period, the Observatory purchased a Danjon prism astrolabe and an АПМ-10 (APM-10) transit

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

S/169/62/000/002/004/072
D228/D301

AUTHOR: Aksent'yeva, Z. N.

TITLE: The work of the Poltavskaya gravimetricheskaya observatoriya AN UkrSSR (Poltava Gravimetric Observatory, Academy of Sciences, UkrSSR) in the IGY and IGC period

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 2, 1962, 4, abstract 2A10 (Mezhdunar. geofiz. god. Inform. byul., no. 3, 1961, 88-91)

TEXT: Investigations are described on the study of latitudinal variations and the movement of the earth's poles, i.e. series of latitudinal observations carried out on two zenith-telescopes at Poltava, the processing of the most complete methods of analysis of polar movement, and so forth. Trial azimuthal observations by means of a passage instrument and dip-measurement work in Ukrainian mines are described; the general characteristics of the work of the Poltava Gravimetric Observatory -- the chief institution in the USSR for the problem of "latitudinal variations and the movement of the

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

S/3089/63/000/005/0011/0016

ACCESSION NR: AT4032214

AUTHOR: Aksent'yeva, Z. N.

TITLE: Work of the Poltavska gravimetricheskaya observatoriya (Poltava Gravimetric Observatory) during the time between the Fourth and Fifth All-Ukrainian Conferences on discussion of the results of the International Geophysical Year and International Geophysical Cooperation

SOURCE: AN UkrSSR. Mezhduvedomstvenny*y geofizicheskiy komitet. Geofizika i astronomiya; informatsionny*y byulleten', no. 5, 1963, 11-16

TOPIC TAGS: geophysics, IGY, IGC, gravimetry, latitude observation, polar wandering, earth tide, Danjon astrolabe, gravity variation, zenith telescope

ABSTRACT: During the International Geophysical Year, the Poltava Gravimetric Observatory coordinated Soviet research on latitude variations and polar wandering; results of observations in the IGY and IGC periods still are being processed. At Poltava, two zenith telescopes were used during the period 1949 - 1961 to study the change of the mean latitude of Poltava; instruments, methods, and personnel involved are discussed briefly. The Tsentral'noye Byuro Sovetskoy Sluzhby* Shiroty* (Central Bureau of the Soviet Latitude Service) at Poltava uses

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ACCESSION NR: AT4032214

data from various Soviet stations to compute the preliminary coordinates of the pole by the Orlov method and communicate them to the Sovetskaya Sluzhba Vremeni (Soviet Time Service) and the International Time Bureau. Latitude variation data are not yet being received from Blagoveshchensk. Polar coordinates from July 1952 through January 1960 have been computed. The renaming and reorganization of the International Latitude Service is discussed at considerable length; the SSSR has not yet entered into communication with the reconstituted agency. During 1962-1965 the observatory will continue systematic observations of the latitude variation of Poltava with the same zenith telescopes plus a Danjon prism astrolabe. In 1962 observations will begin with a more powerful and partially automated Soviet zenith telescope. In 1964-1965 the observatory will have a photographic zenith telescope. The importance of these latitude studies is discussed. Irregularity of the earth's rotation is being studied with a Danjon astrolabe; a two-year series of such observations already has been processed. The observatory is not yet fully equipped for photographic lunar observations involved in the study of irregularity of the earth's rotation. The general subject of earth tides is discussed at length. The Poltava observatory has charge over a number of earth tide stations whose activities are described only briefly. Poltava specialists began observations of gravity variations with the highly precise GS-11 gravimeter

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ACCESSION NR: AT4032214

in 1961; only one instrument is available, whereas 5-6 such instruments are needed.

ASSOCIATION: Poltavskaya gravimetricheskaya observatoriya AN UkrSSR (Poltava Gravimetric Observatory AN UkrSSR)

SUBMITTED: 00 DATE ACQ: 16Apr64 ENCL: 00

SUB CODE: AS NO REF SOV: 002 OTHER: 000

Card 3/3

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

YAKOVKIN, A.A., otv. red.; FEDOROV, Ye.P., red.; AKSENT'YEVA, Z.N., red.; BARABASHOV, N.P., red.; BOGORODSKIY, A.F., red.; GORYNYA, A.A., red.; KOVAL', I.K., red.; KOLCHINSKIY, I.G., red.; TSESEVICH, V.P., red.; KOVALENKO, L.D., red.

