"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

FIKHTENGOL'TS, Grigoriy Mikhaylovich; AKILOV, G.P., red.; RATENBERG, L.A., tekhn.red.

[Fundamentals of mathematical analysis] Osnovy matematicheskogo analiza. Izd.4., stereotipnoe. Moskva, Gos.izd-vo fiziko-matem. lit-ry. Vol.1. 1960. 440 p. (MIRA 13:7)
(Mathematical analysis)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

LYAPIN, Yevgeniy Sergeyevich; AKILOV, G.P., red.; POL'SKAYA, R.G., tekhn.red.

[Semigroups] Polugruppy. Moskva, Gos.izd-vo fiziko-matem. lit-ry, 1960. 592 p. (MIRA 13:9)
(Groups, Theory of)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

FIKHTENGOL'TS, Grigoriy Mikhaylovich; AKILOV, G.P., red.; POL'SKAYA, R.G., tekhn.red.

[Textbook on differential and integral calculus] Kurs differentsial'nogo i integral'nogo ischisleniia. Moskva, Gos.izd-vo fiziko-matem.lit-ry. Vol.3. 1960. 656 p. (MIRA 13:6)

(Calculus, Differential) (Calculus, Integral)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

FADDEYEV, Dmitriy Konstantinovich; FADDEYEVA, Vera Nikolayevna; AKILOV, G.P., red.; POL'SKAYA, R.G., tekhn.red.

[Computing methods in linear algebra] Vychislitel'nye metody lineinoi algebry. Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1960. 656 p. (MIRA 13:12)

(Algebra, Linear)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

FIKHTENGOL'TS, Grigoriy Mikhaylovich; AKILOV, G.P., red.; VOLCHOK, K.M., tekhn. red.

[Fundamentals of mathematical analysis]Osnovy matematicheskogo analiza. Izd.3. Moskva, Gos.izd-vo fiziko-matem.lit-ry. Vol.2. 1960. 464 p. (MIRA 15:1)

(Mathematical analysis)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

NATANSON, Isidor Pavlovich; AKILOV, G.P., red.; POL'SKAYA, R.G., tekhn.red.

[Summation of infinitesimal quantities] Summirovanie beskonechno malykh velichin. Izd.3., ispr. Moskva, Gos.izd-vo fiziko-matem. lit-ry, 1960. 54 p. (Populiarnye lektsii po matematike, no.12) (MIRA 14:6)

(Calculus)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

SMIRNOV, Modest Mikhaylovich; AKILOV, G.P., red.; VOLCHOK, K.M., tekhn. red.

[Problems in connection with equations of mathematical physics] Zadachi po uravneniiam matematicheskoi fiziki. Izd.4., dop. Moskva, Gos. izd-vo fiziko-matem. lit-ry, 1961. 112 p. (MIRA 14:7)

(Mathematical physics)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

FADDEYEV, Dmitriy Konstantinovich; SOMINSKIY, Il'ya Samuilovich; AKILOV, G.P., red.; LUK'YANOV, A.A., tekhn. red.

[Collection of problems in higher algebra] Sbornik zadach po vysshei algebre. Izd.7., ispr. Moskva, Gos. izd-vo fiziko-matem.lit-ry, 1961. 304 p. (MIRA 14:12)

(Algebra--Problems, excercises, etc.)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

SMIRNOV, Vladimir Ivanovich, akademik; AKILOV, G.P., red.; VOLCHOK, K.M., tekhn. red.

[Course in higher mathematics] Kurs vysshei matematiki. Izd.19., ispr. Moskva, Gos.izd-vo fiziko-matem.lit-ry. Vol.1. 1961. 478 p. (MIRA 15:1)

(Mathematics)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

MIKHLIN, Solomon Grigor'yevich; AKILOV, G.P., red.; KUL'YANOV, A.A., tekhn. red.

[Multidimensional singular integrals and integral equations] Mnogomernye singuliarnye integraly i integral'nye uravneniia. Moskva, Fizmatgiz, 1962. 254 p. (MIRA 15:9)
(Integrals, Generalized) (Integral equations)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

VYSOVSKIKH, Ivan Petrovich; AKILOV, G.P., red.; LUK'YANOV, A.A., tekhn. red.

[Lecutres on calculation methods] Lektsii po metodam vychislenii. Moskva, Fizmatgiz, 1962. 342 p. (MIRA 15:7)
(Calculus)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

FIKHTENGOL'TS, Grigoriy Mikhaylovich; AKILOV, G.P., red.; POL'SKAYA, R.G., tekhn. red.

[Course in differential and integral calculus]Kurs differentsial'nogo i integral'nogo ischisleniia. Izd.5., stereotipnoe. Moskva, Fizmatgiz. Vol.1. 1962. 607 p. (MIRA 15:8)
(Calculus, Differential) (Calculus, Integral)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

SMIRNOV, Vladimir Ivanovich, akademik; AKILOV, G.P., red.; VOLCHOK, K.M., tekhn. red.

[Course in higher mathematics]Kurs vysshei matematiki. Izd. 18, stereotipnoe. Moskva, Gos.izd-vo fiziko-matem.lit-ry, Vol.2. 1962. 628 p. (MIRA 15:9)

(Mathematics)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

KOSHLYAKOV, Nikolay Sergeyevich, prof. [deceased]; GLINER, Erast Borisovich; SMIRNOV, Modest Mikhaylovich; DZHANELIDZE, G.Yu., prof., retsenzent; AMOSOV, S.I., prof., retsenzent; AKILOV, G.P., dots., nauchnyy red.; LUK'YANOV, A.A., tekhn. red.

[Differential equations in mathematical physics] Differentsial'nye uravneniia matematicheskoi fiziki. Pod obshchim rukovodstvom N.S.Koshliakova. Moskva, Gos. izd-vo fiziko-matem. litry, 1962. 767 p. (MIRA 15:3)

1. Chlen-korrespondent Akademii nauk SSSR (for Koshlyakov). (Differential equations) (Mathematical physics)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

FIKHTENGOL'TS, Grigoriy Mikhaylovich; AKILOV, G.P., red.; POL'SKAYA, R.G., tekhn. red.

[Course in differential and integral calculus]Kurs differentsial'nogo i integral'nogo ischisleniia. Izd.5., stereotipnoe. Moskva, Fizmatgiz. Vol.2. 1962. 807 p. (MIRA 15:9)

(Calculus, Differential) (Calculus, Integral)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKILOV, G.P.; VULIKH, B.Z.; GAVURIN, M.K.; ZALGALLER, V.A.; NATANSON, I.P.; PINSKER, A.G.; FADDEYEV, D.K.

Leonid Vital'evich Kantorovich; on his 50th birthday. Usp. mat.nauk 17 no.4:201-215 '62. (MIRA 15:8)
(Kantorovich, Leonid Vital'evich, 1912-)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

KORDONSKIY, Khaim Borisovich; AKILOV, G.P., red.; ROZENGAUZ, N.M., red.; LUK'YANOV, A.A., tekhn. red.

[Applications of the theory of probability in engineering] Prilozheniia teorii veroiatnostei v inzhenernom dele. Moskva, Fizmatgiz, 1963. 434 p. (MIRA 16:7)
(Probabilities) (Engineering mathematics)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

LEBEDEV, Nikolay Nikolayevich; AKILOV, G.P., red.; LUK'YANOV, A.A., tekhn. red.

