SOSNOV, G. A.

SOSNOV, G.A. Nash rodnoi Donbass. Moskva, Ugletekhizdat, 1949. 69 p.
DLC: TN808.R92D63

SO: LC, Soviet Geography Part II, 1951/Unclassified

SOSNOV, G.A.

35297. Novye vidy krepi na shakhtakh kombinata stalinugol'. Ugolv, 1949, No. 11, S. 23-26

SO: Letopis' Zhurnal'nykh Statey, Vol. 34, 1949 Moskva

SOSNOV, G. A., Eng.; FRUDKIN, Ya. M., Eng.

Donets Basin - Coal-mining Machinery
Effective use of rock-loading machines during preparatory work at the mines of the Donets Basin. Ugol', 27, No. 7(316), 1952.

9. Monthly List of Russian Accessions, Library of Congress, October 1952 /1953/, Uncl.

SOSNOV, G. A. and PRUDKIN, Ya. M.

"USSR Coal Mines use Donbass Combines Effectively", Ugol', No. 10, 1950.

SO: W-16167, 6 Jan 1951

KUZ'MICH, A.S., redaktor; GRAFOV, L.Ye., redaktor; SHEVYAKOV, L.D., akademik, redaktor; SUDOPLATOV, A.P., redaktor; BALBACHAN, Ya.I., redaktor; OSTROVSKIY, S.B., redaktor; BARANOV, A.I., redaktor; BAGASHEV, M.K., redaktor; IVANENKO, G.I., redaktor; SOSNOV, G.A., redaktor; PRUDKIN, Ya.M., redaktor; DUL'NEV, V.P., tekhnicheskiy redaktor.

[Reconstruction of the mining industry and the improvement of the surface complex of mines in the Donets Basin; proceedings of a conference in Stalino, November 19-21, 1951.] Rekonstruktsiia gornogo khoziaistva i sovershenstvovanie poverkhnostnykh kompleksov ugol'nykh shakht Donbassa; trudy soveshchaniia v g. Stalino, 19-21 noiabria 1951 g. Moskva, Ugletekhizdat. 1952. 245 p. [Microfilm] (MLRA 9:2)

1. Russia (1923- U.S.S.R.) Ministerstvo ugol'noy promyshlennosti.
(Donets Basin--Coal mines and mining)

SOSNOV, G. A. ; PRUDKIN, YA. M.

Donets Basin - Coal Mines and Mining

Labor effectiveness of "Donbass" coal combines in mines of the Donets Basin. Ugol' 27 no. 8, 1952.

9. **Monthly List of Russian Accessions**, Library of Congress, November 1952. Unclassified.

SOSNOV, G.A., inzhener; PRUDKIN, Ya.M., inzhener.

Analysing the effectiveness of using metal props in stopes. Ugol' 29 no.1:29-33 Ja '54. (MLRA 7:1)
(Mine timbering)

SOSNOV, G.A., gornyy inzhener; PRUDKIN, Ya.M., gornyy inzhener.

Organization of continuous work cycles is the basis of the growth of labor productivity in coal mining. Ugol' 29 no.8:30-34 Ag '54. (MLRA 7:8)

1. Ministerstvo ugol'noy promyshlennosti SSSR.
(Coal mines and mining)

GRAFOV, L.Ye., red.; GUBERMAN, I.D., red.; ZADEMIDKO, A.N., red.; ZASYAD'KO, A.F., red.; KRASNIKOVSKIY, G.V., red.; KUZ'MICH, A.S., red.; LALAYNTS, A.M., red.; MEL'NIKOV, L.G., red.; MINDELI, E.O., kand. tekhn.nauk; ONIKA, D.G., doktor tekhn.nauk, red.; PANOV, A.D., red.; POCHENKOV, K.I., red.; TERPIGOREV, A.M., akademik, red.; USKOV, A.A., red.; KHARCHENKO, A.K., red.; SHCHEDRIN, M.A., red.; BOYKO, A.A., red.; MELAMED, Z.M., kand.tekhn.red.; PERVUKHIN, A.G., red.; BARABANOV, F.A., red.; SOSNOV, G.A., red.; TSYPKIN, V.S., red.; ALADOVA, Ye.I., tekhn.red.

[Restoration of the coal industry in the Donets Basin] Vosstanovlenie ugol'noi promyshlennosti Donetskogo basseina. Moskva, Gos. nauchno-tekhn.izd-vo lit-ry po ugol'noi promyshl. Ugletekhizdat. Vol.1. 1957. 371 p. Vol.2. 1957. 782 p. (MIRA 11:4)
(Donets Basin--Coal mines and mining)

SOSNOV, G.A.; PRUDKIN, Ya.M.

Advantage of mining with twin entries and long pillars as compared to the longwall mining system. Ugol' 32 no.2:14-18 F '57.
(MLRA 10:3)

1. Ministerstvo ugol'noy promyshlennosti SSSR.
(Caol mines and mining)

SOSNOV, G. A.; PRUDKIN, Ya.M.

Effectiveness of using metallic organ-pipe supports for longwalls in Donets Basin mines. Ugol' 32 no.6:23-27 Je '57. (MLRA 10:7)
(Donets Basin--Mine timbering)

TOPCHIYEV, Aleksey Vasil'yevich; BALYKOV, Vladimir Mikhaylovich; GERSHENOVICH, Samuil Yefimovich; SOSNOV, Georgiy Akimovich; SOSNOV, V.D., otv.red.; SHOROKHOVA, A.V., red.izd-va; NADEINSKAYA, A.A., tekhn.red.; BOLDYREVA, Z.A., tekhn.red.

[Mechanization of mining operations in thin steeply dipping coal seams] Mekhanizatsiia vyemki uglia pri razrabotke tonkikh krutykh plastov. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1960. 217 p. (MIRA 13:12)
(Coal mining machinery)

ACCESSION NR: AT4002175 S/2996/63/000/052/0195/0201

AUTHOR: Afanasenkov, A.. N.; Voskoboynikov, I. M.; Sosnova, G. S.; Parfenov, A. K.

TITLE: Combustion initiation shock wave of nitroglycerine charges and its mixtures

SOURCE: Nauchno-tekhnicheskoye gornoye obshchestvo. Vzry*vnoye delo. Sbornik, no. 52/9, 1963. Promy*shlenny*ye vzry*vchaty*ye veshchestva; detonatsiya, goreniye, deystviye vzry*va v gorno/ srede, 195-201

TOPIC TAGS: detonation, shock wave, high-speed combustion, detonation failure, high explosive, combustion initiation, shock wave combustion initiation, nitroglycerine, nitroglycerine charge, ammonite PZhV-20, ammonite PZhV-20 explosive nitroglycerine TNT mixture, nitroglycerine TNT mixture charge

ABSTRACT: Processes other than stable detonation have been observed in explosive charges, e.g. low-speed detonation, combustion inside of massive shells or holes, combustion in thin layers during drop-hammer tests of shock sensitivity, etc. These processes were investigated to help prevent detonation failures. Detonation and combustion procedures were investigated with nitroglycerine charges and with charges of sodatol (trotyl mixed with sodium chloride) across a 2-3 mm thick plexiglas wall. It was found that a detonation rate of 7650 m/sec occurred in passive nitroglycerine charges and that

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ACCESSION NR: AT4002175

the sodatol-active charge detonated at rates greater than 2500 m/sec. It was concluded that combustion velocities obtained with nitroglycerine and its mixtures with ammonium nitrate are equal, and therefore, that decomposition of nitroglycerine plays a decisive role in the combustion process. Detonation failure of safety explosive charges in holes was also studied. It was concluded that detonation failures in safety explosives are more probably between cartridges than in one continuous charge and that at charge densities of 1.5 g/cc and over, detonation transmission from cartridge to cartridge is improbable. Further, the burning out of charges of safety explosives can be attributed to the initiation of combustion by shock waves by the transmission of detonation from cartridge to cartridge. The authors suggested that any sensitizer for safety explosives should be investigated for a tendency to burn out under the effect of shock waves. Orig. art. has: 6 figures

ASSOCIATION: IKHF AN SSSR

SUBMITTED: 00 DATE ACQ: 10Dec63 ENCL: 00

SUB CODE: WA NO REF SOV: 002 OTHER: 001

Card 2/2

KAPLAN, A.Yu.; KARAPETYAN, G.B.; TASKIMBAYEV, Ye.T.; TULIN, V.K.; SOSNOV, G.Ye.