[Figure and motion of the moon] Figura i dvizhenie Luny. Kiev, Naukova dumka, 1965. 135 p. (MIRA 18:7)

1. Akademiya nauk URSR, Kiev.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

ALMAZOYEVA, V. V.; BATAYEV, P. S.; STAVROVSKAYA, V. I.; AKSEYENKO, G. R.; BEZZUBOVA, V. P.; VOROB'YEVA, Z. G.; GLADKIKH, V. F.; ZHUKOVA, L. I.; ZUYEVA, N. K.; KOROGODINA, Yu. V.; KLIMOVA, L. P.; KRYLOV, A. S.; MASLOV, A. V.; PEYKRE, A. E.; SADOVSKAYA, G. Yu.; SPERANSKAYA, V. N.; SOLOVEY, V. Ya.; TURCHINS, M. Ye.; SHAMRAY, A. F.; SHIPITSINA, N. K.; SHINKEVICH, M. A.

Field trials of new repellents. Med. paraz. i paraz. bol. no.4: 457-464 '61. (MIRA 14:12)

1. Iz entomologicheskogo otdela i otdela sinteticheskikh preparotov Instituta meditsinskoy parazitologii i tropicheskoy meditsiny imeni Ye. I. Martsinovskogo Ministerstva zdravookhraneniya SSSR (dir. - instituta - prof. P. G. Sergiyev, zav. otdelami - prof. V. N. Beklemishev i prof. V. I. Stavrovskaya)

(INSECT BAITS AND REPELLENTS)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSEYENOV, V. N.

USSR/Electronics - Voltage rectifiers

Card 1/1 Pub. 133 - 5/19

Authors : Terent'yev, B. P., and Akseyenov, V. N.

Title : Electronic control and protection of voltage rectifiers

Periodical : Vest. svyazi 6, 8-11, June 1955

Abstract : A description of an electronic control and a voltage rectifier, incorporating a protection device consisting of two sensing elements installed on both AC and DC circuits, is presented. The operation and phase control of ion rectifiers, by means of voltage impulses, is briefly explained. Diagrams.

Institution : .....

Submitted : .....

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L 28391-66 EPF(n)-2/EWT(1)/ETC(f)/EWG(m)/T IJP(c) AT

ACC NR: AP6013112 SOURCE CODE: UR/0057/66/036/004/0595/0602

AUTHOR: Akshanov,B.S.; Volkolupov,Yu.Ya.; Sinel'nikov,K.D.

ORG: none

TITLE: Investigation of injection and capture of charged particles in a magnetic mirror trap

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no.4, 1966, 595-602

TOPIC TAGS: hydrogen plasma, plasma confinement, plasma oscillation, electron beam, magnetic mirror,

ABSTRACT: The earlier investigations of two of the authors and collaborators (Sb. "Fizika plazmy i problem upravlyayemogo termoyadernogo sinteza", IV, 403-410; IV, 388-402, Kiyev, 1965) on production of helical electron beams and their injection into magnetic mirror traps have been continued. The magnetic mirrors of the trap were 18 cm apart, and the magnetic field strength could be varied from 0 to 1 kOe. Near one of the magnetic mirrors and outside the region of the trap there was produced with the aid of a third (opposing) winding a cusped magnetic field, in which the low pitch helical electron beams were produced by off-axis injection as discussed in the reference cited above. In the present work a 2 cm diameter ring-shaped cathode was employed as electron source in order to increase the beam current; the electron trajectories, therefore, were not a set of coaxial helices, but a family of helices whose