[Special functions and their applications] Spetsial'nye funktsii i ikh prilozheniia. Izd.2., perer. i dop. Moskva, Fizmatgiz, 1963. 358 p. (MIRA 16:11)
(Functions)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

FADDEYEV, Dmitriy Konstantinovich; FADDEYEVA, Vera Nikolayevna; AKILOV, G.P., red.; ROZENGAUZ, N.M., red.; LUK'YANOV, A.A., tekhn. red.

[Computation methods in linear algebra] Vychislitel'nye metody lineinoi algebry. Izd.2., dop. Moskva, Fizmatgiz, 1963. 734 p. (MIRA 16:10)

(Algebras, Linear)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKILOV, G.P.; VLADIMIROV, D.A.; KANTOROVICH, L.V.; NATANSON, I.P.

Boris Zakharovich Vulikh, 1913 - ; on his 50th birthday. Usp. mat. nauk 18 no.6:242-243 '63. (MIRA 17:3)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

NATANSON, Isidor Pavlovich; AKILOV, G.P., red.; ROZENGAUZ, N.M., red.; LUK'YANOV, A.A., tekhn. red.

[Short course of higher mathematics] Kratkii kurs vysshei matematiki. Moskva, Fizmatgiz, 1963. 748 p. (MIRA 16:10)
(Mathematics)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

ACCESSION NR: AP4042776 S/0020/64/157/003/0503/0505

AUTHORS: Akilov, G. P.; Rubinov, A. M.

TITLE: Successive approximation method for finding a best-approximation polynomial

SOURCE: AN SSSR. Doklady*, 1964, v. 157, no. 3, 1964, 503-505

TOPIC TAGS: approximation method, polynomial, linear programming, convergent series, successive approximation method, normal space

ABSTRACT: The best approximation (a number μ) is defined as the lowest value of a polynomial P, which is determined by solving a series of auxiliary problems, using for example linear programming methods. A scheme of constructing the best-approximation polynomial is described. The sequence of polynomials $\{P_m\}$ obtained during the course of the solution generates a sequence of least approximations $\{\mu_m\}$. If X is a normalized space (on the field of all real or all

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ACCESSION NR: AP4042776

complex numbers, then the following theorem is proved: The sequence $\{\mu_m\}$ converges to μ. The sequence $\{P_m\}$ is bounded (in the space X). If $\{P_{m_i}\}$ is an arbitrary convergent sub-sequence of the sequence $\{P_m\}$, then

$$Q = \lim_{i \to \infty} P_{m_i}$$

is the best-approximation polynomial. If the best-approximation polynomial Q is unique, then the sequence $\{P_m\}$ itself converges to Q. Some particular cases are pointed out. Orig. art. has: 5 formulas. Presented by Academician V.I. Smirnov.

ASSOCIATION: Leningradskiy gosudarstvenny*y universitet im. A. A. Zhdanova (Leningrad State University)

SUBMITTED: 30Jan64 ENCL: 00

SUB CODE: MA NR REF SOV: 000 OTHER: 000

2/2

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

KONTOROVICH, Mikhail Iosifovich; AKILOV, G.P., red.

[Operational calculus and processes in electrical circuits] Operatsionnoe ishchislenie i protsessy v elektricheskikh tsepiakh. Izd.3, dop. Moskva, Nauka, 1964. 328 p. (MIRA 17:11)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

SMIRNOV, Modest Mikhaylovich; AKILOV, G.P., red.

[Partial differential equations of the second order] Differentsial'nye uravneniia v chastnykh proizvodnykh vtorogo poriadka. Moskva, Nauka, 1964. 205 p. (MIRA 17:11)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKILOV, G.P.; RUBINOV, A.M.

Finding the best approximation polynomial by the method of successive approximations. Dokl. AN SSSR 157 no.3:503-505 Jl '64. (MIRA 17:7)

1. Leningradskiy gosudarstvennyy universitet imeni A.A. Zhdanova. Predstavleno akademikom V.I. Smirnovym.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKILOV, K.A.

Trade unions should be capable of realizing new objectives.
Tekst.prom. 19 no.2:58-60 F '59. (MIRA 12:5)

1. Predsedatel' Tadzhikskogo respublikanskogo komiteta profsoyuza rabochikh tekstil'noy i legkoy promyshlennosti.
(Textile industry) (Trade unions)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKILOV, S.

Produce more, spend less. Mest.prom.i khud.promys. 3 no.1:8 Ja '62. (MIRA 15:2)

1. Inspektor-revizor Glavnogo upravleniya mestnoy promyshlennosti Tadzhikskoy SSR.
(Tajikistan--Industrial management)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKILOV, Yu., brigadir stolyarov; VOROB'YEV, N., rabotnik; BIRULYA, Antonina; IVANOVA, N., shveya-motorishtka; BRODER, Ye., brigadir; ZHIGUNOVA, L., udarnik kommunisticheskogo truda, broshyurovshchitsa (Moskva)

Program of our life and our bright future. Mast.prom. i khud. promys. 2 no.9:2-3 S '61. (MIRA 14:11)

1. Zerkal'naya fabrika No.2, Moskva (for Akilov). 2. Garderobnaya kontora No.1, Moskva (for Vorob'yev). 3. Shveynaya fabrika No.1, Moskva (for Ivanova). 4. Stalinskiy promyshlennyy kombinat, g. Kishinev, Moldavskoy SSR (for Broder).
(Communist Party of the Soviet Union—Congresses)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

SHIKHALIYEV, F.A.; AKILOV, Zh.; ZEL'MANOVICH, G.M.

Flushing slant holes. Izv. vys. ucheb. zav.; neft' i gaz 7 no.5: 27-30 '64. (MIRA 17:9)

1. Azerbaydzhanskiy institut nefti i khimii im. M. Azizbekova.

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKIMOV, Sh.; MOVSUMOV, A.A.

Determining the time required for well flooding. Izv. vys. uchebn. zav.; neft' i gaz 8 no.2:33-36 '65. (MIRA 18:3)

1. Azerbaydzhanskiy institut nefti i khimii im. M. Azizbekova i "AzNIIburneft'".

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

MOVSUMOV, A.A.; MAKHMUDOV, M.N.; GASANOV, G.T.; AKILOV, Zn.

Flushing in the drilling of slant holes. Izv. vys. ucheb. zav.; neft' i gaz 8 no.6:25-27 '65. (MIRA 18:7)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKILOVA, A.T.

Akilova, A.T. "Sources of blood supply for the walls of the superficial veins of the upper extremities", Trudy Voyen.-mor. med. akad., Vol. XI, 1948, p. 160-202, -Bibliog: 64 items.

SO: U-3042, 11 March 53, (Letopis 'nykh Statey, No. 9, 1949)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKILOVA, A.T.

Akilova, A.T. "The cutaneous artery", Trudy Voyen.-mor. med. akad., Vol. XI, 1948, p. 203-08, -Bibliog: 28 items.

SO: U-3042, 11 March 53, (Letopis Inykh Statey, No. 9, 1949)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

USSR/Human and Animal Morphology. Circulatory System. S-4

Abs Jour: Ref Zhur - Biol., No 19, 1958, 88459

Author : Akilova, A. T.