Comments on G.V.Molchanov's article "Trends in the efficient construction of units for underground repair of wells" ("Neftianoe Khoziaistvo" No.1, 1962.) Neft. khoz. 40 no.7:53-55 Jl '62. (MIRA 17:3)

1. Ob"yedineniye kazakhstanskoy neftyanoy promyshlennosti (for all except Sosnov). 2. Leninneft' (for Sosnov).

SOSNOV, I.D.

Current objectives in the electrification of railroads. Transp.stroi. 9 no.6:1-4 Je '59. (MIRA 12:11)

1. Zamestitel' ministra transportnogo stroitel'stva.
(Railroads--Electrification)

SOSNOV, I.D.

Objectives of construction workers in the third year of the seven-year plan. Transp. stroi. 11 no.1:1-3 Ja '61. (MIRA 14:1)

1. Zamestitel' ministra transportnogo stroitel'stva.
(Transportation—Buildings and structures)

SOSNOV, I.D.

Prepare in good time for the work of 1963. Transp. stroi. 12 no.9:1-3 S '62. (MIRA 16:2)

1. Zamestitel' ministra transportnogo stroitel'stva SSSR.
(Construction industry)

SOSNOV, I.V. (poselok Shakhty Permskoy oblasti)

Substitute for magnesium sulfate in duodenal sounding. Lab.delo 6 no.6:6-7 N-D '60. (MIRA 13:11)
(MAGNESIUM SULFATE)
(DUODENUM)

AMIROV, A.; ALIBEKOV, B.; KABANOV, B.; SOSNOV, K.; PROK, I.; BAYRAMOV, M.

Regarding an article published in "Neftianik." Azerb. neft. khoz. 36 no.6:36 Je '57. (MLRA 10:9)

(Oil well pumps)

, K. 17.

BANATOV, Petr Stepanovich; SOSNOV, Konstantin Aleksandrovich; ZOLOTAREV, A.K., redaktor; ALADOVA, Ye.I., tekhnicheskiy redaktor; SABITOV, A., tekhnicheskiy redaktor

[Automatic doors for mine ventilation] Shakhtnye avtomaticheskie ventiliatsionnye dveri. Moskva,Ugletekhizdat, 1955. 52 p.
(Mine ventilation) (MLRA 8:10)

AUTHOR: Sosnov, K.A., Engineer SOV-118-58-8-4/24

TITLE: Mechanism for Cleaning Coal Cars in Mines (Mekhanizm ochistki shakhtnykh vagonetok)

PERIODICAL: Mekhanizatsiya trudoyëmkikh i tyazhëlykh rabot, 1958, Nr 8, pp 11-12 (USSR)

ABSTRACT: The Institut UKRNIIugleobogashcheniye (The UKRNIIugleobogashcheniye Institute) in Lugansk constructed the MOV apparatus for cleaning coal or rocks from coal cars in mines. The device consists of four brushes mounted on cantilevers, connected with the dumper. The cars are cleaned while still in the dumper. There is 1 photo.

1. Mines--Equipment 2. Tracked vehicles--Cleaning 3. Coal--USSR

Card 1/1

SOSNOV, K.A.

The KV2 steeply inclined belt conveyer. Biul.tekh.-ekon.inform. no.12:18-19 '61. (MIRA 14:12)
(Conveying machinery)

LITVIN, P.L.; SOSNOV, K.A.; SHELKOVNIKOV, N.I.; GARTSMAN, P.Ye.

"Purification of waste water from enterprises of ferrous metallurgy" by A.F. Shabalina. Reviewed by P.L. Litvin and others. Stal' 21 no.12:1145 D '61. (MIRA 14:12)

1. Leningradskiy Gosudarstvennyy soyuznyy institut po proyektirovaniyu metallurgicheskikh zavodov.
(Metallurgical plants--Water supply)
(Water--Purification)
(Shabalina, A.F.)

SOSNOV, K.A.; GNEDOV, N.P.; ZHUKOV, P.P.

The P1 unit for picking and preparing coal samples from railroad cars. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.i tekh.inform. no.11:29-30 '62. (MIRA 15:11)
(Coal--Testing)

SOSNOV, K.Ye.; VORONENKO, A.I.

Telemetering the production of strippers and heavily flooded wells. Neftepром. delo; no.4:23-25 '64. (MIRA 17:6)

1. Neftepromyslovoye upravleniye "Leninneft'".

SOV/86-58-7-24/38

AUTHOR: Sosnov, L. P., Engr Maj, and Vladimirov, Yu. G., Engr Capt

TITLE: The Use of Oxygen Equipment on Bombers (Ekspluatatsiya kislorodnogo oborudovaniya bombardirovshchika)

PERIODICAL: Vestnik vozdushnogo flota, 1958, Nr 7, pp 62-67 (USSR)

ABSTRACT: In this article the authors state that it is more advantageous to use the gasifiers with liquid oxygen than the bottles with gaseous oxygen in bomber aircraft. According to the authors, the KPZh-30 aircraft gasifier containing liquid oxygen is extensively used in Soviet bomber units. The authors describe some details concerning the maintenance of aircraft oxygen equipment as well as how to check the proper functioning of such equipment during flights. Gasifiers are refilled with oxygen either from the TRZhK-1 transport tanks of liquid oxygen or from Dewar flasks. The latter are used for refilling single aircraft. Liquid oxygen, according to the authors, can be used also by other types of aircraft. One photo, 1 diagram.

Card 1/1

SOSNOV, N. I.

Science

Chemical experiments in schools, Tambovskaia pravda, 1951.

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

SOSNOV, N.

Province seminar of chemistry teachers. Khim.v shkole 14 no.3: 94-95 My-Je '59. (MIRA 12:9)

1. Zaveduyushchiy kabinetom khimii i biologii Tambovskogo oblastnogo Instituta usovershenstvovaniya uchiteley.
(Tambov Province--Chemistry--Study and teaching)
(Macromolecular compounds)

SOSNOV, N.

One-year courses for teachers. Khim. v shkole 15 no.4:96 Jl-Ag '60. (MIRA 13:9)

(Tambor--Teachers)

SOSNOV, N.I.