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ACC NR: AP6013112

axes were generators of a 2 cm diameter cylinder, the axis of which coincided with the symmetry axis of the system. The pitch of the helical trajectories was such that the electrons traveled more than 1 km in traversing the 18 cm between the magnetic mirrors. Accelerating potentials up to 5 kV and beam currents up to 1 A were employed. The plasmas were probed with an axial electron beam which was modulated at high frequency so that its signal could be distinguished from the currents produced by escaping plasma particles. The apparatus contained hydrogen at pressures up to 10^{-2} N/m^2. When the gas pressure was below 10^{-4} N/m^2 the injected electrons accumulated until the resulting space charge was sufficient to cut off a 1-1.5 keV probe beam. When the gas pressure exceeded 10^{-3} N/m^2 the gas became highly ionized and there was produced a well compensated plasma. The lifetime of the plasma after cut off of the injected beam increased rapidly with increasing beam current and under some conditions was as long as 0.1sec. Plasmas with charged particle densities as high as 10^{12} cm^{-3} were obtained. Intense high frequency oscillations developed as a result of the interaction of the plasma and the electron beam. When the power in the electron beam was increased to a critical value a cascade process was triggered, resulting in rapid increase of the intensity of the high frequency oscillations, "burning out" of the neutral gas in the trap, and increase of the plasma density until it reached the initial density of the neutral gas in the apparatus. Orig. art. has: 9 figures.

SUB CODE: 20 SUBM DATE: 18Jul64 ORIG. REF: 004

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100720012-8

AKSHANOV, B.S.

S/058/60/000/006/004/040
A005/A001

26.2332

Translation from: Referativnyy zhurnal, Fizika, 1960, No. 6, p. 30, # 13142

AUTHORS: Sipel'nikov, K.K., Zeydlits, P.M., Nekrashevich, A.M., Bolotin, L. I., Shutskever, Ya.S., Akshanov, B.S., Kovpak, N.Ye., Leontovich, K.A., Akhiyezer, A.I., Lifshits, I.M., Faynberg, Ya.B., Rozentsveyg, L.M., Lyubarskiy, G.Ya., Kaganov, M.I., Pargamanik, L.E.

TITLE: A 20.5-Mev Linear Proton Accelerator 19

PERIODICAL: Tr. Sessii AN UkrSSR, po mirn. ispol'zovaniyu atomn. energii. Kiyev, AN UkrSSR, 1958, pp. 5-15

TEXT: The physical substantiation of the parameter choice is presented and the design of a linear proton accelerator with a drift tube at 20.5 Mev energy is described; the accelerator was constructed in the Fiziko-tekhnicheskiy institut AN UkrSSR (Institute of Physical Engineering of the AS UkrSSR). The main-computational data of the accelerator are the following: the operational wave length is λ = 215 cm; the injection energy is 1.7 Mev; the length of the accelerator is 1,446.8 cm; the synchronous phase is 20°; the length of the first half-tube is 4.875 cm; that of the last one is 16.725 cm; the length of the first gap is

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3.380 cm; that of the last one is 11.150 cm; the length of the first drift tube is 0.145 cm; that of the last one is 32.955 cm. Altoghether, the number of drift tubes is 50, that of the half tubes is 2; the acceleration system begins and ends with the latter. At the entrance of every drift tube, focusing grids are fixed consisting of parallel tungsten wires of 0.07 mm thickness; their total geometric transmittance amounts to 30%. The drift tubes are installed within the resonator by means of a suspension system; the resonator is made as a 1,446.8-cm long regular 16-face prism. The resonator is fed from 20 h.f. generators. The Q-factor of the resonator in the loaded state is equal to $6.5 \cdot 10^4$ in consequence of which the h.f. power needed for accelerating particles to the rated energy amounts to 1.2 Mw. An electrostatic generator operating by pulses with the pulse duration of 500 μ sec at about 1 ma current intensity and 1.7 mv voltage serves as proton injector. The principal circuit and the design of the individual accelerator units are presented.

ASSOCIATION: Fiz.-tekhn. in-t AN UkrSSR (Physico-Engineering Institute of the Ukrainian Academy of Sciences)

A.P. Fateyev

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

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AKSHANOV, B.S.

