CHAPSKIY, K.K.

History of the development of the Caspian and Baikal seals. Trudy Zool.inst. no.17:200-216 '55. (MLRA 8:10)
(Seals (Animals))

CHAPSKIY, K.K.

CHAPSKIY, Konstantin Konstantinovich; BLAGOSKLONOV, K.N., red.; SIDOROVA, V.I., red.izd-va; POPRYADUKHIN, K.A., tekhn.red.

[Transformation of the animal world in the U.S.S.R.] Preobrazovanie shivotnogo mira SSSR. Moskva, Sovetskaia nauka, 1957. 314 p. (MIRA 11:2)
(Animals)

CHAPSKIY, K.K.

Present state and problems of the taxonomy of pinnipeds. Trudy sov. Ikht. kom. no.12:138-149 '61. (MIRA 14:6)

1. Zoologicheskiy institut AN SSSR.
(Pinnipedia)

CHAPSKIY, K.K.

Some ecological aspects of seasonal range dynamics of the White Sea population of Greenland seals (Pagophoca groenlandica). Trudy sov. Ikht. kom. no.12:150-163 '61. (MIRA 14:6)

1. Zoologicheskiy institut AN SSSR.
(White Sea--Seals(Animals))

TOMILIN, Avenir Grigor'yevich, prof.; PAVLOVSKIY, Ye.N., akademik, glavnyy red.; CHAPSKIY, K.K., red.; BYKHOVSKIY, B.Ye., red.; GROMOV, I.M., red.; MONCHADSKIY, A.S., red.; SKARLATO, O.A., red.; STRELKOV, A.A., red.; SHTAKEL'BERG, A.A., red.; MAKAROV, B.M., red.izd-va; ROMANOV, G.M., tekhn.red.; NOVICHKOVA, N.D., tekhn.red.

[Cetaceans of the seas of the U.S.S.R.] Kitoobraznye fauny morei SSSR. Moskva, Izd-vo Akad.nauk SSSR, 1962. 211 p. (Opredeliteli po faune SSSR, no.79). (MIRA 15:8)

1. Direktor Zoologicheskogo instituta AN SSSR (for Pavlovskiy).
(Cetacea)

GROMOV, I.M.; GUREYEV, A.A.; NOVIKOV, G.A.; SOKOLOV, I.I.; STRELKOV, P.P.; CHAPSKIY, K.K.; PAVLOVSKIY, Ye.N., akademik, glav. red.; BYKHOVSKIY, B.Ye., red.; MONCHADSKIY, A.S., red.; SKARLATO, O.A., red.; SHTAKEL'BERG, A.A., red.; SMIRNOVA, N.V., red.; SMIRNOVA, A.V., tekhn. red.

[Mammals of the U.S.S.R.] Mlekopitaiushchie fauny SSSR. Sost. I.M.Gromov i dr. Moskva, Izd-vo AN SSSR. Pts.1-2. 1963. (MIRA 16:9)

1. Akademiya nauk SSSR. Zoologicheskiy institut.
(Mammals)

PAVLOVSKIY, Ye.N., akad., glav. red.; ZENKOVICH, B.A., red.; [illegible]EYNBERG, S.Ye., red.; CHAPSKIY, K.K., red.; MAKAROV, B.M., red.

[Marine mammals] Morskie mlekopitaiushchie. Moskva, Nauka, 1965. 317 p. (MIRA 18:5)

1. Akademiya nauk SSSR. Ikhtiologicheskaia kommissiya. 2. Vsesoyuznyy nauchno-issledovatel'skiy institut morskogo rybnogo khozyaystva i okeanografii (for Zenkovich). 3. Zoologicheskiy institut AN SSSR (for Chapskiy).

BOBRINSKIY, Nikolay Alekseyevich; KUZNETSOV, Boris Aleksandrovich; KUZYAKIN, Aleksandr Petrovich, prof.; NATALI, V.F., doktor biol. nauk, retsenzent; SOKOLOV, I.I., doktor biol. nauk, retsenzent; CHAPSKIY, K.K., doktor biol. nauk, retsenzent; GROMOV, I.M., kand. biol. nauk, retsenzent; KHUNTSKARIYA, Ye.N., red.

[Guide to the mammals of the U.S.S.R.; a manual for students of pedagogical institutes and teachers] Opredelitel' mlekopitaiushchikh SSSR; posobie dlia studentov pedagogicheskikh institutov i uchitelei. Izd.2., ispr. i dop. Moskva, Prosveshchenie, 1965. 381 p. (MIRA 18:5)

CHAPSKIY, O.U.

KHASHCHINSKIY, Viktor Petrovic, professor, redaktor; NACHAHYAN, Sergey Artem'yevich; CHAPSKIY, O.U., redaktor; VODOLAGINA, S.D., tekhnicheskiy redaktor.

[Construction of electric lines and systems in the village] Stroitel'stvo sel'skikh elektricheskikh linii i setei. Pod.red. V.P. Khashchinskogo. Moskva, Gos.izd-vo sel'skokhoz. lit-ry, 1955. 123 p. (MLRA 9:1)
(Electric lines) (Rural electrification)

CHAPSKIY, O.U.

ANIFEROV, Filipp Yevdokimovich, kandidat sel'skokhozyaystvennykh nauk; CHAPSKIY, O.U., redaktor; MOLODTSOVA, N.G., tekhnicheskiy redaktor

[Machinery and implements for the care of orchards] Mashiny i orudiia po ukhodu za sadom. Moskva, Gos. izd-vo sel'skoz.lit-ry, 1956. 157 p. (MLRA 10:2)

(Fruit culture) (Agricultural implements)

GROKHOL'SKIY, Nikolay Fedorovich; CHAPSKIY, O.U., red.; BARANOVA, L.G., tekhn.red.

[Reconditioning of parts of tractors and agricultural machinery by welding and building-up] Vosstanovlenie detalei traktorov i sel'skokhoziaistvennykh mashin svarkoi i naplavkoi. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1960. 145 p. (MIRA 13:9)
(Tractors--Maintenance and repair)
(Agricultural machinery--Maintenance and repair)

CHERNOZUBOV, K.P.; CHAPSKIY, O.N., red.; FRIDMAN, Z.L., tekhn. red.; BARANOVA, L.G., tekhn. red.

[Concise manual for rural electricians] Kratkii spravochnik sel'skogo elektrifikatora. Sost. K.P.Chernozubov. Leningrad, Izd-vo sel'khoz. lit-ry zhurnalov i plakatov, 1961. 430 p. (MIRA 15:1)
(Rural electrification—Handbooks, manuals, etc.)

ZHDANOVSKIY, Nikolay Stepanovich; ZUYEV, Aleksey Ivanovich; CHAPSKIY, O.U., red.; BARANOVA, L.G., tekhn. red.

[Testing and running of tractor engines without braking (under operating conditions)]Bestormoznaia proverka i obkatka traktornykh dvigatelei (v ekspluatatsionnykh usloviiakh) Leningrad, Sel'khozizdat, 1962. 53 p. (MIRA 15:9)
(Tractors--Engines--Testing)

ANTIPIN, Veniamin Georgiyevich; GRIGOR'YEV, Sergey Mikhaylovich; LUR'YE, Abram Bentsianovich; CHAPSKIY, O.U., red.; BARANOVA, L.G., tekhn. red.

[Grain harvesting combines and the organization of combine harvesting of grain crops]Zernouborochnye kombainy i organizatsiia kombainovoi uborki zernovykh kul'tur. Leningrad, Sel'khozizdat, 1962. 383 p. (MIRA 15:10)

(Combines (Agricultural machinery))
(Grain--Harvesting)

ZUYEV, A.I.; GLAZUNOV, P.D.; DANILENKO, N.M.; KISELEV, I.N.;
STRELKOV, M.N.; IOFINOV , S.A., prof., red.;
CHAPSKIY, O.U., red.; BARANOVA, L.G., tekhn.red.;
FRIDMAN, Z.L., tekhn. red.

[Concise manual for the agricultural machinery operator]
Kratkii spravochnik mekhanizatora sel'skogo khoziaistva.
[By] A.I.Zuev i dr. Moskva, Sel'khozizdat, 1963. 583 p.
(MIRA 17:1)

(Agricultural machinery)

PEVZNER, Yakov Davidovich; CHAPSKIY, O.U., red.

[Organizing the repair of agricultural machinery] Organizatsiia remonta mashin v sel'skom khoziaistve. Izd.3., perer. i dop. Moskva, Kolos, 1964. 359 p.
(MIRA 17:12)

MOZHAYEV, Vladimir Nikolayevich, prof.; CHAPSKIY, O.U., red.