Teachers exchange their experience. Khim. v shkole 15 no.5:96 S-O '60. (MIRA 13:10)

1. Oblastnoy institut usovershenstvovaniya uchiteley, g.Tambov.
(Chemistry--Study and teaching)
(Biology--Study and teaching)

18(5,7) SOV/128-59-6-21/25

AUTHOR: Sosnov, O.I., Engineer

TITLE: Device for Measurement of Coating Thickness on Metallic Molds

PERIODICAL: Liteynoye Proizvodstvo, 1959, Nr 6, pp 43-44 (USSR)

ABSTRACT: The instrument shown and described in this article works by means of a needle pressed through the mold coating. As a small current supply is hooked to the needle at one side, and to the metal die at the other, the micrometer will easily show the thickness of the coating, i.e. when piercing the coating the current will flow and thus illuminate a panel light (Pt.3). As this method can be applied during production, the optimum thickness of the coating could be determined. Likewise, the most suitable means to apply the mold coating could be tested. By this method the quality of the castings was improved and the prime cost of production lowered. There is 1 diagram

Card 1/1

YEKEL'CHIK, Moisey Solomonovich; KAMINER, Natan Semenovich; SOSNOV, Rudol'f L'vovich; SHEKHTMAN, Aron Yudkovich; KAZANSKIY, B.N., nauchn. red.; LEYKIN, B.P., red.; MALYUGIN, V.I., red.; USPENSKIY, V.V., red.; SHASS, M.Ye., red.; GERASIMOVA, G.S., red.

[Improving the economic work of contracting organizations] Sovershenstvovanie ekonomicheskoi raboty podriadnykh organizatsii. Moskva, Stroiizdat, 1964. 96 p. (MIRA 18:1)

SOSNOV, V. D.

High reward; Stalin prizes for work in the coal mining industry during 1951
Moskva, Ugletekhizdat, 1952. 196 p. (54-18908 rev)

TN808. R9S6

1. Coal mines and mining - Russia.

2. Stalin prizes.

SOSNOV, V.D., gornyy inzhener.

[Coal mining machine operators, innovators in their field] Novatory-mashinisty ugol'nykh kombainov. Moskva, Izd-vo Znanie, 1953. 31 p. (MLRA 6:7)
(Coal mining machinery)

SOSNOV, V. D.

USSR/Mining

Card : 1/1 Pub. 71 - 9/17

Authors : Sosnov, V. D. and Shorokhova, A. V. Mining Engineers

Title : The economical effectiveness of using PK-2m combines

Periodical : Mekh. trud. rab. 4, 24 - 27, June 1954

Abstract : The technical - economical effectiveness of using PK-2m sinking combines in coal mining, is discussed. The PK-2m sinking combines put into practice in several large coal mining combines are used for conveying coal from underground shafts to the surface. Tables.

Institution : ...

Submitted : ...

TERPIGOREV, A.M., akademik; SOSNOV, V.D., gornyy inzhener.

For further improvement of mine surface installations. Ugol' 29 no.12:1-4 D '54. (MIRA 8:1)
(Coal mines and mining)

SOSNOV, V. D.

PROKOPENKO, Ivan Nikitich; SHEYNMAN, Yuliy Genrikhovich; MAVLYUTOV, Mtyyula Yarullovich; SOSNOV, V.D., redaktor; RATNIKOVA, A.P., redaktor; NADEINSKAYA, A.A., tekhnicheskiy redaktor.

[Mining shaft sinking and timbering] Gornye raboty, provedenie i kreplenie vyrabotok. Izd. 2-e, ispr. i dop. Moskva, Ugletekhizdat, 1955. 423 p. (MLRA 9:4)
(Coal mines and mining)

ARKHANGEL'SKIY, Andrey Sergeyevich; SOSNOV, V.D., otvetstvennyy redaktor; KOROVENKOVA, Z.A., tekhnicheskiy redaktor

[Cutter-loaders] Prokhodcheskie kombainy; obzor otechestvennykh i zarubezhnykh konstruktsii i opyt ikh primeneniia. Moskva, Ugletekhizdat, 1956. 175 p. (MLRA 10:4)
(Coal mining machinery)

DOROKHOV, Mikhail Il'ich; IVANOV, Konstantin Ivanovich; SOSNOV, V.D., otvetstvennyy redaktor; KOLOMIYTSEV, A.D., redaktor izdatel'stva; ALADOVA, Ye.I., tekhnicheskiy redaktor

[Mechanization and organization of drifting in coal mines] Mekhanizatsiia i organizatsiia provedeniia podgotovitel'nykh vyrabotok. Moskva, Ugletekhizdat, 1956. 215 p. (MLRA 9:9)
(Coal mining machinery)

SOSNOV, Vladimir Dmitriyevich; BOLGARINA, E.P., red.; GOLICHENKOVA, A.A., tekhn. red.

[Story about coal] Rasskaz ob ugle. [Moskva] Izd-vo VTsSPS Profizdat, 1957. 98 p. (MIRA 11:4)
(Coal mines and mining)

Sosnov, V.D.

BAGASHEV, M.K., otvetstvennyy red.; BUCHNEV, V.K., otvetstvennyy red.; ZVYAGIN, P.Z., otvetstvennyy red.; SOSNOV, V.D., otvetstvennyy red.; ASTAKHOV, A.V., red.izdatel'stva; NADEINSKAYA, A.A., tekhn.red.

[Soviet coal industry; on the fortieth anniversary of the Great October Socialist Revolution] Ugol'naia promyshlennost' SSSR; k sorokaletiiu Velikoi Oktiabr'skoi sotsialisticheskoi revoliutsii. [Moskva] Gos.nauchno-tekhn.izd-vo lit-ry po ugol'noi promyshl., 1957. 635 p. (MIRA 10:12)

(Coal mines and mining)

SOSNOV, V.D., inzhener.

Mines of the Union of Burma. Bezop.truda v prom. 1 no.5:35-37 '57. (MLRA 10:7)

(Burma--Mining engineering)

PANOV, Andrey Dmitriyevich, kand. tekhn. nauk,; TISHCHENKO, Nikolay Andreyevich,; ZAMYATNIN, Ivan Stepanovich,; SHAVRINA, Raisa Fedorovna,; PAVLYUCHENKO, Dmitriy Nikolayevich,; GRIGOR'YEV, Vladimir Leonidovich,; pri uchastii: Adamidze, D.I.; Krasnikova, Yu. D.; Cherkasheninova, V.I.; Chukayevoy, Ye. V.; SOSNOV, V.D., otv. red.; RATNIKOVA, A.P., red. izd-va,; PROZOROVSKAYA, V.L., tekhn. red.

[Narrow-gauge mining of coal in thin and medium seams] Uzkozakhvatnaia vyemka uglia na plastakh tonkikh i srednei moshchnosti. Moskva, Ugletekhizdat, 1958. 321 p. (MIRA 11:12)
(Coal mines and mining)

IGNAT'YEV, Aleksandr Dmitriyevich; SOSNOV, V.D., inzh., otv.red.; RATNIKOVA, A.P., red.izd-va; SHKLYAR, S.Ya., tekhn.red.

[Technology of underground coal mining and prospects for its expansion] Tekhnologiia podzemnoi vyemki uglia i perspektivy ee razvitiia. Moskva, Ugletekhizdat, 1959. 109 p. (MIRA 12:9)

(Coal mines and mining)

SOSNOV, Vladimir Dmitriyevich, inzh.; MORSHCHIKOV, V.D., red.;
SHADRINA, N.D., tekhn.red.

[In open-pit coal mines] Na ugol'nykh kar'erakh. Moskva,
Izd-vo VTsSPS, Profizdat, 1959. 121 p. (MIRA 13:4)
(Strip mining)

TOPCHIYEV, Aleksey Vasil'yevich; BALYKOV, Vladimir Mikhaylovich; GERSHENOVICH, Samuil Yefimovich; SOSNOV, Georgiy Akimovich; SOSNOV, V.D., otv.red.; SHOROKHOVA, A.V., red.izd-va; NADEINSKAYA, A.A., tekhn.red.; BOLDYREVA, Z.A., tekhn.red.