PHASE I BOOK EXPLOITATION SOV/4012

Akademiya nauk Ukrainskoy SSR. Otdeleniye fiziko-matematicheskikh nauk. Sessiya po mirnomu ispol'zovaniyu atomnoy energii

Trudy (Transactions of the Session on Peaceful Uses of Atomic Energy), Kiyev, Izd-vo AN Ukrainskoy SSR, 1958. 188 p. 2,500 copies printed.

Resp. Ed.: M. V. Pasechnik, Doctor of Physics and Mathematics; Editorial Board: A. K. Val'ter, Academician, Academy of Sciences Ukrainskaya SSR, O.F. Nemets, Candidate of Physics and Mathematics, M. V. Pasechnik, Doctor of Physics and Mathematics; Ed. of Publishing House: T. K. Remennik; Tech. Ed.: N. P. Rakhlina.

PURPOSE: This collection of articles is intended for physicists and scientific personnel working in nuclear research.

COVERAGE: The articles in this collection discuss linear proton accelerators, electron accelerators, electrostatic accelerators, magnetron lenses, the interaction of charged particles and neutrons with nuclei, the applications of tagged atoms in physics research, and experimental methods. Some of the articles are descriptions of already existing nuclear installations and experimental apparatus. No personalities are mentioned. There is a bibliography of Soviet and non-Soviet sources at the end of most of the articles.

Sinel'nikov, K.D., P.M. Zeydlits, A.M. Nekrashevich, L.I. Bolotin, Ya. N. Shutskever, B.S. Akshanov, N. Ye. Kovnak, K.A. Lepatovich, A.I. Akhiyezer, I.M. Lifshits, Ya. B. Faynberg, E.N. Rozentsveyg (Deceased), G. Ya. Lyubarskiy, M.I. Kaganov, and L.E. Pargamanik. 20.5-Mev Linear Proton Accelerators 5

Sinel'nikov, K.D., P.M. Zeydlits, I.A. Grishayev, L. Kh. Kitayevskiy, A.I. Akhiyezer, Ya. B. Faynberg, N.P. Selivanov, and N. A. Khizhnyak. Electron Accelerator with an Output Energy of 3.5 Mev 16

Val'ter, A.K., and A.A. Tsygikalo. A 4-Mev Electrostatic Accelerator for Precision Nuclear Measurements 24

Akshanov, B.S., and P.I. Strel'nikov. A 2.5-Mev Horizontal-Type Electrostatic Generator 35

Akhiyezer, A.I., and A.G. Sitenko. Interaction of Fast Deuterons With Nuclei 57

Klyucharev, A.P., A.K. Val'ter, and B. N. Yesel'son. Reaction of He^3 With Deuterons 64

Tsytko, S.P., and Yu. P. Antuf'yev. Gamma-Resonances in Reactions of Proton Capture by Silicon Isotopes and Energy Levels of the Nucleus 70

Vanetsian, R.A., and Ye. D. Fedchenko. Investigation of Elastic Scattering of 18.7-Mev Energy Protons on Nickel and Copper Nuclei 77

Val'ter, A.K., and N. Ya. Rossomakhina. Elastic Scattering of Neutrons by Nickel, Copper, Lead, Bismuth and Uranium Nuclei 80

Nemets, O.F., and M.V. Pasechnik. Neutron Spectrometer in the 0.7 to 3-Mev Energy Band 84

Barchuk, I.F., V.P. Vertebnyy, B.D. Konstantinov, O.F. Nemets, and M.V. Pasechnik. Spectra of Fast Neutrons Scattered by Atomic Nuclei 94

Batalin, V.A., N.S. Kopytin, G.S. Kryshtab, M.V. Pasechnik, and V. I. Strizhak, Nonelastic Scattering Cross Sections of East Neutrons 102

Akhiyezer, A.I., N.I. Akhiyezer, and G. Ya. Lyubarskiy. Effective Boundary Condition for Multiplying and Moderating Media Interface 107

Aleksandrov, B.N., B.I. Verkin, and B.G. Lazarev. Obtaining Pure Metals by Repeated Zonal Recrystallization and the Use of Radioactive Isotopes for Investigating the Mechanism of Refining Metal Impurities by This Method 119

Morgulis, N.D. Using the Radioactive Indicator Method in Investigations of Surface Phenomena Physics 138

Miselyuk, Ye. G., P.I. Baranskiy, and V. Ye. Kosenko. Using Radioactive Isotopes in Investigations of Condition and Distribution of Impurities in Germanium 140

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AKSHANOV, B.S.