[Electrical equipment of tractors, automobiles, and combines] Elektrooborudovanie traktorov, avtomobilei i kombainov. Izd.4. Leningrad, Kolos, 1964. 247 p. (MIRA 18:2)

BORSHCHOV, Timofey Sergeyevich, dots.; CHAPSKIY, O.U., red.

[Earthmoving machinery; the organization and technology of earthwork] Zemleroinye mashiny, organizatsiia i tekhnologiia zemlianykh rabot. Izd.2., perer. i dop. Leningrad, Kolos, 1965. 366 p. (MIRA 18:6)

DAVIDOVICH, Semen Markovich; CHAPSKIY, O.U., red.

[Design and working principles of tractors and automobiles] Ustroistvo traktorov i avtomobilei. 2., perer. i dop. izd. Leningrad, Kolos, 1965. 510 p. (MIRA 18:6)

CHAPSKIY, P.D.

GIRKO, Sergey Sergeyevich; KHASHCHINSKIY, V.P., professor, redaktor; CHAPSKIY, P.D., redaktor; VODOLAGINA, S.D., tekhnicheskiy redaktor.

[Research and surveying for the construction of rural hydroelectric power stations] Obsledovaniia i izyskaniia dlia stroitel'stva sel'skikh GES. Pod red. V.P. Khashchinskogo. Moskva, Gos.izd-vo selkhoz. lit-ry, 1955. 178 p. [Microfilm] (MLRA 8:9)
(Hydroelectric power stations)

Chaptsov, R.P.

AUTHOR: Kazantsev, Ye.I. and Chaptsov, R.P. 3-58-6-20/34

TITLE: Students Help Industry (Studenty - Proizvodstvu)

PERIODICAL: Vestnik Vysshey Shkoly, 1958, Nr 6, pp 77 - 81 (USSR)

ABSTRACT: Many years ago the Urals Polytechnical Institute began to examine the question of the students' proper shop training. It was the instructors intention to familiarize the student with the enterprise in which he is likely to work and to train him to give actual help to the enterprises while he is still studying. In 1952, a conference of the Studencheskoye nauchno-tekhnicheskoye obshchestvo (Students Scientific-Technical Society) issued an appeal to all students to carry out at least one project during their training period that would be of assistance to production. At the beginning of the 1957/58 school year it was decided to ascertain, in cooperation with the BRIZ chiefs of the industrial enterprises of Sverdlovsk, which questions the plants are particularly interested in. Under the supervision of the Candidate of Technical Sciences, Dotsent O.A. Ganago, instructor of the Chair for Treating Metals Under Pressure, students of the Metallurgical Faculty carried out several projects which were important from a

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practical point of view. Thus, the 4th-course students designed a manipulator for a horizontal forging machine making the blanks for bearing casings at the Sverdlovskiy sharikopodshipnikovyy zavod (Sverdlovsk Ball Bearing Plant). The author enumerates a number of other works carried out by students for the enterprises. At present the institute maintains connections with the Verkh-Isetskiy metallurgicheskiy zavod, (Verkh-Isetsk Metallurgical Plant), Instrumental'nyy zavod (Tool Factory), Zavod bashennykh kranov (Tower Crane Plant), Uralmashzavod, Uralkhimmash, Uralelektroapparat, and others. Dealing with the deficiencies in the students' coordination with industrial enterprises, the author points out that the students work load prevents them from developing relations. Some chair workers and directors of many enterprises (even the Ural'skiy zavod tyazhelogo mashinostroyeniya - Ural Heavy Equipment Plant) are not inclined to become engaged in developing this coordination. Among other recommendations made by the author, there is one to the effect that the pre-diploma practical training be extended to 8-12 months as against the present $1\frac{1}{2}$ - 2 months. This will enable the students to work in various capacities at the factories, and will help them to gather material for the graduating thesis.

3-58-6-20/34

Students Help Industry

ASSOCIATION: Ural'skiy politekhnicheskiy institut imeni S. M. Kirova (The Urals Polytechnical Institute imeni S. M. Kirov)

Card 3/3

3-58-7-31/36

AUTHORS: Sitnikov, O.P., Candidate of Technical Sciences, and Chaptsov, R.P.

TITLE: The D.C. Electronic Analyzer (Elektronnaya model' postoyannogo toka)

PERIODICAL: Vestnik vysshey shkoly, 1958, Nr 7, p 83 (USSR)

ABSTRACT: The d.c. electronic analyzer was built by students of the Kafedra apparatury avtomaticheskogo upravleniya radiotekhnicheskogo fakul'teta Ural'skogo politekhnicheskogo instituta (The Chair for Automatic Operation of Equipment of the Radiotechnical Faculty of the Ural Polytechnical Institute). It was built in 1956-57 and all parts were constructed by students. There is 1 photo.

ASSOCIATION: Ural'skiy politekhnicheskiy institut imeni S.M. Kirova (The Ural Polytechnical Institute imeni S.M. Kirov)

Card 1/1

KOL'MAN, E., prof.; GORPINICH, K.Ye., uchitel'; SHTEPAN, V.Ye., prepodavatel' teoreticheskoy mekhaniki; VLASOV, O.Ye., prof. (Moskva); MERKULOV, I.T. (Ul'yanovsk); KUTSEV, M.M. (Kuybyshev); CHAPTYKOV, P.G. (Leningrad); DEMIN, V.N. (Tashkent); TUKMAN, R.E. (Tallin); GERTS, G., doktor fizicheskikh nauk, dotsent; DUDEL', S.P., doktor filosof. nauk, prof. (Moskva)

Finiteness and infinity in the universe; survey of letters and articles received by the editor. Priroda 54 no.8:97-102 Ag '65. (MIRA 18:8)

1. Shkola No.8 g. Kremenchuga (for Gorpinich). 2. Krasnoyarskiy politekhnicheskiy institut (for Shtepan). 3. Filosofskiy fakul'tet universiteta im. Gumbol'dta, Berlin, Germanskaya Demokraticheskaya Respublika (for Gerts).

CHAPURIN, F. K., Candidate

Afforestation - Kuban

Practices in growing shelterbelts from spot seedings in Kuban. Dokl. Akad. sel'khoz. 18, No. 1, 1953. and Agrobiologiya, No.1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

CHAPURIN, F., kand.sel'skokhozyaystvennykh nauk

Planting oak in clusters in the Kuban. Nauka i pered.op.v sel'khoz. 9 no.12:30-31 D '59. (MIRA 13:4)
(Kuban—Oak)

CHAPURIN, I.A.

For widespread adoption of all-metal saw blades. Tekst.prom. 15 no.11:23-25 N '55. (MLRA 9:1)

1. Glavny inzhener fabriki "Krasnaya vetka".

CHAPURIN, I.A.

Automatic starting device on a roving frame. Tekst.prom. 16 no.6: 55-56 Je '56. (MLRA 9:8)

1. Glavnyy inzhener fabriki "Krasnaya vetka".
(Spinning machinery--Attachments)

CHAPURIN, I.A.

Redesigning sliver arranging on carding machines to increase the sliver in the can. Obm.tekh.opyt. [MLP] no.16:13-17 '56. (Carding machines) (MIRA 11:11)

ZOBOV, Ye.V.; SHCHELKUNOVA, M.S.; BABANOVA, Zh.I.; CHAPURIN, V.I.; SHEMELEVA, V.A.; DYUL'GER, T.B.; GINKU, A.I.

Anticorrosive coatings of the internal surfaces of tanks used for the storage and processing of wine and juices; preliminary report. Trudy MNIIPP 2:43-55 '62. (MIRA 16:4)
(Wine and wine making—Equipment and supplies)
(Corrosion and anticorrosives)

ABLOV, A.V.; D'YAKON, I.A.; IVANOVA [illegible]; PROSKINA, M.N.; CHAPURINA, L.F.

Modification of copper glycocholate. Zhur. neorg. khim. 10 no.3: 628-635 Mr '65. (MIRA 18:7)

1. Institut khimii AN Moldavskoy SSR.

ABLOV, A.V.; CHAPURINA, L.F.; BELICHUK, N.I.

Infrared absorption spectra of diacetylsemicarbazonoxime metallic derivatives. Zhur. neorg. khim. 10 no.5:1186-1190 My '65. (MIRA 18:6)

1. Institut khimii AN Moldavskoy SSR.

ABLOV, A.V.; PROSKINA, N.N.; CHAPURINA, L.F.