[Mechanization of mining operations in thin steeply dipping coal seams] Mekhanizatsiia vyemki uglia pri razrabotke tonkikh krutykh plastov. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1960. 217 p. (MIRA 13:12)
(Coal mining machinery)

KLYUCHNIKOV, Ivan Ivanovich; ARKHANGEL'SKIY, Andrey Sergeyevich; Prinyali uchastiye: VYSOKOSOV, V.I., SOKOLOV, Yu.L., BALANDINSKIY, Ye.D.; SOSNOV, V.D., otv. red.; SILINA, L.A., red. izd-va; IL'INSKAYA, G.M., tekhn. red.

[Cutter-loaders PKG-3 and PKG-4] Prokhodcheskie kombainy PKG-3 i PKG-4. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1961. 174 p. (MIRA 14:8)
(Mining machinery)

KOGAN, Kopel' Borisovich; LEVITSKIY, Mark Yur'yevich; SOSNOV, V.D., otv. red.; ABARBARCHUK, F.I., red.izd-va; LOMILINA, L.N., tekhn. red.

[GSh2 entry loader] Shtrekovyi gruzchik GSh2. Moskva, Gosgortekhizdat, 1962. 39 p. (MIRA 15:6)

(Coal mining machinery)
(Loading and unloading)

PETRENKO, P.V.; EL'KIN, I.L.; KAZAKOV, S.S.; VOZHIK, D.L.; DENISOV, V.V.; PUCHKOV, V.I.; BOGUTSKIY, N.V.; SAVEL'YEV, I.P.; KOLENTSEV, M.T.; MERKULOV, N.Ya.; VERKLOV, V.A.; OVSYANNIKOV, P.A.; SOSNOV, V.D., otv. red.; CHIZHOVA, V.V., otv.red.; ZHUKOVA, A.P., red.; LEVINA, T.I., red.; PRONINA, N.D., tekhn. red.; OVSEYENKO, V.G., tekhn. red.

[Practice of using cutterloaders]Opyt ispol'zovaniia ochistnykh kombainov; sbornik statei. Moskva, 1962. 102 p. (MIRA 16:2)

1. TSentral'nyy institut tekhnicheskoy informatsii ugol'noy promyshlennosti.

(Coal mining machinery)

ABMORSHEV, Valentin Ivanovich; LOKHANIN, Konstantin Anatol'yevich; SOSNOV, V.D., otv. red.; ABARBARCHUK, F.I., red. izd-va; OVSEYENKO, V.G., tekhn. red.

[PK-3 (PK-3m) cutter-loader]Prokhodcheskii kombain PK-3 (PK-3m). 2. izd., dop. i perer. Moskva, Gosgortekhizdat, 1962. 219 p. (MIRA 16:1)
(Coal mining machinery)

KHORIN, Vladimir Nikitovich, doktor tekhn. nauk, laureat Gosudarstvennoy premii; SUKACH, Aleksandr Davydovich, inzh., laureat Gosudarstvennoy premii; SOSNOV, V.D., otv. red.; SILINA, L.A., red.izd-va; BOLDYREVA, Z.A., tekhn. red.

[The "Donbass-1K" and LGD-2 coal cutter loader; manual of operation, maintenance, and servicing]Ugol'nye kombainy "Donbass-1K" i LGD-2; rukovodstvo po ekspluatatsii, ukhodu i obsluzhivaniiu. Moskva, Gosgortekhizdat, 1962. 324 p. (MIRA 15:15:10)

(Coal mining machinery)

AYRUNI, Arsen Tigranovich, kand. tekhn. nauk; ALEKSEYEV, Viktor Borisovich; BURSHTEYN, Mark Aleksandrovidh; GEYMAN, Leonid Mikhaylovich; GRABILIN, Yuriy Nikolayevich; KILIMOV, Sergey Leonidovich; SOSNOV, Vladimir Dmitriyevich; SENCHEVA, Valentina Ivanovna; SUYETIN, Georgiy Georgiyevich; FEYGIN, Lev Mikhaylovich; SHEVCHENKO, Vadim Dmitriyevich; KAZAKOV, B.Ye., otv. red. toma; TAYTS, T.L., red.; OSVAL'D, E.Ya., red. izd-va; MINSKER, L.I., tekhn. red.

[The coal industry of capitalist countries]Ugol'naia promyshlennost' kapitalisticheskikh stran. Moskva, Gos.nauchno-tekhn.izdvo lit-ry po gornomu delu. Vol.2.[Technology, mechanization, and organization of development workings]Tekhnologiia, mekhanizatsiia i organizatsii rabot pri provedenii podgotovitel'nykh gornykh vyrabotok. Otv. red. toma: B.E.Kazakov, V.D.Sosnov, G.G.Suetin. 1962. 351 p. (MIRA 16:2)

1. Moscow. TSentral'nyy institut tekhnicheskoy informatsii ugol'noi promyshlennosti. 2. TSentral'nyy institut tekhnicheskoy informatsii ugol'noy promyshlennosti, Moscow (for Suyetin, Sencheva). 3. Gosudarstvennyy proyektnyy institut po avtomatizatsii ugol'noy promyshlennosti (for Feygin). 4. Gosudarstvennyy komitet Soveta Ministrov SSSR po avtomatizatsii i mashinostroyeniyu (for Sosnov). 5. Vsesoyuznyy tsentral'nyy proyektnyy institut po proyektirovaniyu shakhtnogo stroitel'stva kamennougol'noy promyshlennosti (for Burshteyn, Shevchenko). 6. Gosudarstvennoye nauchno-tekhnicheskoye izdatel'stvo po ugol'noy promyshlennosti (for Geyman).

(Continued on next card)

SOSNOV, V.D., inzh.

Efficiency of mechanising the mining of steep coal seams in the Donets Basin. Ugol' 39 no.3:32-36 My'64. (MIRA 17:5)

PRUDKIN, Ya.M., inzh.; SOSNOV, V.V., inzh.

Overall mechanization and automation in coal mines. Mekh. i avtom. proizv. 16 no.6:50-53 Je '62. (MIRA 15:6)
(Automation)
(Coal-mining machinery--Technological innovations)

69377
SOV/35-59-10-8254

3.2100

Translation from: Referativnyy zhurnal. Astronomiya i Geodeziya, 1959, Nr 10, pp 87-88 (USSR)

AUTHOR: Sosnova, A.

TITLE: On the Processing of Photographic Observations of Artificial Satellites Using a "Strela-4" Electronic Digital Computer

PERIODICAL: Astron. tsirkulyar, 1958, May 26, Nr 192, pp 9-10

ABSTRACT: Eight to twelve reference stars were chosen situated on either side of the track of the artificial earth satellite (AES), and one star near the optical center. On the measuring instrument x and y coordinates of the chosen reference stars were measured, as well as a series of points along the track of the AES. In order to calculate the position of the AES a program was used composed for processing meteoric photographs on the "Strela-4". The calculating principles are cited.

N.P.K.

Card 1/1

SOSNOVA, A.[K.]

Photographic determination of the integral brilliance of the solar corona during the eclipse of February 25, 1953. Astron. tsir. no.139:8-9 Je '53. (MLRA 7:1)

1. Stalinabadskaya astronomicheskaya observatoriya Akademii nauk Tadzhikskoy SSR. (Eclipses, Solar) (Sun--Corona)

SOSNOVA, A.K.