Inst : Not Given

Title : Changes of the Venous Perivascular Bed in Endarteritis

Orig Pub: Vestn. khirurgii, 1956, 77, No. 9, 73-85

Abstract: The venous perivascular bed in the areas of the neurovascular bundles of the leg and foot was studied in 25 amputated extremities of patients suffering from endarteritis. A decrease of the arterial perivascular bed was observed - at first of spastic nature, later due to hyalihosis and thrombosis of the arteries. The veins of the perivascular and intervascular venous tracts of the perineurium, and the transverse venous anastomoses increased, they emptied themselves

Card 1/2

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

USSR/Human and Animal Morphology. Circulatory System. S-4

Abs Jour: Ref Zhur - Biol., No 19, 1958, 88459

Abstract: in the intervascular venous tract, and formed enormous venous sleeve-like structures around arteries of any caliber. These venous sleeves, surrounding the arteries, received numerous venous branches from the arterial wall. The changes of the venous network in the arterial adventitia were minor, but in the tunica media they were considerable: A markedly dilated venous plexus, the character of which changed along the length of the blood vessel; the venous outlfow from this network took place through transverse venous anastomoses of the arterial adventitia. The degree of dilation of the venae venorum was insignificant as compared with the dilation of the venae arteriorum. -- I. B. Barabash

Card 2/2

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKILOVA, A.T. (Leningrad, ul. Pisareva, d. 4, kv. 29)

Arterial perivascular bed in the region of veins of the stomach and small and large intestines [with summary in English]. Arkh. anat.gist. i embr. 36 no.2:63-69 F '59. (MIRA 12:4)

1. Kafedra normal'noy anatomii (nach. - chlen-korrespondent AMN SSSR prof. B.A. Dolgo-Saburov) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.

(GASTROINTESTINAL SYSTEM, blood supply
arterial perivasc. bed in area of gastrointestinal veins (Rus))

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKILOVA, A.T. (Leningrad, ul. Pisareva, d.4, kv.29)

Perivascular bed in the area of mesenteric vessels of the small and large intestine of cats under experimental conditions. Arkh. anat. gist. i embr. 36 no.3:44-52 Mr '59. (MIRA 12:7)

1. Kafedra normal'noy anatomii (Nach. - chlen-korrespondent AMN SSSR prof. B. A. Dolgo-Saburov) Voyenno-meditsinskoy ordena Lenina akademii im. S.M. Kirova.

(INTESTINES, blood supply
eff. of resection of intestinal & mesenteric artery & vein on perivasc. bed in cats (Rus))
(MESENTERIES, blood supply,
perivasc. bed in dogs (Rus))

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

BELYANCHIKOV, V.N., inzh.; NOVIKOV, I.V., inzh.; ZAYTSEV, L.Ye., inzh.; AKIL'YEV, S.A., inzh.; BELKIN, V A., inzh.; POCHKINA, L.A., inzh.; VASIL'YEV, O.A., inzh.; Prinimali uchastiye: KOPEYKINA, O.P.; SMIRNOVA, A.N.; BELKINA, S.S.; SHILINA, Ye.I.; LAGUNOV, Ye.N.; REZNIK, S.Z.; BRISMAN, B.I.; KUZ[illegible]; SHIBKOVA, R.Ye., [illegible] tekhn. red.

[Operational life of parts of excavating, construction, and road machinery; a reference catalog] Sroki sluzhby detalei ekskavatorov, stroitel'nykh i dorozhnykh mashin; katalog spravochnik. Izd.2., perer. i dop. Moskva, Goslesbumizdat. Pt.2. [Road, construction machinery, and machinery for manufacturing building materials] Dorozhnye, stroitel'nye mashiny i mashiny dlia proizvodstva stroitel'nykh materialov. 1963. 306 p. (MIRA 17:4)

1. "Stroitiyazhmashzapchast'," Tekhnicheskaya kontora. Konstruktorskoye byuro.

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

KANTSEL', Ya.O., inzh.; BELYANCHIKOV, V.N., inzh.; NOVIKOV, I.V., inzh.; ZAYTSEV, L.Ye., inzh.; AKIL'YEV, S.A., inzh.; BELKIN, V.A., inzh.; POCHKINA, L.A., inzh.; VASIL'YEV, O.A., inzh.; KUZ'MINYKH, A.A., red.izd-va; SHIBKOVA, R.Ye., tekhn. red.

[Service life of parts of excavating, construction and road machinery; a reference catalog] Sroki sluzhby detalei ekskavatorov, stroitel'nykh i dorozhnykh mashin; katalog-spravochnik. Izd.2., perer. i dop. Moskva, Goslesbumizdat. Pt.1.[Excavating machinery and hoisting equipment; cranes, loaders, winches, and elevators] Ekskavatory i pod"emno-transportnoe oborudovanie; krany, pogruzchiki, lebedki, elevatory. 1963. 342 p. (MIRA 17:3)

1. Russia (1917- R.S.F.S.R.) Glavnoye upravleniye po snabzheniyu i sbytu produktsii tyazhelogo, transportnogo i stroitel'no-dorozhnogo mashinostroyeniya. Tekhnicheskaya kontora "Stroityazhmashzapchast'." Konstruktorskoye byuro.

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

BELYANCHIKOV, V.N., inzh.; NOVIKOV, I.V., inzh.; GRACHEV, A.S., inzh.; BELKIN, V.A., inzh.; AKIL'YEV, S.A., inzh.

[Catalog and reference manual on the adaptability of hydraulic and pneumatic systems to excavating, construction, and road machinery] Katalog-spravochnik primeniaemosti gidro- i pnevmosistem na ekskavatorakh, stroitel'nykh i dorozhnykh mashinakh. Moskva, Goslesbumizdat, 1963. 147 p. (MIRA 17:7)

1. Russia (1917- R.S.F.S.R.) Glavnoye upravleniye po snabzheniyu i sbytu produktsii tyazhelogo, traktornogo i stroitel'no-dorozhnogo oborudovaniya.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

NOVIKOV, Ivan Vasil'yevich; AKIL'YEV, Stepan Alekseyevich;
MIKHAYLOV, A.N., red.

[Reconditioning parts of road machinery] Vosstanovlenie detalei dorozhnykh mashin. Moskva, Transport, 1965. 146 p. (MIRA 18:4)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKIM, E.L.; NIKITIN, N.I.

Production and study of low-substituted oxyethylcellulose. Trudy LTITSBP no.12:193-198 '64.

Acetylation of low-substituted oxyethylcellulose. Ibid.:199-205 (MIRA 18:8)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKIM, E.L.

Electron microscopic study of cellulose triacetate keeping its fibrous structure after processing. Trudy LTITSBP no.12:206-211 '64. (MIRA 18:8)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKIM, E.L., inzh.

Microscopic and electron-microscopic examination of samples of hydroxyethyl cellulose. Trudy LTITSBP no.11:63-67 '62.
(MIRA 16:10)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKIM, E.L.

Study of the acetylation of cellulose on the basis of changes of the electric conductivity of the acetylating mixture. Zhur.-prikl.khim. 35 no.3:605-612 Mr '62. (MIRA 15:4)

1. Leningradskaya lesotekhnicheskaya akademiya imeni S.M.Kirova.
(Cellulose) (Acetylation)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKIM, E.L.; NIKITIN, N.I.