Infrared absorption spectra of the products of the addition of aromatic amines to cobalt, zinc, and cadmium halides. Zhur. neorg. khim. 10 no.6:1350-1354 Je '65.
(MIRA 18:6)

1. Institut khimii AN Moldavskoy SSR.

ABLOB, A.V.; CHAPURINA, L.F.; BELICHUK, N.I.

Infrared absorption spectra of metallic derivatives of diacetyloxime hydrazone. Zhur.neorg.khim. 11 no.1:72-75 Ja '66. (MIRA 19:1)

1. Institut khimii AN Moldavskoy SSR. Submitted June 8, 1964.

ZHURAVLEV, V., strakhovoy delegat, val'shchik lesa; CHAPURINA, M., strakhovoy delegat, podkatchitsa (Nyandoma, Arkhangel'skoy obl.)

Don't pass by! Okhr.truda i sots.strakh. 6 no.1:16 Ja '63. (MIRA 16:1)

1. Nyandomskiy lesopunkt, Arkhangel'skoy obl. (for Zhuravlev).
(Archangel Province--Lumbering hygienic aspects)

CHAPURSKAYA, N.A.; BORISENKO, N.G.; CHERNOVA, I.A.; CHERNIY, F.A.; BELOUS, G.V.

Results of dispensary service for convalescents following infectious hepatitis. Nauch. inform. Otd. nauch. med. inform. AMN SSSR no.1:28 '61 (MIRA 16:11)

1. Institut infektsionnykh bolezney (direktor - chlen korrespondent AMN SSSR prof. I.L.Bogdanov) AMN SSSR, Kiyev.

*

CHAFORSKAYA, N.A. (Kiyev); RITENBINDER, Ye.A. (Kiyev)

Clinical and epidemiological characteristics of influenza in infants in an intraepidemic period (1960-1961). Sbor.nauch.trud. Inst.infek.bol. no.4:143-148 '64. (MIRA 18:6)

CHAPURSKAYA-BAZHENOVA, N. A.

see BAZHENOVA, N. A.

CHAPURSKAYA-BAZHENOVA, N. A. Jul 53

USSR/Medicine - Dysentery

"Carrying of Dysentery Bacilli, Symptomless Forms of Dysentery, and Disguised Forms of Dysentery," N. A. Chapurskaya-Bazhenova

Zhur Mikro, Epid, i Immun, No 7, pp 32-33

Carrying of bacilli occurs principally in cases of symptomless or disguised dysentery. In such cases, the presence of the infection can generally be established by rectoromanoscopy, because changes of the mucous membrane are present in the distal part of the large intestine. Occasionally these changes are absent, i.e., healthy persons carry bacilli. The symptomless course of dysentery may be alternated by typical acute clinical dysentery (hemocolitis). This work is based on data obtained in 1949-51 at the Clinical Dept., Inst of Infectious Diseases, Acad Med Sci USSR.

267T44

CHAPURSKAYA-BAZHENOVA, L.A.

Bacterial carriage and asymptomatic and latent forms of dysentery. Sovet. med. 17 no.4:16-18 Apr 1953. (CIML 24:4)

1. Of the First Clinical Division (Head -- Prof. B. Ya. Padalka) of the Institute of Infectious Diseases (Director -- Prof. I. L. Bogdanov), Academy of Medical Sciences USSR.

BAZHENOVA, N.A.

Certain aspects of the epidemiology of diphyllobothriasis in Leningrad Province. Med.paraz. i paraz. bol.24 no.3:242-248 Jl-S '55. (MLRA 8:12)

1. Zaveduyushchaya Leningradskoy oblastnoy protivomalyariynoy stantsiyey.
(TAPEWORM INFECTIONS, epidemiology,
diphyllobothriasis in Russia)

KHOMENKO, G.I., prof., red.; MAKSIMOVICH, N.A., prof., red.; CHAPURSKAYA, N.A., starshiy nauchnyy sotrudnik, red.; LIKHTOROVICH, P.K., red.; DUBINSKAYA, Ye.A., red.; GITSHTEYN, A.D., tekhred.

[Dysentery; epidemiology, pathogenesis, clinical aspects, and therapy] Dizenteriia; epidemiologiia, patogenez, klinika i terapiia. Red.kol. G.I.Khomenko i dr. Kiev, Gos.med.izd-vo USSR, 1959. 270 p. (MIRA 13:5)

1. Akademiya meditsinskikh nauk SSSR, Moscow. Institut infektsionnykh bolezney. 2. Institut infektsionnykh bolezney AMN SSSR (Kiyev) (for Khomenko, Maksimovich, Likhterovich, Dubinskaya).
(DYSENTERY)

Chapurskaya-Bazhenova, N. A., Yanchenko, T. F., Golub, N. F.
Chudnaya, L. M., Chernova, I. A., Borisenko, N. G.,
Danileychenko, I. A., and Kirichinshaya, I. A.

Detection of abortive and latent forms of poliomyelitis and of the "healthy" virus carriers in the closest environment of the patient. p. 95

Materialy nauchnykh konferentsii, Kiev, 1959. 288pp
(Kieskiy Nauchno-issledovatel'skiy Institut Epidemiologii i Mikrobiologii)

SOV/78-4-2-11/40

5(2)

AUTHORS: Grinberg, A. A., Chapurskiy, I. N.

TITLE: Acetyl Acetonates of Bivalent Platinum (Atsetilatsetonaty dvukhvalentnoy platiny)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 2, pp 314-318 (USSR)

ABSTRACT: The orange and light yellow acetyl acetonates of bivalent platinum, which are soluble in water, and the canary-yellow acetyl acetonates, which are insoluble in water, were investigated with regard to their production conditions and physico-chemical properties. The orange salt is easily soluble in water (~4.73% at 15°), difficultly soluble in alcohol and practically insoluble in ether, chloroform, and benzene. The formula by Werner was proved by the analyses of this salt (Ref 3). On account of the determination of the molecular electric conductivity the following coordination formula has been suggested for the orange salt:

$$K\left[\begin{matrix}Cl\\Cl\end{matrix} Pt\ Ac\right] \qquad Ac = \left[CH_3\text{-}CO\text{-}CH{=}CO\text{-}CH_3\right]$$

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The formula of the light yellow salt is: $K\left[\begin{matrix}Cl\\Ac\end{matrix}\ Pt\ Ac\right]$
The light yellow salt is also easily soluble in water and difficultly soluble in alcohol. The solubility in water is ~10.2%. If hydrochloric acid is added, an amorphous yellow precipitate separates out of the aqueous solutions of this salt. It is difficultly soluble in water and easily soluble in organic solvents. The canary-yellow acetyl acetonate is insoluble in water but easily soluble in organic solvents, as benzene, alcohol, chloroform, and carbon tetrachloride. By analyzing this compound the following formula was found: $Pt(C_5H_7O_2)_2$. The molecular weight of this compound is 388 (calculated 393.34). The solubility determination of $Pt(C_5H_7O_2)_2$ in benzene and alcohol at 25° showed the following results: $L_{25°}$ in ethyl alcohol = $6.5.10^{-3}$ g-mol/l,
$L_{25°}$ in benzene = 4.10^{-2} g-mol/l.
The determination of the molecular electric conductivity of the weak aqueous solutions shows that the yellow salt and the orange salt are binary electrolytes whereas the insoluble

Acetyl Acetonates of Bivalent Platinum

platinum diacetyl acetonate is no electrolyte. There are 1 table and 4 references, 3 of which are Soviet.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad Technological Institute imeni Lensovet)

SUBMITTED: November 3, 1957

ACCESSION NR: AP4013533 S/0181/64/006/002/0632/0634

AUTHOR: Chaputovich, Ye. Ye.

TITLE: Change in the width of the forbidden zone of tellurium under hydrostatic pressure

SOURCE: Fizika tverdogo tela, v. 6, no. 2, 1964, 632-634

TOPIC TAGS: forbidden zone, tellurium, zone width, forbidden zone width, hydrostatic pressure, pressure dependence, optical method, electrical method, lattice defect

ABSTRACT: The author found deviations in values of a presented in the data of various authors: $a = \left(\frac{\partial E}{\partial P}\right)_T$ (E = width of forbidden zone, P = pressure). He therefore examined single crystals of Te to draw comparisons. For unannealed samples a was found to range from $-1.0 \cdot 10^{-5}$ to $-1.3 \cdot 10^{-5}$ ev/atm. After heating at a temperature of 200C for 20 hours, all investigated samples gave a value of $-(1.6 \pm 0.1) \cdot 10^{-5}$ ev/atm. The author concludes that the value of a in Te is sensitive to lattice defects and increases with diminution in number of defects (after heating). The value of a obtained by the optical method does not agree

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ACCESSION NR: AP4013533

with the value obtained by the electrical method. The optically obtained value is nearer the theoretical value. "The author expresses his sincere thanks to L. F. Vereshchagin, Corresponding Member AN SSSR, for his guidance in the work." Orig. art. has: 2 tables and 3 formulas.