Photographic determination of the integral brightness of the corona during the total solar eclipse of February 25, 1952 in Archman. Biul.Stal.astron.obser. no.9:22-24 '54. (MIRA 8:1)
(Sun--Corona) (Eclipses, Solar--1952)

KATASEV, L.A.; SOSNOVA, A.K.

Results of photographic study of meteors at the Stalinabad Observatory. Trudy AN Tadzh. SSR 20:42-50 '54. (MIRA 13:3)
(Meteors)

SOSNOVA, A.K.; ISAMUTDINOV, SH.O.

Determining the astronomical coordinates of the Stalinabad Astronomical Observatory (SAO) Astron.tsir. no.154:11-12 N '54. (MLRA 8:6)

1. Stalinabadskaya astronomicheskaya observatoriya.
(Coordinates)
(Stalinabad Astronomical Observatory)

KATASEV, L.A.; SOSNOVA, A.K.

Results of photographic observations of meteors in 1953 at the Stalinabad Observatory. Biul.Stal.astron.obser. no.15:10-13 '56. (MLRA 9:10)

(Meteors)

KATASEV, L.A.; SOSNOVA, A.K.; BABADZHANOV, P.B.

Results of photographic observations of meteors at the Stalinabad Astronomical Observatory in 1954-1955. Biul. Stal.astron.obser. no.19:33-34 '57. (MIRA 13:3)
(Meteors)

68576

SOV/35-59-11-9175

3.1550

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959, Nr 11, p 78 (USSR)

AUTHOR: Sosnova, A.K.

TITLE: On the Error of Determination of Coordinates of the Radiant

PERIODICAL: Byul. Komis. po kometam i meteoram, Astron. Soveta AS USSR, 1958, Nr 2, pp 34 - 38

ABSTRACT: The radiant of a meteor, photographed from two points, is fixed as the intersection point of two great circles, passing through the projections of the meteor onto the celestial sphere, as seen from observation points. The author analyzes the errors, arising in the determination of the radiant. It is shown that the root-mean-square error ΔR in the radiant R is expressed by the formula:

$$\Delta R = \frac{\sqrt{(\Delta P_M)^2 + (\Delta P_N)^2}}{\sqrt{2}\sin Q}$$

Card 1/2

SOV/169-60-1-971

Translation from: Referativnyy zhurnal, Geofizika, 1960, Nr 1, p 130 (USSR)

AUTHOR: Sosnova, A. K.

TITLE: The Processing of Photographic Observations of Artificial Satellites by Utilizing the Electronic Digital Computer "Strela-4"

PERIODICAL: Astron. tsirkulyar, 1958, May 26, Nr 192, pp 9 - 10

ABSTRACT: Eight to twelve reference stars located along both sides of the satellites track on the photograph and one star located near the optic center are selected. The coordinates of the selected stars and of a series of points of the satellite track are measured. The program drawn up for processing the meteor photographs on the "Strela-4" is used for computing the positions. The scheme of calculations is added.

Card 1/1

81763
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3.1550

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1960, No. 2, p. 65, # 1525

AUTHOR: Sosnova, A. K.

TITLE: Determination of the Velocity of Meteors

PERIODICAL: Astron. tsirkulyar, 1958, dek. 23, No. 198, pp. 15-16

TEXT: Segments of the trail s of a meteor in various instants of time, measured from photographs taken with an obturator, are represented by the empirical formula: $s = a + bt + ce^{Kt}$ where a, b, c and K are constants. Velocity and braking are found by differentiating s (t). The method of determining parameters b, c, and K from first differences of s is proposed. The first differences look as follows: $s_{i+1}-s = \bar{b} + \bar{c}e^{Kt_i} = \varphi(t)$, where $\bar{b}$ and $\bar{c}$ are constants. K is found from the φ (t) curve, $\bar{b}$ and $\bar{c}$ by the least-square method. Then b and c are determined, which differ from $\bar{b}$ and $\bar{c}$ by constant multipliers, and velocity and braking of meteors are calculated. The advantage of the proposed method of processing consists in that only three (b, c and K) parameters are determined instead of four (a, b, c and K), and moreover, the K-value is obtained more reliably.

S. V. Mayeva

Card 1/1

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A001/A001

9,7000

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1960, No. 9, p. 77, # 9147

AUTHOR: Sosnova, A.K.

TITLE: A Practice of Using a "Strela" Digital Electronic Computer for Processing Measurements of Meteor Photographs

PERIODICAL: Byul. Komis. po kometam i meteoram Astron. soveta AN SSSR, 1959, No. 4, pp. 35-41

TEXT: A program of processing photographic observations of meteors was compiled and fitted for the "Strela" electronic computer at the Computation center of MGU. The method of processing the plates (selection of fundamental stars, measuring their coordinates and points of meteoric trails) is described. The calculation program was compiled for 12 fundamental stars, 16 main points along a meteor trail and 20 points being the terminals of interruptions in the trail. Formulae are presented for calculating the coordinates of the poles of great meteor circles, coordinates of the radiant and 20 points (terminals of

Card 1/2

23692

S/035/61/000/004/022/058
A001/A101

3,1410

AUTHORS: Bogaslavskaya, Ye.Ya., Sosnova, A.K.

TITLE: The application of the electronic digital computer "Strela" to some astrometric problems

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 4, 1961, 19, abstract 4A225 ("Tr. 14-y Astrometr. konferentsii SSSR, 1958", Moscow-Leningrad, AN SSSR, 1960, 182 - 185; French summary)

TEXT: This is a report on application of a "Strela" electronic digital computer to solving the following astrometric problems: determination of positions of minor planets, calculation of stellar proper motions, processing of meteoric photographs (see RZhAstr, 1959, no. 10, 8254), and obtaining photographic positions of Earth's artificial satellites (see RZhAstr, 1960, no. 9, 9147). Calculation schemes are given for the first two problems. It takes 21 min to calculate a position of a minor planet (20 hours for manual calculations); the computer can yield proper motion of 114 stars in one procedure.

G. T.

[Abstracter's note: Complete translation]

Card 1/1

SOSNOVA, A. K.

Cand Phys-Math Sci - (diss) "Use of methods of photographic astrometry in problems of meteor astronomy." Leningrad, 1961. 9 pp; (Main Astronomical Observatory of the Academy of Sciences USSR); 250 copies; price not given; (KL, 6-61 sup, 195)

L 8614-65 EWT(1)/EWG(v)/EWA(d)/EEC-4/EEC(t) Pe-5/Pae-2 AFWL/SSD/
AFETR GW
ACCESSION NR: AR4038685 S/0269/64/000/003/0067/0067

SOURCE: Ref. zh. Astron. Otd. vy*p., Abs. 3.51.500

AUTHOR: Sosnova, A. K.

TITLE: Application of the methods of photographic astrometry to problems involved in meteor astronomy. III. Errors in determination of meteor radiants, heights and velocities

CITED SOURCE: Byul. Komis. po kometam i meteoram Astron. soveta AN SSSR, no. 8, 1963, 27-39

TOPIC TAGS: meteor, meteor astronomy, meteor height, meteor radiant, meteor velocity, photographic astrometry

TRANSLATION: Formulas are derived for estimation of the errors in determination of the coordinates of the radiants, the heights and the velocities of meteors on the basis of bilateral photographic observations. It is shown that the value of these errors is dependent on the accuracy of determination of the position of points on the photographic meteor trail, the length of the base, the accuracy of determination of the time of meteor flight and the speed of rotation of the shutter. As an

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example an estimate is made of the accuracy of processing of meteor photographs at the Institute of Astrophysics of the Academy of Sciences of the Tadzhik SSR (where the length of the base is 34 km). The flight time of meteors is determined from simultaneous observations using guided and unguided apparatus. The rate of rotation of the shutter is 1,500 rpm. NAFA 3C/25 cameras are used. The error for the radiant is 3', for distance -- 0.001, and for velocity -- 0.0015. Bibliography of 8 items. P. Babadzhanov.