Preparation and acetylation of low-substituted hydrocyethyl cellulose. Zhur. prikl. khim. 36 no.5:1075-1085 My '63. (MIRA 16:8)

(Cellulose) (Acetylation)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKIM, E.L.; PEREPECHKIN, L.P.; IVSYAKOVA, N.S.

Use of low-substituted hydroxyethylcellulose for the production of spun acetate. Trudy LTITSBP no.13:33-37 '64. (MIRA 18:2)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKIM, Eduard L'vovich; PEREPECHKIN, Lev Pavlovich; BRODOTSKIY, A.I., red.

[Cellulose, acetyl cellulose and acetate fibers] TSelliuloza, atsetiltselliuloza, atsetatnye volokna. Moskva, Lesnaia promyshlennost', 1964. 113 p. (MIRA 17:12)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

NIKITIN, Nikolay Ignat'yevich. Prinimali uchastiye: ABRAMOV A. Ye.A., starshiy nauchnyy sotr., kand. khim. nauk; AKIM, E.L., inzh.-tekhnolog; ANTONOVSKIY, B.D., dots., kand. tekhn. nauk; VASIL'YEVA, G.G., inzh.-tekhnolog; ZAYTSEVA, A.F., starshiy nauchnyy sotr., kand. tekhn.nauk; KLENKOVA, N.I., kand. tekhn. nauk; MALEVSKAYA, S.S., kand. khim. nauk; NIKITIN, V.N.starshiy nauchnyy sotr., kand. fiz.-mat. nauk; OBOLENSKAYA, A.V., kand. tekhn. nauk, dotsent; PETROPAVLOVSKIY, G.A., starshiy nauchnyy sotr., kand. tekhn. nauk; PONOMAREV, A.N., kand. tekhn. nauk, dots.; SOLECHNIK, N.Ya., prof., doktor tekhn. nauk; TOKAREV, B.I., inzh.; TSVETAYEVA, I.P., kand. tekhn. nauk; CHOCHIYEVA, M.M., kand. tekhn. nauk; ELIASHBERG, M.G., doktor tekhn. nauk; YUR'YEV, V.I.; KARAPETYAN, G.O., red.izd-va; ZAMARAYEVA, R.A., tekhn. red.

[Wood chemistry and cellulose] Khimiia drevesiny i tselliulozy. Moskva, Izd-vo Akad.nauk SSSR, 1962. 711 p. (MIRA 15:2)

1. Chlen-korrespondent Akademii nauk SSSR (for Nikitin). 2. Zaveduyushchiy kafedroy fizicheskoy i kolloidnoy khimii Lesotekhnicheskoy akademii (for Yur'yev).

(Cellulose)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

OBOLENSKAYA, Artimida Valentinovna, dots.; SHCHEGOLEV, Viktor Petrovich, st. nauchn. sotr.; AKIM, Garri L'vovich, dots.; AKIM, Eduard L'vovich, kand. tekhn. nauk; KOSSOVICH, Nadezhda L'vovna, dots.; YEMEL'YANOVA, Iraida Zakharovna, kand. tekhn. nauk; KOSAYA, G.S., kand. tekhn. nauk, retsenzent; NIKITIN, V.M., prof.red.

[Practical laboratory work on wood chemistry and cellulose] Prakticheskie raboty po khimii drevesiny i tselliulozy. Moskva, Lesnaia promyshlennost', 1965. 411 p. (MIRA 18:7)

1. Kafedra khimii drevesiny i tsellyulozy Lesotekhnicheskoy akademii im. S.M.Kirova (for Obolenskaya, Shchegolev, Akim, G.L., Akim, E.L.). 2. Kafedra anatomii i fiziologii rasteniy Lesotekhnicheskoy akademii im. S.M. Kirova (for Kossovich). 3. Zaveduyushchaya laboratoriyey fiziko-khimicheskikh issledovaniy Gosudarstvennogo nauchno-issledovatel'skogo instituta gidroliznoy i sul'fatno-spirtovoy promyshlennosti, Leningrad (for Yemel'yanova).

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

SUBJECT USSR/MATHEMATICS/Algebra CARD 1/1 PG - 873
AUTHOR VILENKIN N.Ja, AKIM E.L., LEVIN A.A.
TITLE Matrix elements of irreducible unitary representations of the group of Euclidean motions of a three-dimensional space and their properties.
PERIODICAL Doklady Akad, Nauk 112, 987-989 (1957)
reviewed 6/1957

At the Third Mathematical Union Congress Radov has presented an adress on the computation of the matrix elements of the irreducible unitary representations of the group M(3,R) of the Euclidean motions of a three-dimensional space. The authors carry out the computation of the same elements with the aid of an integral method. Here certain functions are appearing which satisfy certain relations which can be denoted as generalizations of well-known relations between Bessel functions. The authors give a theorem of addition and recurrence formulas for these functions which originate in it.

INSTITUTION: Military Engineer Academy.

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

ACC NR: AP7007596

SOURCE CODE: UR/0293/66/004/006/0823/0826

AUTHOR: Akim, E. L.
ORG: none

TITLE: Determination of the lunar gravity field using the data on motion of the lunar artificial satellite "Luna-10"

SOURCE: Kosmicheskiye issledovaniya, v. 4, no. 6, 1966, 823-826
TOPIC TAGS: lunar satellite, artificial satellite orbit, moon gravity / Luna-10 lunar satellite
SUB CODE: 22,03

ABSTRACT:

The article cited below gives the preliminary results of determination of the non-central character of the moon's gravity field on the basis of observational data on motion of the lunar artificial satellite "Luna-10." It was found that the non-central character of the field is an important factor determining the evolution of the satellite orbit. The perturbation of the satellite orbit, arising due to the non-central character of the lunar gravity field, is manifested particularly clearly in the evolution of the longitude Ω of the ascending node of the satellite and the angular distance ω of periselene from the node. The evolution of the parameters Ω, ω contains a clearly expressed secular deviation, leading to regression of both parameters. In 460 revolutions of the satellite around the moon the perturbations of the parameters Ω, ω caused by the non-central character of the moon's gravity field attain the values

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$$\Delta\Omega = -7^\circ.7, \quad \Delta\omega = -11^\circ.8.$$

Perturbations of inclination of the satellite orbit and its eccentricity for the most part have a periodic character and have the amplitude

$$\Delta i \approx 0^\circ.15, \quad \Delta e \approx 0.003.$$

The orbital perturbations of the satellite due to the non-central character of the lunar field lead to perturbations in its coordinates, in one satellite revolution attaining the value

$$|\Delta \bar{r}| \approx 0.75 \text{ km}.$$

The gravitational influence of the earth and sun on the motion of the artificial lunar satellite also lead to evolution of its orbit. This influence causes regression of the node and orbital pericenter of the satellite. During the active lifetime of the satellite these perturbations are

$$\Delta\Omega = -1^\circ, \quad \Delta\omega = -2^\circ.$$

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The perturbations due to a non-central gravity field of the moon exceed by 5-6 times the perturbations caused by the gravitational influence of the sun and moon. Analysis of trajectory measurements yielded numerical values for eleven coefficients of expansion of lunar gravity potential.