ASSOCIATION: Institut fiziki vysokikh davleniy AN SSSR, Moscow (Institute of Physics of High Pressures AN SSSR)

SUBMITTED: 03Aug63 DATE ACQ: 03Mar64 ENCL: 00

SUB CODE: PH NO REF SOV: 001 OTHER: 011

Card 2/2

CHAPUTOVICH, Ye.Ye.

High-pressure multiwire electric lead-in. Prib. i tekh. eksp. 9 no.4:193 Jl-Ag '64. (MIRA 17:12)

1. Institut fiziki vysokikh davleniy AN SSSR.

CHAPYGINA, N. M.

BERDINA, V.S.; KURGANSKAYA, V.M.; CHAPYGINA, N.M.

Recurrence of elementary synoptic processes with a meridional type of circulation. Trudy TSIP no.56:71-93 '57. (MLRA 10:8)
(Meteorology)

CHAPYGINA, N. M.

3(7) PHASE I BOOK EXPLOITATION SOV/3031

Moscow. Tsentral'nyy institut prognozov

Voprosy dolgosrochnykh prognozov (Problems in Long-Range Forecasting) Moscow, Gidrometeoizdat (otd.) 1958. 104 p. (Series: Its: Trudy, vyp. 73) 1,100 copies printed.

Sponsoring Agency: USSR. Glavnoye upravleniye gidrometeorologicheskoy sluzhby.

Ed.: (title page): V.M. Kurganskaya; Ed. (inside book): V.I. Tarukhunova; Tech. Ed.: I.M. Zarkh

PURPOSE: This issue of the Institute's Transactions is intended for meteorological and hydrographic specialists working in the field of long-range weather forecasting.

COVERAGE: This collection of articles deals with aspects of extended weather forecasting. Individual articles discuss: synoptic conditions of wind regimes most favorable to shipping along the Northern Sea Route [Soviet Arctic Seas]; synoptic conditions underlying a continuous ice cover in various parts

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Problems in Long-Range Forecasting SOV/3031

of the Sea of Azov; a method for compiling daily schematic 500-mb contour maps (AT_{500}) for 3 days by utilizing an equation of the conservation of vortex velocity and temperature regime; a method for the advance computation of the baric field for periods of 24, 48, and 72 hours; the determination of definite relationships for forecasting air temperature for a natural synoptic period. The results of actual tests in a series of investigations in extended forecasting are cited. References accompany each article.

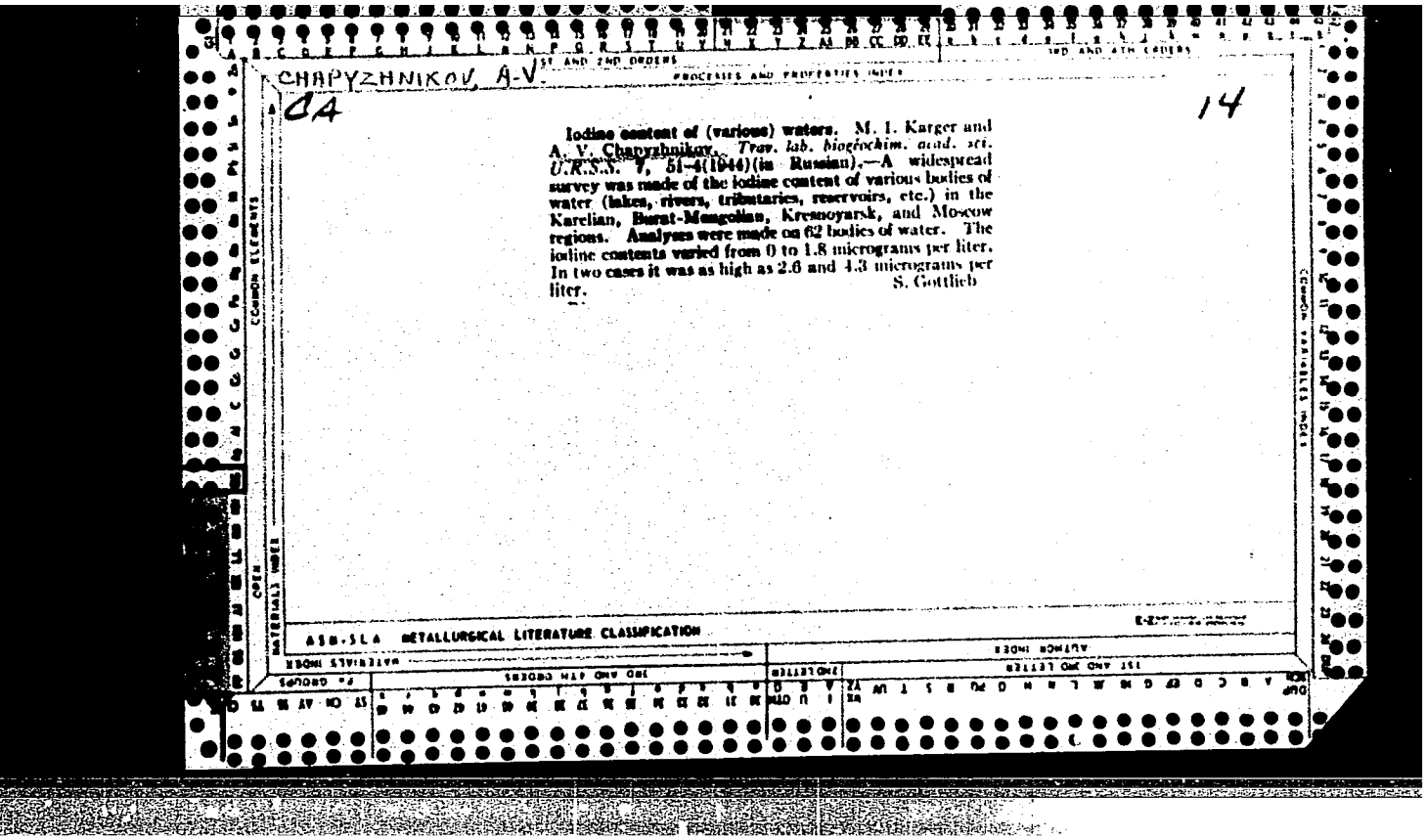
TABLE OF CONTENTS:

Card 2/3

DMITRIYEVA, Yu. N.; CHAPYGINA, N. M.

Selection of analogues using machines. Meteor. i gidrol. no. 4:38-39 Ap '64. (MIRA 17:5)

1. TSentral'nyy institut prognozov.



CHAPYZHNIKOV, A.V.

04

14

Iodine content of (various) waters. M. I. Karger and A. V. Chapyzhnikov. *Trav. lab. biogéochim. acad. sci. U.R.S.S.* 7, 51-4(1944)(in Russian).—A widespread survey was made of the iodine content of various bodies of water (lakes, rivers, tributaries, reservoirs, etc.) in the Karelian, Buryat-Mongolian, Krasnoyarsk, and Moscow regions. Analyses were made on 62 bodies of water. The iodine contents varied from 0 to 1.8 micrograms per liter. In two cases it was as high as 2.6 and 4.3 micrograms per liter.

S. Gottlieb

A58-5L4 METALLURGICAL LITERATURE CLASSIFICATION

CHAPYZHNIKOV, B. A.

78-3-30/35

AUTHORS: Breger, A. Kh, Ormont, B. F., Kutsev, V. S., Viting, B. I. and Chapyzhnikov, B. A.

TITLE: The Use of Brake Radiation of a Betatron for Characterizing the Oxygen Content of Semi-Conductors and Metallic Materials (Particularly Titanium Oxy-Carbides). (Ob ispol'zovanii tormoznogo izlucheniya betatrona dlya kharakteristiki soderzhaniya kisloroda v poluprovodnikovykh i metallicheskikh materialakh (v chastnosti, v oksikarbidakh titana)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1957, Vol.II, Nr.3, pp. 696-699. (USSR)

ABSTRACT: This is a preliminary report on the development of a radio-activational method for determining non-metallic impurities in metals and semi-conductors. The possibility of determining oxygen in the system Ti-C-O from the reaction $O^{16}(\gamma,n)O^{15}$ with the use of brake radiation from a betatron has been demonstrated. Preliminary calibration curves for preparations with not less than 1% oxygen have been constructed. The method is non-destructive and requires about 10 min per

Card 1/2

The Use of Brake Radiation of a Betatron for Characterizing the Oxygen Content of Semi-Conductors and Metallic Materials...