9(3)4) PHASE I BOOK EXPLOITATION SOV/2746

Akademiya nauk USSR. Fiziko-tekhnicheskiy institut

Elektrostaticheskiye generatory; sbornik statey (Electrostatic Generators; Collection of Articles) Moscow, Atomizdat, 1959. 255 p. 4,100 copies printed.

Ed. (Title page): A. K. Val'ter, Member, Academy of Sciences, USSR; Ed. (Inside book): Z. D. Andreyenko; Tech. Ed.: N. A. Vlasova.

PURPOSE: This collection of articles may be useful to scientists and engineers working with high-voltage electrostatic generators.

COVERAGE: The authors discuss the construction and operation of a number of electrostatic generators developed in the USSR and describe methods of generating negative hydrogen ions. They discuss the operation of accelerating tubes and present methods of stabilizing accelerator voltages. No personalities are mentioned. References appear at the end of some articles.

Koval', A. G., L. I. Krupnik, A. D. Timofeyev and Ya. M. Fogel'. Problem of Producing a Beam of Negative Hydrogen Ions by Overcharging Positive Ions in a Cathode Channel of a High-frequency Source 15

The authors discuss a negative hydrogen-ion source based on the production of a negative ion beam by overcharging positive ions in a gas flowing through a cathode channel of a high-frequency source. They also derive expressions for determining amount of negative hydrogen ions in that beam. There are 11 references: 6 Soviet, 4 English and 1 German.

Tsyrikalo, A. A. Testing of Accelerating Tubes of a 4 Mev Electrostatic Accelerator Developed by FTI AN UkrSSR

The author briefly discusses the construction of a number of accelerating tubes and describes testing of these tubes in a 4 Mev electrostatic accelerator. He also discusses the results of testing and presents the configuration of the electric field in a tube with conical electrodes. There is 1 Soviet reference.

Fogel', Ya. M., B. P. Slabospitskiy and I. T. Gurbovskiy. Generation of Negative Ions of Helium, Carbon, Oxygen and Chlorine When Passing Positive Ions Through a Supersonic Jet of Mercury Vapor. 32

The authors study the transformation of positive ions of helium, carbon, oxygen and chlorine into negative ions when former are passed through a supersonic jet of mercury vapor. They also consider the possibility of producing a source of heavy negative ions and present graphs showing variation of the transformation coefficient with temperature and ion energy. There are 7 references: 3 Soviet and 4 English.

Akshanov, B. S. Electrostatic Generator as an Injector for an Accelerator 46

The author discusses the use of electorstatic generators as injectors of high-energy particles for accelerators. He describes basic features of these generators and considers the operation of generator ion sources. He also discusses control and supply circuits of ion sources and briefly describes generators developed in the laboratory of FTI AN UkrSSR. There are no references.

Pivovar, L. I., and V. M. Tubayev. Study of Electric Strength of Some Compressed Gases and Gaseous Mixtures With the Aid of an Electrostatic Generator 56

The authors discuss a compact electrostatic generator developed in the laboratory of FTI AN UkrSSR and used in testing electric strength of compressed gases and gaseous mixtures such as carbon dioxide, nitrogen, hydrogen and mixtures of nitrogen and carbon dioxide, nitrogen and an electrically negative gas, sulfur hexafluoride (SF_6); carbon dioxide and sulfur hexafluoride. They describe the experimental setup, discuss the procedure used in testing and present experimental results. There are 12 references: 11 English and 1 Soviet.

Novikovskiy, B. S. Voltage Stabilization of a High-current Direct-acting Accelerator 73

The author discusses the operation of a voltage stabilization system for a high-current accelerator. The system was developed and tested in the laboratory of FTI AN UkrSSR and it may be used in accelerators using an electrostatic generator and a multiplier circuit. There are no references.