DATE ACQ: 17Apr64 SUB CODE: AA ENCL: 00

Card 2/2

36588
S/081/62/000/010/069/085
B168/B180

11.8200

AUTHORS: Voskoboynikov, I. M., Sosnova, G. S.

TITLE: Detonation of explosive compositions

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 10, 1962, 501, abstract 10L439 (Zh. prikl. mekhan. i tekhn. fiz., no. 4, 1961, 133 - 135)

TEXT: The rate of detonation and the temperature at the front of the blast wave were measured for liquid and solid explosive compositions. The data were compared with results of calculations based on the assumption that the composition of the explosion products is the same in the blast wave from composite explosives as in that from a simple one with the same elementary composition as the mixture. In the case of liquid explosive mixtures (tetranitromethane with hexane, nitromethane, nitrobenzene, or dinitrotoluene; nitroglycerin with methyl alcohol or nitromethane) a large measure of agreement was found between the calculated and experimental values, which indicates that the hypothesis is correct. A comparison of the experimental detonation speeds in the case of heterogeneous explosive compositions (suspension of carbon black and trotyl in tetranitromethane,

Card 1/2

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AUTHORS: Sosnova, G. S., Voskoboynikov, I. M., Brusnikina, V. M., Lapshina, Z. Ya., Novikov, S. S., and Apin, A. Ya.

TITLE: Comparative data on the physical and chemical properties of some liquid explosives

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 2, 1962, 351-352

TEXT: The characteristics of some liquid explosives were compared with the aim of finding out what effect the chemical structure has upon them: The following data were compared:

Explosive	g/cm^2	D,m/sec	T,°K	Q_{expl}, cal/g	Q_{form} kcal/M
butynediol-1,4-dinitrate	1.42	7100	4000	1290	-6.4
butanediol-1,4-dinitrate	1.31	6600	3050	1210	65.5
1,1-dinitro ethane	1.36	7300	3800	1190	25.8
dinitroxy ethyl nitroamine (DINA liquid melt)	1.48	7400	3450	1180	53.6

Card 1/3

Comparative data on the...

The detonation velocity D was determined optically and by an ionization method with an accuracy of ± 100 m/sec. The detonation temperature (T, °K) was measured by the electron-optical chromatographic method (error of measurement ± 150°K). Homogeneous liquid explosives were used in order to eliminate the influence of grain size and porosity of the charge. The formation heats Q_{form} indicated above were calculated from the binding energy and atomization heat (Ref. 3: Ya. K. Syrkin and M. Ye. Dyatkina, Khimicheskaya svyaz' i stroyeniye molekul (Chemical binding and structure of molecules), Goskhimizdat, M.-L., 1946; Ref. 4: F. A. Baum, K. P. Stanyukovich, and B. I. Shekhter, Fizika vzryva (Physics of explosion), Fizmatizdat, M., 1959). The explosion heat Q_{expl} was calculated on the assumption that the disintegration from explosion is governed by the Brinkley-Wilson rules, i.e., that the hydrogen in the detonation wave is always completely oxidized to water, and that CO_2 is formed only after the carbon has completely oxidized to CO. The composition of the explosion products was found not to depend on the chemical structure of the substance but on the elemental composition of the molecules (C, H, N, O). There are 1 table and 5 references:

Card 2/3

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B117/B138

Comparative data on the...

3 Soviet-bloc and 2 non-Soviet-bloc.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics of the Academy of Sciences USSR). Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences USSR)

SUBMITTED: January 31, 1961

Card 3/3

APIN, A.Ya. (Moskva); VOSKOBOYNIKOV, I.M. (Moskva); SOSNOVA, G.S. (Moskva)

Course of the reaction in a detonation wave of mixed explosives. (MIRA 16:11)
PMTF no.5: 115-117 S-O '63.

AFANASENKOV, A.N.; VOSKOBOYNIKOV, I.M.; SOSNOVA, G.S.; PARFENOV, A.K.

Study of the initiation of the combustion of a nitroglycerin charge and its mixtures by shock waves. Vzryv. delo no.52/9: 195-200 '63. (MIRA 17:12)

1. Institut khimicheskoy fiziki AN SSSR.

S/020/63/149/003/028/028
B192/B102

AUTHORS: Sosnova, G. S., Voskoboynikov, I. M., Dubovik, A. V.

TITLE: The luminescence of the front of a low-rate detonation in nitroglycerin

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 149, no. 3, 1963, 642-643

TEXT: The course of detonations of the rate D=2.01±0.1 km/sec in cylindrical nitroglycerine charges of 10 - 40 mm diameter were observed photographically. After ignition of the nitroglycerine a dark channel becomes visible in the detonation front in a tube of plexiglas, from which waves are emitted towards the wall of the tube. The reaction is most intensive in the layers near the wall. At the center of the charge the flow in these layers overtakes the front, thereby forming a detonation front concave in relation to the direction of propagation. Experiments with tubes of materials having different elastic and acoustic properties show a damping of the detonation if the sonic velocity in the material is smaller than 2.0 km/sec (paraffin, cork, lead). If plexiglas tubes are replaced by thick-walled steel tubes the reaction process is accelerated and the dark channel disappears. Also the thickness of the

The luminescence of the front of a ...

tube is important for the continuous course of the detonation. For plexiglas of 0.1 mm thickness detonations of 2 km/sec cannot propagate themselves, whilst for thicknesses larger than 2 mm a continuous course of the detonation is possible. There are 3 figures.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR
(Institute of Chemical Physics of the Academy of Sciences USSR)

PRESENTED: August 3, 1962, by V. N. Kondrat'yev, Academician

SUBMITTED: July 30, 1962

VAYSMAN, G.A., prof., SOSNOVA, O.E.

Use of diocide in pharmaceutical practice. Apt.delo 7 no.6:39-43 N-D '58 (MIRA 11:12)

1. Iz kafedry tekhnologii lekarstvennykh form i galenovykh preparatov Kiyevskogo instituta usovershenstvovaniya vrachey.
(BACTERICIDES)

SOSNOVA, P. S.

SOSNOVA, P. S.

Fangotherapy during the intervals between the rheumatic fever attacks in children. Vopr. pediat. 18:4, 1950. p. 17-21

1. Of the Children's Clinic of the Therapeutic Faculty (Director—Prof. A. I. Skrotskiy), Odessa Medical Institute (Director—A. N. Motnenko), Odessa.

CIML 19, 5, Nov., 1950

SOSNOVA, P.S.; MIDLER, T.L.

Burn reaction as an index of reactivity in children. Pediatriia, Moskva no. 4:71 July-Aug. 1952. (CLML 22:5)

1. Of the Department of Children's Diseases of the Therapeutic Faculty of Odessa Medical Institute.

SOSNOVA, P.S., dots.

Rheumatic fever in children in Zaporozh'ye. Ped., akush. i gin. 20 no.1:6-11 '58. (MIRA 13:1)

1. Klinika detskikh bolezney (zav. - dots. P.S. Sosnova) Zaporozhskogo instituta usovershenstvovaniya vrachey im. M. Gor'kogo (direktor - dots. V.T. Karpukhin).
(ZAPOROZH'YE--RHEUMATIC FEVER)

SOSNOVA, P.S.; BARBALAT, S.D.; KARMAZINA, N.Ya.; ROGOL', M.G.