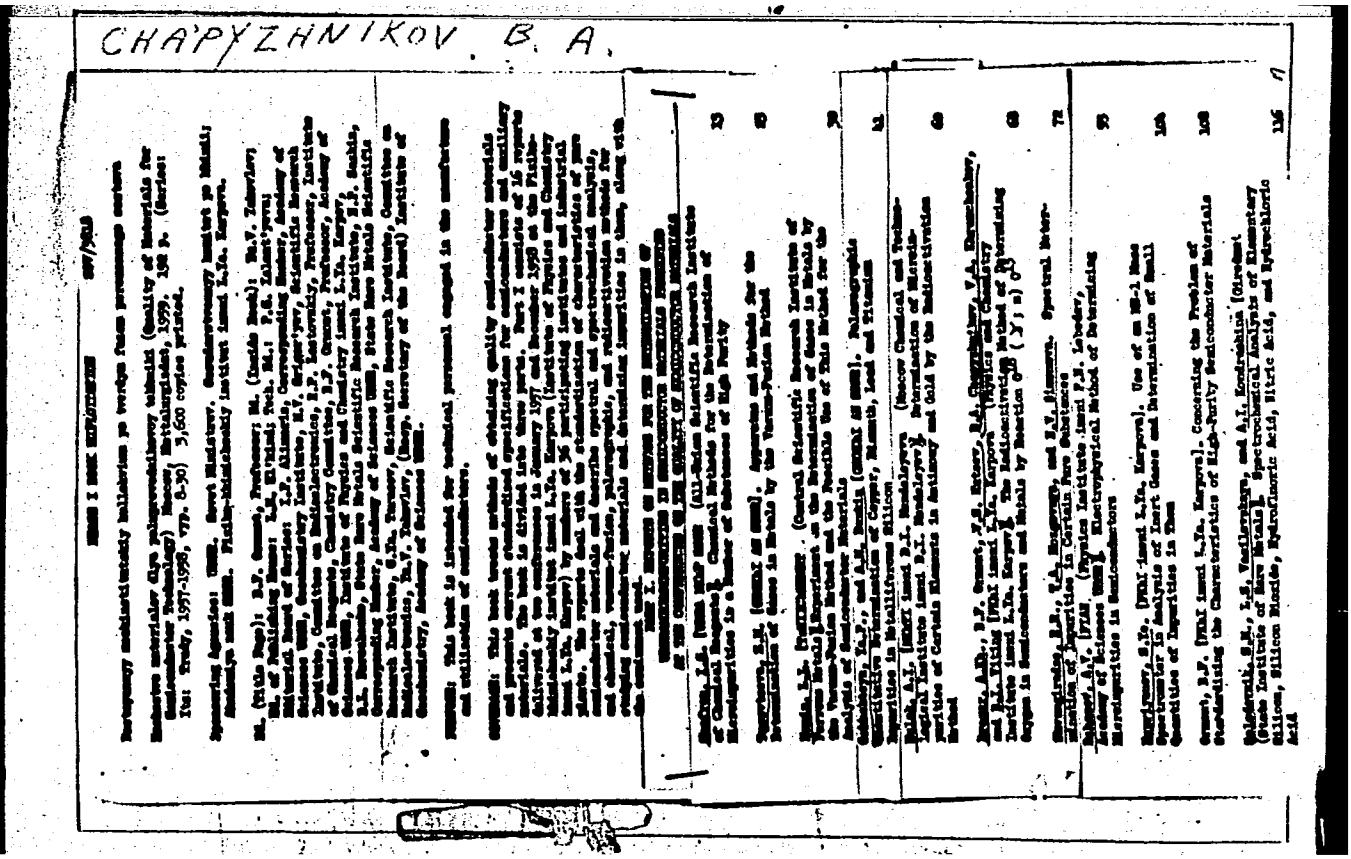
determination. There is 1 figure and 7 references, of which 4 are Slavic.

ASSOCIATION: The Physico-Chemical Institute imeni L. Ya. Karpov. (Fiziko-khimicheskiy Institut im. L. Ya. Karpova.)

SUBMITTED: August 15, 1956.

AVAILABLE: Library of Congress.

Card 2/2



CHAPYZHNIKOV, B. A.

BREGER, A.Kh.; ORMONT, B.F.; VITING, B.I.; GRIZHKO, V.M.; KOZLOV, V.A.; KUTSEV, V.S.; CHAPYZHNIKOV, B.A.; CHEPEL', L.V.

Radioactivation method of determining oxygen in semiconducting meterials and metals on the basis of the photonuclear reaction $O^{16}(\gamma,n)O^{15}$. Trudy kom.anal.khim. 10:137-141 '60. (MIRA 13:8)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova, Moskva.
(Oxygen--Analysis)
(Oxygen--Isotopes)
(Semiconductors--Oxygen content)

S/120/62/000/002/003/047
E039/E420

AUTHORS: Chepel', L.V., Viting, B.I., Chapyzhnikov, B.A.

TITLE: Exposure inside the accelerating space of a betatron

PERIODICAL: Pribory i tekhnika eksperimenta, no.2, 1962, 23-26

TEXT: For a series of physical and physicochemical investigations it was necessary to significantly increase the specific induced activity of samples exposed in a betatron or synchrotron. Samples are normally placed outside the accelerator at a distance of not less than 20 to 30 cm from the target. In this paper two new methods are described for exposing solid and liquid samples inside the working space of a betatron giving an increase in the specific induced activity of 20 to 100 times. The first method makes use of an internal pocket with dispersion foils and is a modification of a previously described method. The pocket consists of a glass tube of 30 mm bore with a flat topped platinum cap at one end attached by means of a Kovor collar. At the other end of the tube is a vacuum seal for mounting the pocket in the apparatus. Eddy current heating is insignificant; an equilibrium temperature of 70°C being obtained. The glass tube

Card 1/2

Exposure inside the ...

is coated with an earthed layer of "Aquadag". The effect of the dispersion foils on the distribution of the electron beam is examined by means of autoradiographs of exposed single crystals of rock salt. The second method makes use of two glass tubes which terminate in a small volume ~ 2 cc in the working space of the betatron and can be used to expose liquids to the fast electron beam. Both methods can be used for obtaining small quantities of artificial isotopes and also for exposing a series of materials to fast electrons without stopping the betatron. Absolute values of the induced activity for plates of Cu^{64} volume 10 x 10 x 0.5 mm^3 exposed in the pocket are ~ 0.5 μ curies with a radiation intensity of 50 rpm at a distance of 1 m from the target. These methods are used for the radioactivation analysis of metals, semiconductors and some hydrocarbons and polymers. There are: 8 figures and 1 table.

ASSOCIATION: Fiziko-khimicheskiy institut (Institute of Physics and Chemistry)

SUBMITTED: June 7, 1961

Card 2/2

L 14943-63 EWP(j)/EPF(c)/EWT(m)/BDS - ASD Pr-4 RM/WW

ACCESSION NR: AP3003761 S/0075/63/018/007/0865/0872

AUTHORS: Chepel', L. V.; Chapyzhnikov, B. A.; Viting, B. I.

TITLE: Radioactivation method for determining oxygen in some polymers

SOURCE: Zhurnal analiticheskoy khimii, v. 18, no. 7, 1963, 865-872

TOPIC TAGS: radioactivation method, oxygen, polymer, photonuclear reaction, O sup 15, linear electron accelerator, C sup 11

ABSTRACT: This is a continuation of studies which authors previously conducted with respect to developed radioactivation method for determining oxygen which was suitable to be applied to other objects (metals and semiconductors). Authors state that a further augmentation of the methods sensitivity can be attained by using powerful sources of electromagnetic radiation (linear electron accelerators) and by perfecting the measurement of the activity of O^{15} on the "background" of other isotopes which are formed in the analyzed material by photonuclear reactions. Present work is devoted to an examination of a special method for measuring the activity of the O^{15} isotope on the "background" of the C^{11} isotope. The photonuclear reaction O^{16} (Gamma, n) O^{15}, whose threshold is 15.6 Mev, forms the positron-active isotope O^{15} with a half-life period of 127 seconds and positron