Orig. art. has: 2 figures. [JPRS: 39,718]

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24029
S/020/61/138/003/001/017
C 111/C333

24.4400

AUTHORS: Akim, E. L., Levin, A. A.

TITLE Generating function for Clebsch-Gordan's coefficients

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 138, no. 3, 1961, 503-505

TEXT: For the coefficients of Clebsch-Gordan $C(l_1 l_2 m_1 m_2 | lm)$, see E. P. Wigner (Ref. 1: Gruppentheory und ihre Anwendung auf die Quantenmechanik der Atomspektren [Group theory and its application to quantum mechanics of atomic spectra], N. Y.- London, 1959) the authors gives with the aid of the results of J. M. Gel'fand and Z. Ya. Shapiro (Ref. 2: UMN, 10, v. 3 (1955)) on "generalized spherical functions " $P_{mn}(\mu)$, a so called "generating function" such that the $C(l_1 l_2 m_1 m_2 | lm)$ occur as coefficients of the series of this function:

$$(-1)^{l-m} a_l t^{\frac{l_2-l_1-m}{2}} (1-t)^{l_1+l_2} P^{l}_{l_2-l_1,m}\left(\frac{1+t}{1-t}\right) =$$

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Generating function for . . .

$$= \sum_{m_1+m_2=m} C(l_1 l_2 m_1 m_2 \mid lm)\, n_{m_1}^{l_1}\, n_{m_2}^{l_2}\, t^{l_2-m_2}, \quad t = \frac{z_2}{z_1}$$

where $n_m^l = \dfrac{(-1)^{l-m}}{\sqrt{(l-m)!\,(l+m)!}}$, $\quad a_l = \sqrt{\dfrac{2l+1}{(l_1+l_2-l)!\,(l_1+l_2+l+1)!}}$

and the left side is denoted as the "generating function". With the aid of the hypergeometric function this generating function can also be written in the form

$$(-1)^{l-m} a_l \frac{1}{(m+l_1-l_2)!} \sqrt{\frac{(l+l_1-l_2)!\,(l+m)!}{(l+l_2-l_1)!\,(l-m)!}} (1-t)^{l_1+l_2-l} \times$$
$$\times F(m-l,\ l_1-l_2-l,\ l_1-l_2+m+1,\ t) =$$
$$= \sum_{m_1+m_2=m} C(l_1 l_2 m_1 m_2 \mid lm)\, n_{m_1}^{l_1}\, n_{m_2}^{l_2}\, t^{l_2-m_2} \qquad \text{(A)}$$

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Generating function for . . . S/020/61/138/003/001/017
C 111/C333

for $l_2 - l_1 \leq m \leq l$ and similarly for $-l \leq m \leq l_2 - l_1$.
With the aid fo the "generating function" the authors obtain the representations

$$C(l_1 l_2 m_1 m_2 | lm) = (-1)^{l-m} a_l [n^{l_1}_{m_1} n^{l_2}_{m_2} (l_2 - m_2)! (m + l_1 - l_2)!]^{-1} \times$$
$$\times \sqrt{\frac{(l + l_1 - l_2)! (l + m)!}{(l + l_2 - l_1)! (l - m)!}} \times \qquad (B)$$
$$\times \left\{ \frac{d^{l_2 - m_2}}{dt^{l_2 - m_2}} (1 - t)^{l_1 + l_2 - l} F(m - l, l_1 - l_2 - l, l_1 - l_2 + m + 1, t) \right\}_{t=0},$$

$$C(l_1 l_2 m_1 m_2 | ml) = (-1)^{l-m} i^{l_1 + l_2 + m_1 - m_2} 2^{-(l_1 + l_2)} \frac{(2l + 1) n^{l_1}_{m_1} n^{l_2}_{m_2}}{a_l} \times$$
$$\times \int_{-1}^{+1} (1 - \mu^2)^{\frac{l_1 + l_2}{2}} \left(\frac{1 - \mu}{1 + \mu} \right)^{\frac{m_1 - m_2}{2}} \overline{P}^l_{l_1 - l_2, m}(\mu)\, d\mu, \qquad (C)$$

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C 111/C333

Generating function for . . .

for the coefficients $C(l_1 l_2 m_1 m_2 | lm)$. Furthermore, the asymptotic representation

$$C(l_1 l_2 m_1 m_2 | lm) \approx (-1)^{l_1+l_2-l} \frac{(l+m+1)^{l_2-m_2}}{(l-l_2-m_1)!} \times$$
$$\times \sqrt{\frac{(2l+1)(l+l_1-l_2)!(l+m)!(l-m)!(l_1-m_1)!(l_2+m_2)!}{(l+l_2-l_1)!(l_1+l_2-l)!(l_1+l_2+l+1)!(l_1+m_1)!(l_2-m_2)!}}.$$

(D)

which holds for $l_1, l_2, l, m \gg l_1 + l_2 - m$.

The results and notations from (Ref. 2) and from M. A. Neymark (Ref.3: UMN, 9, v. 4 (1954)) are essentially used in the paper. There are 2 Soviet-bloc and 1 non-Soviet-bloc references.

PRESENTED: January 21, 1961, by A. N. Kolmogorov, Academician

SUBMITTED: January 13, 1961

Card 4/4

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L 04572-67 FSS-2/EWT(1) TT/GW

ACC NR: AP6033266 SOURCE CODE: UR/0020/66/170/004/0799/0802

41
B

AUTHOR: Akim, E. L.; Keldysh, M. V. (Academician)

ORG: none

TITLE: Determining the gravitational field of the Moon by the artificial Moon satellite Luna-10

SOURCE: AN SSSR. Doklady, v. 170, no. 4, 1966, 799-802

TOPIC TAGS: Moon, gravitational field, Moon artificial satellite, gravitational potential

ABSTRACT: To determine the noncentral gravitational field of the Moon, the motion of the artificial Moon satellite "Luna 10" is analyzed with gravitational forces of the Earth and the Sun taken into account. From the statistically processed measurements of the trajectory of Luna-10 carried out over the period of its existence (from April 3 to May 30, 1966), it is established that the effect of noncentrality of the gravitational field of the Moon is an essential factor in the evolution of the orbit of Luna-10. The perturbations of its circumlunar orbit due to noncentrality of the gravitational field of the Moon are particularly noticeable in the evolution of the longitude of the ascending node Ω and the angular distance of the pericenter to the ascending node ω. The perturbations of elements Ω and ω of Luna-10 during the time of its existence (460 revolutions) due to noncentrality of the gravitational field

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of the Moon and due to gravitational effects of the Earth and the Sun (the gravitational effects of other planets are neglected) are presented as functions of the number of revolutions of the Moon satellite. A comparison of the results shows that perturbations for Luna-10 due to noncentrality of the gravitational field of the Moon exceed the perturbations due to gravitational forces of the Earth and the Sun 5 to 6 times. The gravitational potential of the Moon is taken in the form of expansion in spherical functions with unknown coefficients (the gravitational field parameters) C_{nm} and d_{nm} ($n = 2, 3, \ldots, m = 0, 1, \ldots n$). As a result of processed measurement data, the numerical values for eleven expansion coefficients are derived which are presented with maximum possible errors. To illustrate the determined gravitational potential of the Moon, the level surface passing through the point with spherical coordinates $r = 1738$ km, $\psi = 0$, $\lambda = 0$ is analyzed. The level lines obtained by intersecting this surface by the equatorial plane of the Moon, the zero meridian plane ($\lambda = 0$), and the plane corresponding the meridian $\lambda = 90°$ are presented. Orig. art. has: 4 figures.