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L 13460-66 EWT(1)/T IJP(c)

ACC NR: AP6002450 SOURCE CODE: UR/0057/65/035/012/2232/2234

AUTHOR: Akshanov, B.S.; Marinin, V.G.; Strel'tsov, A.I.; Sinel'nikov, K.D.

ORG: none

52
B

TITLE: Injection of charged particles into a magnetic mirror trap

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 12, 1965, 2232-2234

TOPIC TAGS: magnetic mirror, cusped magnetic field, charged particle, ~~particle injection, nonhomogeneous magnetic field~~, magnetic field intensity, magnetic trap

ABSTRACT: This "brief communication" is a continuation of another paper by two of the authors, K.D.Sinel'nikov and B.S.Akshanov (Sb. "Fizika plazmy i problemy upravlyayemogo termoyadernogo sinteza", No. 4, ~~p. 103~~, Izd, AN USSR, Kiyev, 1965), in which a method was proposed for injecting charged particles into a magnetic mirror system by allowing them first to pass through a magnetic field with cusped geometry, part of which forms one of the mirrors of the trap. It is shown that a criterion given by K.D.Sinel'nikov, N.A.Khizhnyak, et al.(Ibid. p. 388) for penetration by the injected particles of the second magnetic mirror in the case of equal magnetic field strength in the two mirrors becomes more stringent (particles are captured over a wider range of energy and injection radius) provided the magnetic field strength in the second mirror is greater than that in the first. The theoretical conclusion was tested

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experimentally by injecting electrons of different energies into an asymmetric bi-conical cusped field, and reasonable agreement was found. It is concluded that the proposed method of particle injection will be reasonably efficient in strong fields, provided the ratio of the field strengths is properly chosen. Orig. art. has: 10 formulas and 1 figure.

SUB CODE: 20 SUBM DATE: 10May 65 ORIG. REF: 002 OTH REF: 000

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L 28488-66 EPF(n)-2/EWT(1)/ETC(f)/EWG(m)/T IJP(c) AT

ACC NR: AP6013114 SOURCE CODE: UR/0057/66/036/004/0608/0611

AUTHOR: Akshanov,B.S.; Volkolupov,Yu.Ya.; Sinel'nikov,K.D.

ORG: none

68
B

TITLE: Investigation of the energy distribution of charged particles in a magnetic trap

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 4, 1966, 608-611

TOPIC TAGS: hydrogen plasma, plasma confinement, electron beam, magnetic mirror, electron energy

ABSTRACT: The authors' investigations of injection and entrapment of helical electron beams in a magnetic mirror trap (ZhTF, 36, 595, 604, 1966/ see Abstracts AP6013112 and AP6013113/) have been continued. To the apparatus described in the preceeding papers has been added an electrostatic analyzor similar to that described by H.P. Eubank and T.D.Wilkerson (Rev.Sci.Instr. 34, No. 1, 14-21,1963). With the aid of this analyzer the energy distribution of charged particles escaping from the magnetic trap was investigated. The energies of electrons beyond the range of the analyzer (30keV) were measured with a scintillator and aluminum absorbers. Ions with energies above 250 eV and electrons with energies up to 100 keV were observed. Higher energy electrons remained confined in the trap longer than did lower energy ones. Under

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ACC NR: AP6013114

conditions in which 10 keV electrons were confined for 38 millisec, 30 keV electrons remained confined for 85 millisec. The presence of electrons with energies much higher than the energies of the injected electrons (5keV) is ascribed to interaction with the plasma oscillations that were observed to develop (loc.cit.supra). These oscillations decreased im amplitude and the numbers of high energy electrons simultaneously decreased when the pitch of the injected electron trajectories was increased. During the process of "burning out" of the neutral gas, discussed in the preceeding papers, the spectrum of the high frequency oscillations became nearly continuous and extended beyond 10^{10} Hz, with maxima near the Langmuir and Larmor frequencies. Orig. art. has: 6 figures.