Card 1/2

L 14943-63

ACCESSION NR: AP3003761

5

energy of 1.68 Mev. The relationship of the reactions size to the Gamma-quanta energy is shown in a figure. This figure also contains the curve for the dependence of the size on the energy for the reaction C^{12}(Gamma, a)C^{11} which forms the positron-active C^{11} isotope. Authors then discuss significance of the curves, which were obtained with radiation of various energy. The Gamma-radiation source was the betatron from the Physico-Chemical Institute. The analyzed samples were irradiated inside of the betatron's acceleration chamber. The analysis method was worked out on samples of artificial and natural rubber. The activity of the sample was measured with a device consisting of a scintillation counter and recorder. The scintillation counter included a photoelectron multiplier and plastic scintillator. The samples were irradiated for 2 minutes, and after 30 seconds elapsed after termination of irradiation, the measurements of activity began. Data obtained was plotted onto a decay curve. A formula is given for computing the oxygen content. "Authors wish to thank A. S. Kuz'minskiy, A. Kh. Breger and V. F. Chertkova for a number of valuable hints during development of the method and for discussing the results." Orig. art. has: 5 figures, 1 table and 1 formula.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova, Moscow (Physico-Chemical Institute)

SUBMITTED: 08Sep62 DATE ACQ:08Aug63 ENCL: 00

SUB CODE: CH, EL NO REF SOV: 008 OTHER: 008

Card 2/2

L 46173-66 EWT(m)/EWP(j)/T IJP(c) DJ/RM

ACC NR: AP6021206 (A) SOURCE CODE: UR/0138/66/000/003/0049/0053

AUTHOR: Chepel', L. V.; Chapyzhnikov, B. A.; Mikhaylova, G. N.; Zhuravskaya, Ye. V.; Kuz'minskiy, A. S.

ORG: Physicochemical Institute im. L. Ya. Karpov (Fiziko-khimicheskiy institut); Scientific Research Institute of the Rubber Industry (Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti)

TITLE: Radioactive method of determining oxygen in elastomers during their processing and aging

SOURCE: Kauchuk i rezina, no. 3, 1966, 49-53

TOPIC TAGS: oxygen, elastomer, radioisotope

ABSTRACT: A method has been developed for determining the oxygen content of polymers directly during their processing and aging, the sample being unaffected by the analysis. It consists in activating the nuclei of oxygen and carbon present in the polymer by means of gamma radiation, then identifying the radioisotopes formed. Since the radioisotopes O^{15} and C^{11} are formed simultaneously during the irradiation, in order to measure the activity of O^{15} against the background of C^{11}, a technique of discrimination involving the use of a laboratory scintillation analyzer was employed. The method was first applied to the study of the oxidation kinetics of raw and cured rubbers during rolling, vulcanization, and radiation aging, and then to the determination

Card 1/2 UDC: 678.4/.7:543:844:621.039.83

L 46173-66

ACC NR: AP6021206

3

of oxygen in an unfilled NK-base rubber at various stages of vulcanization in the press. The method can also be used to study the development of oxidation processes associated with wear and fatigue in rubbers. Orig. art. has: 4 figures and 1 table.

SUB CODE: 11/ SUBM DATE: 25May64/ ORIG REF: 003/ OTH REF: 002

Card 2/2 mt

CHARAKHDZE, G.

PORITSKIY, V.I.; CHARAKADZE, G.

Conferences of readers of "Meteorologiia i gidrologiia."
Metero.i gidrol. no.2:51-52 F '52. (MLRA 8:9)
(Meteorology--Periodicals)

KUNCHEV,K.N.; CHARAKCHIEV,D.

Favism in adults in the Burgas region. Suvrem. med.,Sofia 11 no.2-3:126-132 '60.

1. Iz Okruzhnata bolnitsa - Burgas, Gl. lekar:Zh. Siakolov.
(FAVISM epidemiol.)

ACC NR: AP5024659 SOURCE CODE: UR/0048/65/029/009/1774/1776

AUTHOR: Bazilevskaya, G.A.; Kvashnin, A.N.; Krasotkin, A.P.; Filatov, V.M.; Charakhch'yan, A.N.

ORG: Physics Institute im P.N.Lebedev, Academy of Sciences, SSSR (Fizicheskiy institut Akademii nauk SSSR)

TITLE: Radiosonde for measurement of x rays in the stratosphere /Report, All-Union Conference on Cosmic Ray Physics held at Apatity 24-31 August 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v 29, no 9, 1965, 1774-1776

TOPIC TAGS: x ray, stratosphere, secondary cosmic ray, radiosonde

ABSTRACT: There are briefly described two radiosondes for measuring x rays in the stratosphere. Both instruments employ NaI:Tl scintillators and vacuum tube electronics and are battery powered with transistor voltage convertors. The lighter instrument weighs 2.5 kg and records photons with energies above 30-35 keV. The second instrument weighs 6 kg and its threshold is adjustable from 20 to 360 keV by a system of relays, so that photon energy spectra can be recorded. Schematic diagrams are given for both instruments, but not for their power supplies or for the relay system. Altitude versus counting rate curves recorded over Dolgoprudnyy are presented. Orig. art. has: 4 figures.

SUB CODE: NP,OP,EC/ SUBM DATE: 00/ ORIG REF: 002/ OTH REF: 000

Card 1/1

L 3645-66 EWT(1)/FCC/EWA(h) GW

ACCESSION NR: AP5026221 UR/0048/65/029/010/1800/1804

AUTHOR: Charakhch'yan, A. N.; Charakhch'yan, T. N. 55 55 35 31 B

TITLE: Several problems on the generation of cosmic rays by the sun and their propagation into interplanetary space

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 10, 1965, 1800-1804

TOPIC TAGS: differential energy spectrum, proton, exponential function, proton spectrum, corpuscular stream, chromospheric flare, interplanetary space, solar atmosphere 12,55

ABSTRACT: Measurements proved that the differential energy spectrum of protons may be expressed as an exponential function with the exponent $\gamma = 6$ when the energy is several hundred Mev. The exponent γ of the proton spectrum was found to equal 3 before the arrival of corpuscular streams from a chromospheric flare, and it reached the value of 6 when the earth was in the stream of a chromospheric flare. The spectral exponent 3 relates to protons freely diffusing into interplanetary space from the sun, and the exponent 6 must be related to an additional stream of protons carried by magnetic traps. One part of solar-protons propagates freely and reaches the earth earlier than the other, which is trapped by the

Card 1/2

L 3645-66

ACCESSION NR: AP5026221 4

magnetic field and propagates slowly. The constancy of energy spectra of flares indicates that the particle acceleration in flares is constant and does not depend upon solar atmospheric processes. Two graphs in the original article represent data of measurements of differential spectra of protons, α-particles, and nuclei of the M group. Spectra of protons and α-particles of two flares are represented by the same curves. A table in the original article contains ratios of the number of α-particles to the number of protons and the number of nuclei to the number of protons determined from various flares. The first ratio is usually equal to 0.25, and the second ratio is always equal to 0.14 in the cases shown in the table. The formation of spectra of charged particles of cosmic rays is very complicated and has no relation to the chemical elements in the sun. Orig. art. has: 3 figures and 1 table. [EG]

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Institute of Physics, Academy of Sciences, SSSR); Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta im. M. V. Lomonosova (Institute of Nuclear Physics, Moscow State University) 55 55

SUBMITTED: 00 ENCL: 00 SUB CODE: AA

NO REF SOV: 009 OTHER: 008 ATD PRESS: 4116

Card 2/2 (bok)

L 3646-66 EWT(1)/FCC/EWA(h) GW

ACCESSION NR: AP5026222 UR/0048/65/029/010/1805/1806

AUTHOR: Vernov, S. N.; Charakhch'yan, A. N.; Babarykin, V. K.; Bayarevich, V. V.; Stozhkov, Yu. I.; Charakhch'yan, T. N.

35
32
B

TITLE: Measurements of the intensity of cosmic rays in the stratosphere above Antarctica

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 10, 1965, 1805-1806

TOPIC TAGS: cosmic ray, primary cosmic ray, outer radiation belt, artificial radioactivity, critical energy, proton 12

ABSTRACT: Simultaneous measurements of the intensity of cosmic rays in both hemispheres are of great importance for investigating low-energy primary cosmic radiation, temperature effect, disturbances in the earth's outer radiation belt, and artificial radioactivity in the stratosphere. Although the critical energy in Murmansk is about 100 Mev and in Mirnyy about 10 Mev, measurements are carried out in atmospheric layers above both places with a pressure of 10 g/cm^2, which can be penetrated by protons with energies above 100 Mev. Data obtained simultaneously in Murmansk and Mirnyy are obtained at different seasons, and they arrive from different directions in the atmosphere. Sounding takes place in all stations at a given time. Four times a week cosmic rays are measured with a

Card 1/2

L 3646-66
ACCESSION NR:: AP5026222

3

single counter and two times with a special telescope. Results of measurements are represented graphically. The difference between Murmansk and Mirnyy varies, depending upon the season of the year. The difference is small when the pressure is between 20 and 200 g/cm^2. The difference increases at other pressures. Orig. art. has: 2 figures. [EG]

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Institute of Physics, Academy of Sciences, SSSR); Nauchno-issledovatel'skiy institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta im. M. V. Lomonosova (Scientific Research Institute of Nuclear Physics, Moscow State University); VIII Sovetskaya antarkticheskaya ekspeditsiya (VIII Soviet Antarctic Expedition)

SUBMITTED: 00 ENCL: 00 SUB CODE: AA,ES

NO REF SOV: 001 OTHER: 000 ATD PRESS: 4116

Card 2/2

AGESHIN, P.N.; KOLOMEYETS, Ye.V.; CHARAKHCH'YAN, A.N.; CHARAKHCH'YAN, T.N.