Some current problems of penumonia in infants. Zdravookhranenie 5 no.3:11-16 My-Je '62. (MIRA 16:1)

1. Iz kafedry fakul'tetskoy i gospital'noy pediatrii (zav. dotsent P.S.Sosnova) Kishinevskogo meditsinskogo instituta.
(PNEUMONIA) (INFANTS--DISEASES)

SOSNOVA, V.

Change in methods of accelerated trituration in cytology [in Russian with summary in German]. Chekh.biol. 3 no.1:54-57 F '54. (MLRA 7:6)

1. Institut biologii ChSAN, fiziologiya rasteniy, Praga.
(Cells) (Biological specimens)

SOSNOVA, V.

V. Sosnova and E. Hrabetova, "Die Wirkung von D-Chloramphenicol auf die zytoplasmatischen Strukturen meristematischer Zellen," Die Naturwissenschaften (Berlin), 45/1, January 1958, pp. 22-23.

Received on 27 September 1957.
Biological Institute of the CSAV, Prague XIV.

SOSNOVA, V.; ULLMANOVA, Z.

Anatomic and cytological studies of plastids in vegetation points. p. 323.
CESKOSLOVENSKA BIOLOGIE, Vol. 5, No. 6, Nov 1956, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 12, Dec 1957. Uncl.

PTUSKIN, M.S., inzhener; SOSNOVENKO, N.F., inzhener.

[Technology of steam boiler construction] Tekhnologiia parovoznogo kotlostroeniia. Kiev, Ges. nauchno-tekhn. izd-vo mashinostroit. lit-ry [Ukr. otd-nie] 1951. 134 p. (MLRA 7:4)
(Steam boilers)

SOSNOVENKO, N.F.

VLOKH, M.M., nachal'nik.

Remarks of a boilermaker. ("Technology of locomotive boiler construction." M.S. Ptuskin, N.F. Sosnovenko. Reviewed by M.M. Vlokh.) Vest.mash. 33 no. 4:89-90 Ap '53. (MLRA 6:5)

1. Tekhnologicheskoye byuro kotlostroeniya Voroshilovgradskogo parovozostroitel'nogo zavoda. (Locomotive boilers) (Ptuskin, M.S.) (Sosnovenko, N.F.)

SOSNOVETS, A.A.

Cytology of the genus Scorzonera L. Bot. zhur. 45 no.12:1813-1815 D '60. (MIRA 13:12)

1. Botanicheskiy sad Moskovskogo gosudarstvennogo Universiteta. imeni M.V. Lomonosova.

(Scorzonera)

34352
S/203/61/001/006/004/021
D055/D113

9.6150

AUTHORS: Vakulov, P.V.; Goryunov, N.N.; Logachev, Yu.I., and Sosnovets, E.N.

TITLE: Radiation registered during the flights of Soviet artificial satellites and space rockets

PERIODICAL: Geomagnetizm i aeronomiya, v.1 , no.6, 1961, 880-887

TEXT: Methods of registering radiation, based on the use of scintillation and gas-discharge counters and applied in Soviet artificial satellites and space rockets, are described. The registration of weak currents (up to 10^{-10}a) with the aid of a relaxation oscillator on a neon tube is described. The scintillation counters measured the number of particles releasing more energy in the crystal than that determined by the thresholds of the counting devices. Ionization caused by radiation in the entire crystal was also measured. The gas-discharge counters registered charged particles and γ-radiation to an accuracy of $\sim$ 1%. The counters were located behind screens of various materials to facilitate the analysis of radiation according to

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Radiation registered ...

penetration. The devices with the counters were located both inside and outside the container with scientific apparatus. For economy the photomultipliers in the counters were fed without a divider by leads from a high-voltage battery direct to the electrodes. Ionization was determined from the currents of the anode and seventh dynode. By using two channels, these currents could be compared in order to estimate how much of the energy produced in the crystal resulted from saturation of the anode current during intense scintillation in the crystal. By this means comparatively high-energy particles could be detected in the inner zone during tests with the third artificial Earth satellite. The use of a single scintillation counter to measure many parameters permitted the weight and size of the device to be reduced but required careful selection of photomultipliers, which had to satisfy the following requirements: (1) there must not be more than one sound impulse per 10 sec. corresponding to energy liberation of above 30 kev in an NaJ(Tl) crystal and there must be practically no impulses corresponding to energy liberation of > 300 kev; (2) leakage current of the seventh dynode $\leqslant 1 \cdot 10^{-10}$ a; (3) anode dark current $< 1 \cdot 10^{-8}$ a; (4) leakage current of the other dynodes of the intervals $\leqslant 1 \cdot 10^{-7}$ a. The CTC-5(STS-5)

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Radiation registered ...

gas-discharge counters used were small and had a low operating voltage (~ 400 v) and a thin wall, which facilitated the recording of low-energy particles. The electronic circuits operating on semi-conductor elements and the calibration method are described in detail. There are 9 figures and 5 Soviet references.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova. Institut yadernoy fiziki (Moscow State University imeni M.V. Lomonosov. Institute of Nuclear Physics).

SUBMITTED: October 12, 1961

Card 3/3

L 21116-65 EEC-4/EWG(v)/EWA(h)/EWT(l)/EEC(t)/FS(v)-3/EEC(m)/FCC/FSF(h)/FSS-2
Pe-5/Pg-4/Pi-4/Pl-4/Po-4/Pq-4/Pae-2/Peb/Pb-4 AEDC(b)/BSD/AFWL/SSD/ASD(a)-5/
AEDC(a)/AFMD(c)/AFETR/AFTC(a)/AFTC(b)/APGC(f)/ESD(si) TT/GW/WS
ACCESSION NR: AP5002106 S/0048/64/028/012/2058/2074

AUTHOR: Vernov, S. N.; Chudakov, A. Ye; Vakulov, P. V.; Gorchakov, Ye. V.; Ignat'yev, P. P.; Kuznetsov, S. N.; Logachev, Yu. I. Lyubimov, G. P.; Nikolayev, A. G.; Okhlopkov, V. P.; Sosnovets, E. N.; Ternovskaya, M. V.

TITLE: Radiation study by Cosmos 17 [Report presented at the Vsesoyuznoye soveshchaniye po fizike kosmicheskikh luchey (All-Union Conference on the Physics of Cosmic Rays), held at Moscow, 4-10 October 1963]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 28, no. 12, 1964, 2058-2074

TOPIC TAGS: radiation measurement, spaceborne ionization measurement, primary cosmic radiation, scintillation counter, gas discharge counter/ STS-5 gas discharge counter, Cosmos-17

ABSTRACT: The article describes equipment used in the flight of Cosmos-17 (apogee, 788 km; perigee, 260 km) for investigating the Earth's radiation belts and primary cosmic radiation. The equipment consisted of two scintillation counters (with NaI and CsI crystals) and

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a STS-5 gas-discharge counter. The cylindrical NaI counter (20 X 20 mm) was mounted under the shell of the satellite and was fitted with aluminum shielding (1 g/cm^2). On one channel it recorded ionization produced in the crystal by radiation; on the two others, it registered the number of pulses with energy release in the crystal over the specified thresholds (50 kev and Mev). The effective cross section of the NaI crystal for particles registered along the ionization and first threshold channels was approx. 4.7 cm^2; for the second channel, it was roughly 5% smaller for particles with quadruple ionization and 20% smaller for relativistic particles.