SUB CODE: 20 SUBM DATE: 18Jul64 ORIG. REF: 004 OTH REF: 003

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L 28489-66 EPF(n)-2/EWT(1)/ETC(f)/EWG(m)/T IJP(c) AT

ACC NR: AP6013113 SOURCE CODE: UR/0057/66/036/004/0603/0607

AUTHOR: Akshanov,B.S.; Volkolupov,Yu.Ya.; Sinel'nikov,K.D.

ORG: none

59
B

TITLE: Capture of charged particles injected pulsewise into a constant field trap

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 4, 1966, 603-607

TOPIC TAGS: hydrogen plasma, plasma confinement, plasma oscillation, electron beam, magnetic mirror,

ABSTRACT: The authors have continued their investigation of injection and entrapment of helical electron beams in a magnetic mirror trap, employing the apparatus described in the preceeding paper (ZhTF, 36, 595, 1966/see Abstract AP6013112/). Experiments performed with pulsed beams are discussed in the present paper. Preliminary experiments with square pulses of different durations showed that plasma could be accumulated in the trap within times of the order of 100 microseconds. Experiments with saw-tooth and sinusoidal pulses were accordingly undertaken. With sinusoidal pulses of several milliseconds duration there were frequently observed two moments of maximum plasma density, a maximum occurring each time the electron energy passed through the critical valve for formation of a low pitch helical trajectory. The plasmas produced by pulsed beams were very similar in density and other characteristics

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to those obtained with continuous injection. The plasmas decayed slowly (sometimes very slowly) for a considerable time (tens of milliseconds), after which they frequently suddenly collapsed. This behavior may be due to the presence in the plasma of high energy electrons, the confinement time of which, as the authors have shown (ZhTF, 36, 608, 1966/ see Abstract AP6013114/), increases with their energy and which, for unknown reasons, escape from the plasma with anomalous rapidity under certain conditions. The confinement time of the plasma increased with increasing pressure of the working gas. This may be due to the influence of the high frequency oscillations that were observed in the plasmas at high pressures and high beam currents and covered a very wide range of frequencies extending up to 11 500 MHz, the highest frequency that could be recorded with the available instrument. The process of "burning out" the neutral gas, previously observed with continuous injection, was also observed with pulsed injection. Plasma densities of the order of 10^{12} cm^{-3}, as determined from the cutoff of 3 cm microwaves, were obtained. Orig. art. has: 5 figures.

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L 23581-66 EWT(1)/ETC(f)/EPF(n)-2/EWG(m) IJP(c) AT/GS

ACC NR: AT6008839 SOURCE CODE: UR/0000/65/000/000/0018/0027

AUTHOR: Akshanov, B. S.; Volkolupov, Yu. Ya.; Sinel'nikov, K. D.

ORG: none

TITLE: Investigation of injection and confinement of charged particles by a magnetic mirror trap

SOURCE: AN UkrSSR. Magnitnyye lovushki (Magnetic traps). Kiev, Naukova dumka, 1965, 18-27

TOPIC TAGS: magnetic trap, magnetic mirror ~~trap~~, plasma confinement, plasma injection, electron gun, ionization, charged particle

ABSTRACT: The present work describes experiments in which the injection of particles into magnetic mirror traps is accomplished using a circular electron gun generating directed flow of particles which pass through the magnetic cusp configuration into the mirror trap. At the opposite end of the mirror trap, an additional strong field coil is added to provide a reflecting barrier for those particles which can pass through the main trap. The injected beam was studied by the use of luminescent screens which show that the beams are sufficiently intense to cause ionization of the atoms in the magnetic trap. Another beam of low intensity was used for probing the plasma and the main beam. This beam probing technique led to the conclusion that almost all inject-

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ed particles stagnate in the trap region. The resulting space-charge lifetime was determined by the same technique. These results were obtained by introducing discriminating modulation on the probing beam. The results of these experiments confirm theoretical predictions of the mechanism converting linear flows into spiral ones. It was also found that plasma duration time corresponds to the burnout time (complete ionization) which creates a plasma of about $8 \cdot 10^{11}$ cm^{-3}. It is concluded that beam electron trapping was due not only to ionization and charge exchange but also to the development of beam instability. Orig. art. has: 6 figures.

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