Secular variation in cosmic ray intensity in the stratosphere during the period 1962-1964. Izv. AN SSSR.Ser.fiz. 29 no.10:1901-1902 O '65. (MIRA 18:10)

L 2321-66 EWT(d)/EWT(l)/EEC(k)-2/FCC/EWA(h) GS/GW

ACCESSION NR: AT5023618 UR/0000/65/000/000/0454/0460

AUTHORS: Vernov, S. N.; Lizutin, L. L.; Charakhch'yan, A. N.; Charakhch'yan, T. N. 48 47 B+1

TITLE: Outer Van Allen belt and bursts of x-rays in the stratosphere

SOURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Moscow, 1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii. Moscow, Izd-vo Nauka, 1965, 454-460

TOPIC TAGS: radiation belt, X ray, stratosphere, magnetic storm, solar activity, Van Allen belt

ABSTRACT: Observations of bursts of x-rays in the stratosphere, which are apparently the result of bremsstrahlung of high-energy electrons trapped in the magnetic field of the earth, are discussed. The work and results from a number of American and Soviet groups are described. The results of observations made during 1964 above Murmansk and Mirnyy are presented, giving the integrated photon energy spectra and the dependence of count rate on pressure for the four events described. By comparison with the previous results, it was found that increased radiation in

Card 1/2

L 2321-66
ACCESSION NR: AT5023618

the stratosphere is correlated with recurrent magnetic storms, with large ionospheric disturbances, and, in the aurora zone, with the absorption of radio waves in the F2 layer of the ionosphere. Toward the minimum of solar activity the frequency of x-ray bursts remained unchanged, and the photon energy spectrum became more stable. Satellite measurements made at the same time showed no increase in galactic cosmic ray intensity. Since the number of high-energy electrons in the outer Van Allen belt is insufficient to explain the intensity of x-rays in the stratosphere, it is concluded that the x-rays must be caused, in part, by an additional flux of electrons produced by transient electron-accelerating processes occurring in the magnetosphere of the earth. Orig. art. has: 3 figures and 3 tables.

[04]

ASSOCIATION: none

SUBMITTED: 02Sep65 ENCL: 00 SUB CODE: AA, ES

NO REF SOV: 007 OTHER: 008 ATD PRESS: 4107

Card 2/2 md

L 1536-66 EWT(1)/FCC/EWA(h) GS/GW

ACCESSION NR: AT5023637 UR/0000/65/000/000/0547/0552

AUTHOR: Charakhch'yan, A. N. ; Charakhch'yan, T. N.

TITLE: Generation of cosmic rays on the sun

SOURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. 1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii. Moscow, Izd-vo Nauka, 1965, 547-552

TOPIC TAGS: chromospheric flare, cosmic ray burst, stratosphere, primary component, magnetic storm, ionospheric perturbation, energetic spectrum, galactic cosmic ray, absorption curve

ABSTRACT: Three strong chromospheric flares occurred in 1959 followed, after intervals of several days, by bursts of cosmic rays in the stratosphere with intensity of the primary components 200, 800, and 2800 times greater than the ordinary level. Bursts of cosmic rays followed chromospheric flares at intervals of several hours, and magnetic storms and ionospheric perturbations followed them at intervals of approximately one day. Energy spectra of protons in primary cosmic rays were studied by measuring the absorption of protons in the upper layers of the atmosphere. The intensity of cosmic rays of galactic origin attained a maximum at 16—22 km and de-

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L 1536-66

ACCESSION NR: AT5023637

creased at higher altitudes. No maximum was observed at high latitudes, and the intensity increased gradually with altitude. The numbers of particles created at various heights during bursts were measured, and measurements of the numbers of particles at the same heights carried out before bursts were compared. The differences were then used for constructing absorption curves as functions of the pressure in the stratosphere. It was concluded from comparing the absorption curves of many bursts that the indices of differential energy spectra of protons measured before the arrival of solar corpuscular streams from chromospheric flares and having energies of millions of electron-volts lie near 3.0. Indices of the same proton spectra measured after the arrival of corpuscular streams were near 6.0. This difference in indices was explained by two kinds of protons. Proton spectra with indices near 3.0 belong to protons leaving the sun and diffusing freely into interplanetary space, and spectra with indices near to 6.0 belong to supplementary streams of fast protons carried by magnetic traps. Orig. art. has: 4 figures and 1 table. [EG]

ASSOCIATION: none

SUBMITTED: 02Sep65 ENCL: 00 SUB CODE: AA,ES

NO REF SOV: 005 OTHER: 003 ATD PRESS: 4097

Card 2/2

CHARAKHCH'YAN, A. N.

PA 36/49T69

USSR/Nuclear Physics - Cosmic Radiation Sep 48
Nuclear Physics - Elementary Particles

"Use of a Hodoscope to Study Particle Showers Generated in Lead by Cosmic Rays in the Stratosphere," S. N. Vernov, A. N. Charakhch'yan, Phys Inst imeni P. N. Lebedev, Acad Sci USSR, 3 pp

"Dok Ak Nauk SSSR" Vol LXII, No 3

Diagram shows arrangement of counters. Three counters form the so-called telescope, and nine are secondary counters. Hodoscope consisted of necessary number of independent amplifying channels, connected to each secondary counter. Amplifying

36/49T69

USSR/Nuclear Physics - Cosmic Radiation (Contd) Sep 48

circuits of secondary counters were generally closed, and discharges in one of the counters were not registered unless the necessary triple concurrence occurred in the telescope. Submitted by Acad S. I. Vavilov, 13 Jul 48.

36/49T69

CHARAKHCH'YAN, A. N.

USSR/Nuclear Physics - Cosmic Rays Dec 49
Hodoscopes

"Investigation of the Structure of Showers Created by Primary Cosmic Rays in the Stratosphere," S. N. Vernov, A. N. Charakhch'yan, Phys Inst imeni P. N. Lebedev, 3 pp

"Dok Ak Nauk SSSR" Vol LXIX, No 4

Gives results of studying structure of showers created by primary cosmic rays in lead and aluminum. Specially constructed portable hodoscopes raised to the stratosphere in sounding balloons used for measurements. Data

155T49

USSR/Nuclear Physics - Cosmic Rays (Contd) Dec 49

transmitted by radio and recorded on fast-moving film at receiving point. Showers created by primary cosmic rays in lead contained considerably more particles than showers formed in aluminum. This difference in number of particles indicates electron-photon component is present in showers. Submitted by Acad D. V. Skobel'tsyn 20 Aug 49.

155T49

CHARAKHCH'YAN, A. N.