SUB CODE: 03/ SUBM DATE: 13Sep66/ OTH REF: 001/ ATD PRESS: 5100

Card 2/2 vmb

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKIM, E.L.; ENEYEV, T.M.

Determining the parameters of motion of a space vehicle from trajectory measurement data. Kosm. issl. 1 no.1:5-50 Jl-Ag '63. (MIRA 17:4)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKIM, G. L. Cand Tech Sci -- (diss) "The Delignification and and Refining of Unbleached Cellulose by the Oxygen-Alkali Method." Len, 1957. 17 pp with tables, 20 cm. (Min of Higher Education USSR, Len Order of Lenin Forestry Engineering Academy im S. M. Kirov), 100 copies (KL, 27-57, 106)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

OBOLENSKAYA, Artimida Valentinovna, dots.; SHCHEGOLEV, Viktor Petrovich, st. nauchn. sotr.; AKIM, Garri L'vovich, dots.; AKIM, Eduard L'vovich, kand. tekhn. nauk; KOSSOVICH, Nadezhda L'vovna, dots.; YEMEL'YANOVA, Iraida Zakharovna, kand. tekhn. nauk; KOSAYA, G.S., kand. tekhn. nauk, retsenzent; NIKITIN, V.M., prof. red.

[Practical laboratory work on wood chemistry and cellulose] Prakticheskie raboty po khimii drevesiny i tselliulozy. Moskva, Lesnaia promyshlennost', 1965. 411 p. (MIRA 18:7)

1. Kafedra khimii drevesiny i tsellyulozy Lesotekhnicheskoy akademii im. S.M.Kirova (for Obolenskaya, Shchegolev, Akim, G.L., Akim, E.L.). 2. Kafedra anatomii i fiziologii rasteniy Lesotekhnicheskoy akademii im. S.M. Kirova (for Kossovich). 3. Zaveduyushchaya laboratoriyey fiziko-khimicheskikh issledovaniy Gosudarstvennogo nauchno-issledovatel'skogo instituta gidrolizney i sul'fatno-spirtovoy promyshlennosti, Leningrad (for Yemel'yanova).

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

NIKITIN, V.M.; AKIM, G.L.

Applying the oxygen-alkaline method for delignifying and refining unbleached cellulose. Report No.2. Trudy LTA no.80 pt.2:77-90 '58. (MIRA 13:4)
(Cellulose)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

NIKITIN, V.M.; AKIM, G.L.

Bleaching and refining of cellulose pulp by oxygen and alkali.
Bum.prom. 35 no.12:5-7 D '60. (MIRA 13:12)

1. Leningradskaya ordena Lenina lesotekhnicheskaya akademiya im. S.M.Kirova.
(Woopulp)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKIM, G.L., dotsent; PROTASOV, A.V., inzh.

Bleaching sulfate pulp from aspen by molecular oxygen.
Bum. prom. no.3:7-9 Mr '64. (MIRA 17:3)

1. Lesotekhnicheskaya akademiya im. S.M. Kirova.

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKIM, L. Ye.

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Nitrocellulose lacquers from wood pulp. L. E. Akim and A. S. Konoplev. *Za Lakokrasochnuyu Ind.* 1934, No. 2, 17-19.—By a method of combined bleaching and intermediate treatment with NaOH under pressure, com. unbleached sulfite pulp gave a product with 95-97% α-cellulose, Cu no. less than 0.5 and ash content under 0.3%. When nitrated and stabilized, it yielded 130-50% of nitrocellulose contg. 11.2-11.6% N, completely sol. in the alc.-Et_2O mixt. and having a viscosity lower than that of linters nitrocellulose. For the production of collozylin with a viscosity of 1° (American method), addnl. reworking in an autoclave was required. By a method of mild bleaching with Cl, collozylin suitable for production of colorless lacquers was obtained. Comparative exposure tests showed that lacquers obtained from the wood pulp are equal to those produced from linters. The process was successfully used on a com. scale. Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

AKIM, L. Ye.

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Preparation of lacquers from wood collozylin. II. L. E. Akim and V. V. Zhebrovskii. *J. Applied Chem.* (U. S. S. R.) 9, 1090-5(in English 1095)(1936).—The Vazag Co. film prepn. method (cf. *C. A.* 26, 5438) was used. The films were tested in the Schopper app. (cf. U. S. pat. 1,707,734, *C. A.* 25, 2005). Lacquer films obtained from wood nitrocellulose have: a rupture modulus of 317-405 kg./sq. cm., elongation 24-33%, av. thickness 0.108-1.108 mm., viscosity of 6% soln. 12.5-20 drops/sec., and N_2 content of 9.02-11.48%. Treatment of wood nitrocellulose in an autoclave lowers its viscosity and decreases the strength of the film. The stability of the wood, nitrocellulose (colored and pigmented varieties) films on Fe plates is not lower than that obtained from the cotton linter. The use of wood cellulose as raw material for high-quality nitrolacquer is quite feasible. Exptl. data are tabulated. Ten references.

A. A. Dolgovny

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AKIM, L. Ye

CA

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Beneficiation of wood pulp in bleaching drums. L. E. Akim. *Tsentral. Nauch.-Issledovatel. Inst. Bumazhnoi Prom., Materialy* No. 31, 3-11(1940).—Soft and medium hardwood sulfite pulp can be beneficiated in 2 stages in a bleaching drum. For soft pulp the following conditions are suggested. In the first stage the use of active Cl should amt. to 40% of that required for a one-stage process. Alk. treatment for 3 hrs. with a 1% NaOH with the mixt. concn. at 5% and the temp. not lower than 85°. Alk. treatment is followed by washing with cold H_2O for 2 hrs. after which there is an addnl. bleaching for 2-3 hrs. at 15°. Consumption of active Cl is 1% by wt. of fibers. The mixt. is then washed with cold H_2O for 1-2 hrs., then acid-treated for 30 min. with 0.2% H_2SO_4 and finally washed with cold H_2O for 2-3 hrs. The consumption of NaOH amts. to 20% by wt. of the fibers but this can be reduced to 8-10% by using the spent alkali from the first drum in the second. In addn., 30% of the NaOH can be replaced with $Ca(OH)_2$. In expts. in which $Ca(OH)_2$ was used the yield of α-cellulose was 91.82%. For pulp of medium hardness the following conditions are suggested. In the first stage the consumption of active Cl should be 80% of that required in the one-stage process. Alk. and acid treatments and the addnl. bleaching are the same as for the soft pulp.