The STS-5 gas-discharge counter has an effective cross section of 4.3 cm^2. It was placed inside the device containing the scintillation counter and was not fitted with any special protection. Up to counting rates of 3 x 10^3 pulse/sec, the counter registered virtually all particles. At higher rates, the count became less reliable.

The flat CsI counte (crystal diameter, 6 mm; thickness, 3 mm) was mounted outside the container. For protection from light, the crystal was covered with aluminum foil (2 mg/cm^2). For protection against

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ACCESSION NR: AP5002106

bremsstrahlung, the photomultiplier and the crystal were shielded with 5 mm of lead and 11 mm of aluminum, except for the front of the photomultiplier, which had a conical opening for particle incidence (aperture angle, 40°). This counter carried out ionization measurements and particle registration at energy release in the crystal of 45 and 160 kev and 5.4 and 8.5 Mev. Both electrons and protons could be registered along the first two (45 and 160 Kev) channels. Along the other two (5.4 and 8.5 Mev) channels, the count was mainly of protons; at an electron path perpendicular to the crystal surface energy losses were about 2 Mev and oblique paths were precluded by the thickness of the shielding. Table 1 of the Enclosure gives the minimal detected particle energies registered by the counters. Orig. art. has: 3 figures, 2 tables and 4 formulas.

ASSOCIATION: none

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L 1553-66 FSS-2/EWT(1)/FS(v)-3/FCC/EWA(d)/EWA(h) TT/GS/GW

ACCESSION NR: AT5023610 UR/0000/65/000/000/0394/0405

AUTHOR: Vernov, S. N.; Chudakov, A. Ye.; Vakulov, P. V.; Gorchakov, Ye. V.; Kuznetsov, S. N.; Logachev, Yu. I.; Nikolayev, A. G.; [illegible]; Rubinshteyn, I. A.; Stolpovskiy, V. G.; El'tekov, V. A.

TITLE: Geometric position and particle composition of the earth's radiation belts

SOURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Moscow, 1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii. Moscow, Izd-vo Nauka, 1965, 394-405

TOPIC TAGS: cosmic radiation, earth radiation belt, cosmic ray, Elektron 1, Elektron 2

ABSTRACT: An exhaustive study is made of data recorded by the Elektron-1 and -2 satellites, which were launched on 30 January 1964. Orbital data are given in Table 1 of the Enclosure. The first orbits were positioned so that the satellites passed their apogee at about 3 o'clock a.m. local time. The outer boundary of the radiation belt was thus crossed at about midnight and again at about 7—8 p.m. on the return branch of the orbit. The subsequent orbits were shifted toward the sunset [illegible] Elektron-1, by 8 min, and Elektron-2, by about 4 min in the 24-hr period. Elek[illegible]on

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tron-1 and -2 were equipped with similar instrumentation. In some cases, however, there were differences in energy thresholds. A chart summarizing all data shows the electron and proton fluxes of different energies in the equatorial plane and for comparison gives IMP-1 data. The following conclusions can be made from the chart: 1) A belt of artifically injected electrons exists at distances closest to the Earth's center. The maximum of the belt in February 1964 was at L = 1.35. The flux of electrons with energy above 2 Mev at the maximum was about 1×10^7 $cm^{-2} \cdot sec^{-1} \cdot ster^{-1}$. 2) The average directed flux of protons with an energy of 45—70 Mev at the maximum of the inner belt (L = 1.45) was about 1.5×10^3 $cm^{-2} \cdot sec^{-1} \cdot ster^{-1}$. A change in the integral spectrum at proton energies above 50 Mev was observed at L = 2.2; the spectrum of these energies is in the process of hardening, which could be explained by the theory of albedo neutrons. 3) The spatial distribution of protons with an energy of one to several Mev differs from that of the electrons. There is a definite regularity in the distribution of protons according to their energies. The average directed flux of protons with an energy above 2 Mev was about 4.5×10^5 $cm^{-2} \cdot sec^{-1} \cdot ster^{-1}$ in the equatorial plane at L = 2.8. It appears that the majority of the protons in this energy range are created by transverse drift with respect to the magnetic field lines. 4) A belt of high-energy electrons was observed at L = 2.75. Its width at the equator was about 0.4 earth radii. The average directed flux of electrons above 6 Mev was about 10^2 $cm^{-2} \cdot sec^{-1} \cdot ster^{-1}$. 5) A minimum of distribution

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ACCESSION NR: AT5023610

of electrons of above 150 kev energy was observed in the region between L = 3 and L = 4. The altitude intensity shift is subject to large fluctuations in time and may drop at times to negligible magnitudes. 6) The maximum of the outer belt is positioned, on the average, at L = 4.8. The maximum altitude intensity shift indicator m = 0.5 +0.3/-0.2 within a wide range of L. There is a sharp intensity jump on the night side at L = 7 + 0.5. On the morning side, a slow monotonic drop of intensity was observed. The average directed flux of electrons with an energy of over 70 kev at the maximum of the outer belt is about 5×10^6 $cm^{-2} \cdot sec^{-1} \cdot ster^{-1}$ and can change by more than an order of magnitude. The electron energy spectrum observed within the 70 to 600 kev range is in agreement with the data of other researchers. The electron energy spectrum in the energy range above 1 Mev appears to be softening, in comparison with measurements of earlier years. Orig. art. has: 11 figures. [FP]

ASSOCIATION: none

SUBMITTED: 02Sep65 ENCL: 01 SUB CODE: AA, SV

NO REF SOV: 007 OTHER: 004 ATD PRESS: 4094

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L 3096-66 FSS-2/EWT(1)/FS(v)-3/FCC/EWA(d) TT/GS/GW
ACCESSION NR: AT5023615 UR/0000/65/000/000/0433/0434

AUTHORS: Vernov, S. N.; Chudakov, A. Ye.; Vakulov, P. V.; Gorchakov, Ye. V.; Logachev, Yu. I.; Nikolayev, A. G.; Rubinshteyn, I. A.; Sosnovets, E. N.; Ternovskaya, M. V.

TITLE: Pulsations of the earth's magnetic field, from the measurements taken by the Elektron-3 satellite

SOURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Moscow, 1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii. Moscow, Izd-vo Nauka, 1965, 433-434

TOPIC TAGS: satellite, satellite data analysis, pulse counter, pulse amplifier, pulse amplitude, earth magnetic field

ABSTRACT: The Elektron-3 satellite, launched on July 11, 1964, carried a coil with a ferrite core. Signals from this coil were transmitted to two amplifying circuits, one for the band of 1—10 cps, the other for 30—300 cps. Both circuits recorded pulses with amplitudes exceeding ~1, ~5, ~25 γ. The type and operation of the memory bank are briefly described. From a small amount of data processed it can be seen that no pulses with the amplitudes ~25 γ were recorded, that at

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the maximum sensitivity ($\gtrsim$ 1 γ) the count exceeded seven pulses per 2 minutes, and that at the intermediate sensitivity ($>5\gamma$) about 2—3 pulses were recorded by the low-frequency circuit and about 1 by the high-frequency circuit. It is noted that the number of magnetic field pulses with the amplitude $\gtrsim 5\gamma$ is generally greater in the frequency region of 1—10 cps than in the region of 30—300 cps and that the pulse intensity tends to increase in some geographical regions. Normally, this increase is recorded by the low-frequency circuit but not by the high-frequency one. [04]

ASSOCIATION: none [illegible] Fiziko kosmicheskogo prostranstva

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NO REF SOV: 000 OTHER: 000 ATD PRESS: 4106

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