B. Z. Kamich

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15.9530

SOV/63-4-6-2/37

AUTHORS: Eliashberg, M. G., Nepenin, Yu. N., Akim, L. Ye. (Candidates of Technical Sciences)

TITLE: Modern Methods of Preparing Ligneous Cellulose for Chemical Processing

PERIODICAL: Khimicheskaya nauka i promyshlennost', 1959, Vol 4, Nr 6, pp 698-705 (USSR)

ABSTRACT: This is a review of Soviet and foreign literature on the preparation of bleached cellulose for the artificial fibers, plastics, and explosives industries. GOST-5982-59 and 9104-59 norms of sulfite viscose cellulose for the manufacture of rayon staple fiber, yarn, and cord, and Swedish characteristics of high-strength cord are given in tables. Sulfite and sulfate digestion is described in detail. Sulfite-alkali, nitric acid, and other methods are briefly mentioned. Optimal conditions for sulfite digestions are as follows: temperature raised to 105-110° C within 3 to 4 hr and maintained for 1 to 2 hr; then raised to 140-142° C within 3 to 4 hr.

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Modern Methods of Preparing Ligneous Cellulose for Chemical Processing

77268
SOV/63-4-6-2/37

In recent times, calcium bisulfite was replaced with ammonium, sodium, or magnesium bisulfites, which remain stable and penetrate the wood much better than calcium bisulfite. Unbleached sulfite cellulose (viscose grade) obtained in about 46% yield (based on wood chips) contained about 1% residual lignin, 3 to 4% pentosans, and 89 to 90% α-cellulose; the mean degree of polymerization was 700 to 1,000. The degree of polymerization and the content of hemicellulose is regulated by the acidity of the liquor and the end temperature of the digestion. The acidity can be raised by removal of a part of the alkali; this reduces the amount of calcium bisulfite in the digester and increases the hydrolytic action of the liquor (Ye. A. Kuznetsov, New Technology of Sulfite Cellulose Manufacture--Novaya tekhnika v proizvodstve sul'fitnoy tsellyulozy--Goslesbumizdat, 1956, p 25). Sulfate digestion is conducted at higher temperatures than the sulfite process and takes less time; the temperature is raised to 168-174° C within 2 to 3 hr and is maintained at this level for 1 to 2 hr. The yield is

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Modern Methods of Preparing Ligneous Cellulose for Chemical Processing

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SOV/63-4-6-2/37

cellulose. It was tried successfully on aspen wood (V. S. Gromov, P. N. Odintsov, Mum. prom., 1957, Nr 6). Optimal conditions: 11-12 hr cooking at 150° C; yield 52% based on wood; 89-93% α-cellulose; 0.01% ashes. The liquor can be reused 6 to 7 times; excess lignin (20% based on wood) is then separated, and the purified liquor used again. The mechanical purification and screening of the unbleached cellulose is described. The separation of 18.5% fine fibers raised the α-cellulose content from 87.5% to 89.2%, lowered the lignin content from 3.07% to 0.47%, that of pentosans from 6.54% to 4.26%, and that of resins and ashes from 1.96% to 0.71%. The continuous bleaching of sulfite viscose cellulose is described in detail. The process consists of seven stages; namely: chlorination I; chlorination II; refining; wash; hypochlorite bleaching I; hypochlorite bleaching II; acidification. Recently, one or two stages of bleaching with ClO_2 follow the hypochlorite bleaching II when cellulose with a small lignin content is processed, and a

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maximum bleaching effect (without damaging the fiber) is required. The refining (caustic extraction) is done with 0.5-1.0% NaOH at 95 to 140° C (hot refining) or 9-12% NaOH at normal temperature (cold refining). The content of resins and fats in bleached cellulose can be lowered considerably by adding surface active agents (OP-10, TMS, OP-7, and other) to the NaOH solution. The bleaching with sodium or potassium hypochlorite is conducted at pH = 9 to 10; t = 38 to 42° C; time of reaction 4 to 5 hr. Acidification is done with 1-2% sulfurous acid (by weight, based on the fiber); time of reaction, 50 to 60 min. Bleaching with ClO_2 is discussed. The bleaching can be made in basic, acid, or neutral medium. In an acid medium the oxidizing potential is fully utilized, according to the reaction:

$$ClO_2 + 4H^+ + 5e = Cl^- + 2H_2O.$$

In alkaline medium only part of the oxidizing potential

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is utilized:

$$ClO_2 + e \longrightarrow ClO_2^-$$

This last reaction proceeds energetically and shows a high bleaching effect, but it reduces the viscosity and the mechanical characteristics of the cellulose. However, by bleaching in alkaline medium at pH $\leqslant$ 10, one can omit the hypochlorite bleaching after the refining stage (Proceedings of the Leningrad Technological Institute of the Cellulose and Paper Industry--Trudy LTI cellyul. i bum. prom.--1955, Nr 3, p 3). There are 4 tables; 1 figure; and 77 references, 12 U.S., 3 U.K., 11 Swedish, 2 Finnish, 2 Japanese, 1 Polish, 10 German, 36 Soviet. Recent U.S. and U.K. references are: Cabbot, Purves, P. a. P. Mag. of Canada, Nr 2 (1959); L. Joergensen, The Chemistry of Pulp Fibers (Symposium at Cambridge, September 1957); F. Walker, Paper Trade J., 140, Nr 36, 21 (1956); J. Evans, ibid., 133, Nr 31 (1954); W. Rapson, Paper Mill News, 78, Nr 13, 88 (1955).

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AKIM, L.Ye., kand.tekhn.nauk; RUSINA, N.A., kand.tekhn.nauk; KIL'KIN, V.Ye.; mladshiy nauchnyy sotrudnik

Preparation of refined viscose pulp for high strength cord. Bum.prom. 34 no.7:2-5 Jl '59. (MIRA 12:10)

1. Leningradskiy tekhnologicheskiy institut tsellyulozno-bumazhnoy promyshlennosti.
(Viscose) (Tire fabrics)

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AKIM, L.Ye., kand.tekhn.nauk; ZYRYANOVA, L.V., insh.; GORSKIY, P.I., assistent

Use of surface active substances in the refining of viscose pulp. Bum.prom. 34 no.9:5-7 S '59. (MIRA 13:2)

1. Leningradskiy tekhnologicheskiy institut tsellyulozno-bumazhnoy promyshlennosti.
(Woodpulp) (Surface active agents)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKIM, L.Ye.; MEL'CHAKOVA, N.A.

Refining of viscose by means of oxidation inhibitors. Zhur. prikl.khim. 33 no.7:1623-1628 Jl '60. (MIRA 13:7)

1. Leningradskiy tekhnologicheskiy institut tsellyulozno-bumazhnoy promyshlennosti.
(Viscose) (Oxidation)

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AKIM, L.Ye.; BAMDAS, T.G.; MEL'CHAKOVA, N.A.; TALMUD, S.L.

On the preparation of sulfite viscose. Zhur. prikl. khim. 33 no.8:1867-1874 Ag '60. (MIRA 13:9)

1. Leningradskiy tekhnologicheskiy institut tsellyulozno-bumazhnoy promyshlennosti.

(Viscose)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKIM, L.Ye., kand.tekhn.nauk; KIL'KKI, V.Ye., nauchnyy sotrudnik

Investigating the molecular heterogeneity of wood and cotton cellulose intended for the production of high- and superhigh-strength cord fibers. Trudy LTITSBP no.8:66-73 '61. (MIRA 16:9)
(Woodpulp--Testing)

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AKIM, L.Ye., kand.tekhn.nauk; ZBROZHEK, L.Ya., nauchnyy sotrudnik

Investigating foreign industrial celluloses for high- and superhigh-strength cord with optical and electron microscopes. Trudy LTITSBP no.8:74-80 '61. (MIRA 16:9)

(Woodpulp—Testing)

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AKIM, L.Ye.; ZYRYANOVA, L.V.; GORSKIY, P.I.

Chlorine dioxide bleaching of reed pulp. Bum.prom. 36 no.2:10-11 F '61. (MIRA 14:2)

1. Leningradskiy tekhnologicheskiy institut tsellyulozno-bumazhnoy promyshlennosti.
(Woodpulp) (Chlorine oxide)

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AKIM, L. Ye.; YEL'NITSKAYA, Z.P.

Production of refined sulfite pulp for extrastrong fibers.
Bum.prom. 36 no.4:12-14 Ap '61. (MIRA 14:5)

1. Leningradskiy tekhnologicheskiy institut tsellyulozno-bumazhnoy promyshlennosti.
(Woodpulp)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKIM, L.Ye.; ZBROZHEK, L.Ya.

Change of the structure of the sulfate cellulose fiber in the process of preparing pulp for the production of thin condenser paper. Trudy LTA no.91:39-47 '60. (MIRA 15:12)

1. Leningradskiy tekhnologicheskiy institut tsellyulozno-bumazhnoy promyshlennosti.
(Cellulose) (Paper industry)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKIM, L.Ye., kand.tekhn.nauk; ZBROZHEK, L.Ya., starshiy inzhener; GORSKIY, P.I., starshiy inzhener

Use of optical and electron microscopes for studying bleached commercial pulps. Trudy LTITSBP no.11:54-59 '62. (MIRA 16:10)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKIM, L.Ye., kand.tekhn.nauk; KIL'KKI, V.Ye., starshiy inzhener

Studying the chemical composition and molecular nonuniformity of Japanese viscose cellulose. Trudy LTITSBP no.11:60-62 '62. (MIRA 16:10)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKIM, L.Ye.; KARPINSKIY, M.N.; ROMANENKO, V.A.; ETINA, Yu.Ya.

Changes of the functional groups of viscose cellulose in the process of its bleaching. Zhur.prikl.khim. 35 no.11:2534-2538 N '62. (MIRA 15:12)

(Cellulose) (Bleaching)

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AKIM, L.Ye., kand. tekhn. nauk; KIL'KKI, V.Ye., nauchnyy sotrudnik

Investigating the molecular nonuniformity of wood and cotton cellulose designated for the manufacture of high strength and extra-high strength cord fibers. Report No.2. Trudy LTITSBP no.10:85-89 '62. (MIRA 16:8)

(Tire fabrics) (Cellulose--Testing)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKIM, I.Ye.; RUSINA, N.A.; VERNER, M.A.; LOTKOVA, L.I.

Production of highly refined woodpulp for processing to acetylcellulose. Trudy LTITSBP no.12:167-172 '64.

(MIRA 18:8)

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AKIM, L.Ye.

Technological processes for the bleaching of woodpulp designated for the manufacture of paper and chemical processing. Trudy LTITSBP no.13:5-7 '64. (MIRA 18:2)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

DOLGIN, G.L.; AKIM, L.Ye.

Microscopic analysis of unbleached viscose cellulose treated with ultrasonic waves. Trudy LTITSBP no.13:38-46 '64.

Effect of the treatment of woodpulp with ultrasonic waves on its swelling in phosphoric acid Ibid.:47-51 (MIRA 18:2)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKIM, L.Ye.; GEYSBERG, S.M.; TALMUD, S.L.; Prinimali uchasti e: YEL'NITSKAYA, Z.P., mladshiy nauchnyy sotrudnik; ZEL'DINA, A.Ye., mladshiy nauchnyy sotrudnik; MEL'CHAKOVA, N.A., mladshiy nauchnyy sotrudnik; BLINOV, Ye.P., starshiy laborant; BOGDANOVSKAYA, M.K., starshiy laborant

Obtaining viscose cellulose for the production of staple rayon with complete elimination of the stage of hot alkaline refining of the woodpulp. Trudy LTITSBP no.13:8-15 '64.

(MIRA 18:2)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKIM, L.Ye.; ZBROZHEK, L.Ya.; GORSKIY, P.I.

Studying the micro- and submicrostructure of cotton cellulose for acetylation and of wood viscose cellulose. Trudy LTITSBP no.12:150-159 '64.

Studying the micro- and submicrostructure of rayon fibers used for chemical processing. Ibid.:160-166

(MIRA 18:8)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKIM, L.Ye.; TSEYTLINA, R.I.

Production of rayon pulp satisfying the requirements of the 5982-59 state standard. Trudy LTITSBP no.12:173-177 '64. (MIRA 18:8)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKIM, L.Ye.; RUSINA, N.A.; KIL'KKI, V.Ye.

Production of refined rayon pulp for the manufacture of high-strength cord fibers. Trudy LTITSBP no.12:178-181 '64. (MIRA 18:8)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKIMAKINA, L.V.

Choice of the dimensions of a stereoscopic frame for two-objective stereoscopic cameras using 35 mm. motion-picture film. Zhur. nauch. i prikl. fot. i kin. 2 no.3:206-211 My-Je '57. (MLRA 10:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy kino-fotoinstitut.
(Motion pictures, Three-dimensional) (Photography, Stereoscopic)

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AKIMAKINA, L.V.

Practical ways of manufacturing optical grids for ultrahigh-speed photography. Usp.nauch.fot. 6:152-154 '59. (MIRA 13:6)
(Photographic optics)
(Photography, High speed)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

AKIMAKINA, L. V. IVANOV, L. V.
(All-Union Scientific-Reserch Institute of Cinematography, Moscow)

Hexagonal Lens Rasters.

report submitted for: The 5th International High Speed Photography Congress, Washington, D. C. 16-22 Oct., 1960.

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100620015-6

S/077/63/008/002/002/009
A066/A126

AUTHORS: Ivanov, S.P., Akimakina, L.V.

TITLE: Pecularities of integral stereoscopic filming and projection

PERIODICAL: Zhurnal nauchnoy i prikladnoy fotografii i kinematigrafii, v. 8, no. 2, 1963, 92 - 97

TEXT: A stereocinematograph with a perspective screen and without spectacles has recently been developed at the stereolaboratory of НИКФИ (NIKFI). In integral stereoscopic filming and projection, a large number of pictures of the object are taken simultaneously and reproduced on the screen. The number of objectives is determined by the number of pictures in the series, which fix the object from various points simultaneously. The latter differ in very small parallaxes of two close projections of similar-image points. The step in the elementary areas and that of the objectives are chosen commensurably with the diameter of the eye-pupil. The viewing distance is chosen according to the resolving power of the observer's eye. It is almost unnecessary to choose a point of observation for the stereoscopic effect, whereby a "look around" effect of hitherto un-

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Pecularities of integral stereoscopic S/077/63/008/002/002/009
A066/A126

attainable quality is achieved. There are 4 figures and 1 table.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy kinofotoinstitut (NIKFI) (All-Union Scientific Research Institute of Motion Picture Photography)

SUBMITTED: September 15, 1961

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