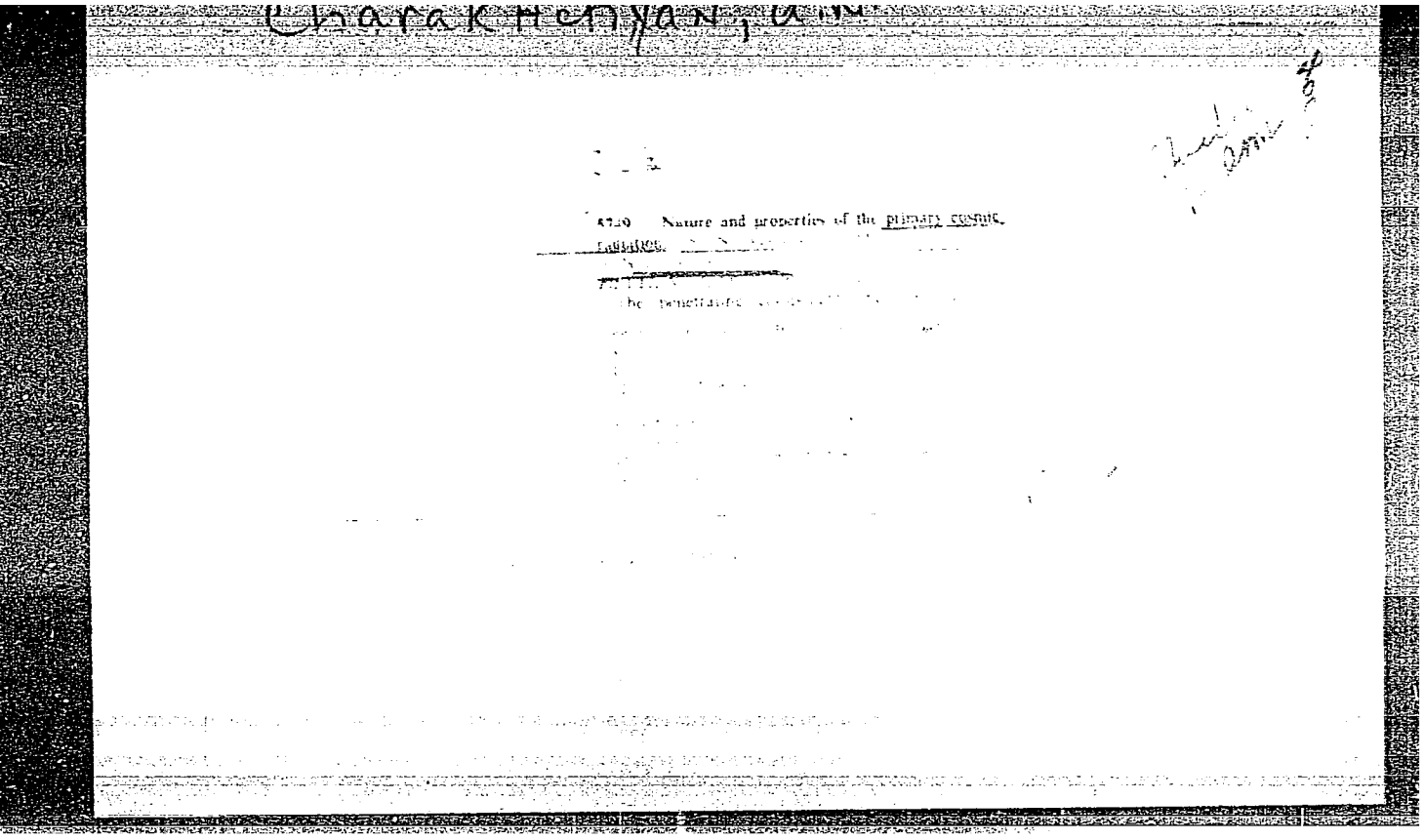
CHARAKHCH'YAN, A. N. - "Investigation of the Altitude Relation Between the Number of Electron-Nuclear Showers and the Intensity of the Penetrating Portions of Cosmic Rays in the Stratosphere at Various Geomagnetic Latitudes." Sub 24 Nov 52, Physics Inst imeni P. N. Lebedev, Acad Sci USSR. (Dissertation for the Degree of Candidate in Physicomathematical Sciences).

SO: Vechernaya Moskva January-December 1952

CHARAKHCH'YAN, A.N.

7C-159 551.521.64

Vernov, S. N.; Kulikov, A. M. and Charakhch'ian, A. N., Azimutal'naia asimetriia kosmicheskikh luchei v stratosfere na ekvatore. [Azimuthal asymmetry of cosmic rays in the stratosphere at the equator.] *Akademiia Nauk SSSR, Doklady*, Novaia Ser., 85(3):525–528, July 21, 1952. 2 figs., table, 5 refs. DLC—The apparatus especially designed for measuring the azimuthal asymmetry in the stratosphere at the equator by continuous registration of cosmic particles with angles to the vertical from 0° to 90° is described. The results of measurements indicate that (1) a large East-West azimuthal asymmetry showing a positive sign at least for a large portion of primary cosmic rays is observed at equatorial latitudes, (2) the East-West azimuthal asymmetry increases with increasing zenith angle and (3) an East-West oriented asymmetry is practically absent at the equator. *Subject Heading:* 1. Cosmic ray asymmetry.—*I.L.D.*



4750 Nature and properties of the primary cosmic radiation.

CHARAKHCH'YAN, A.N.

Photographic abs
P4 1953
Industrial & Scientific
Applications of Photography

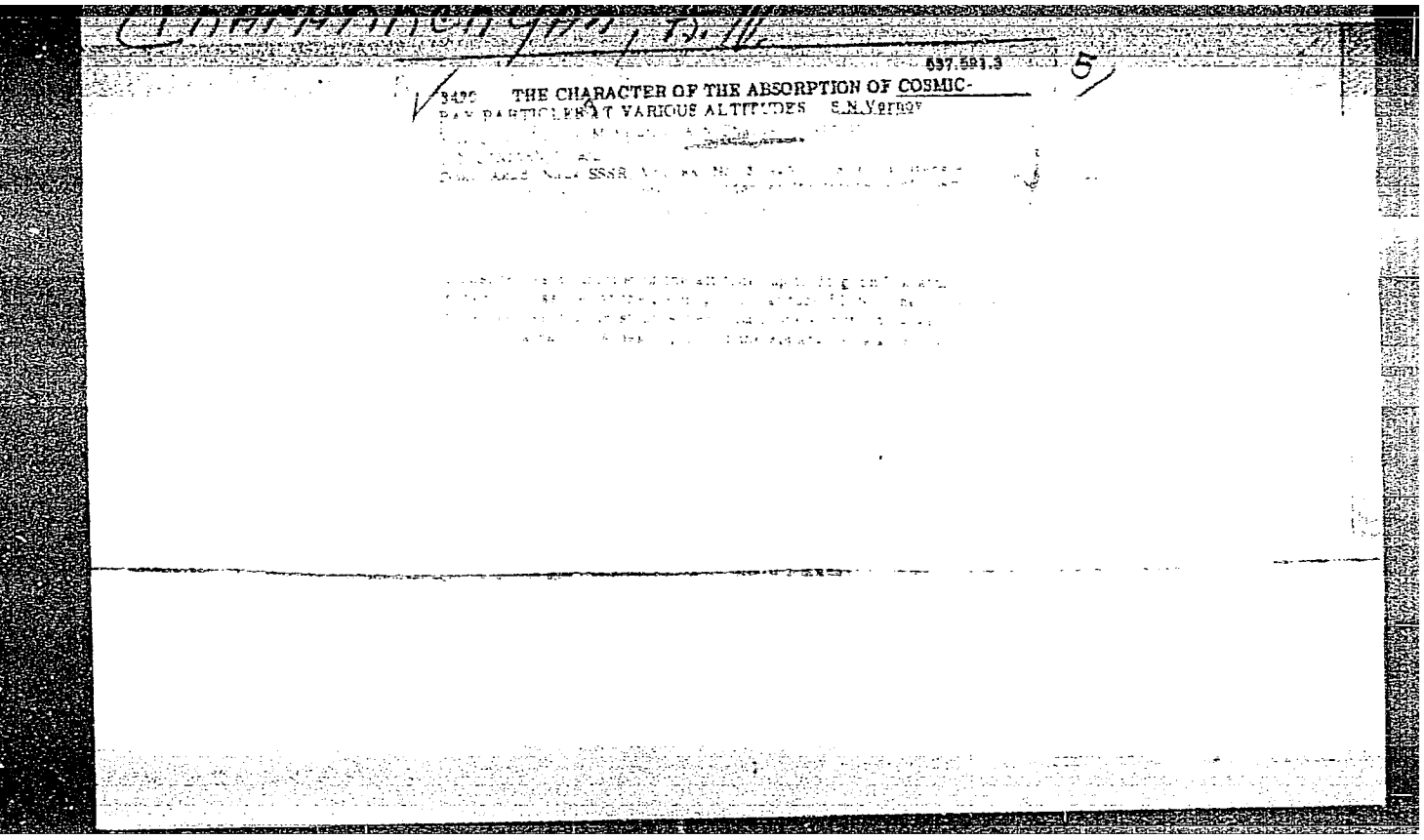
INVESTIGATION OF THE ELECTRON-NUCLEAR SHOWERS AND PENETRATING PARTICLES IN THE ATMOSPHERE AT DIFFERENT LATITUDES. S. N. Vernov and A. N. Charakhch'yan. Doklady Akad. Nauk S.S.S.R. 91, 487-90 (1953) July 21. (In Russian)

Measurements of the intensity of the ionizing component and the number of electron-nuclear showers in cosmic radiation were made at the geomagnetic latitudes 50°N, 31°N, and 3°S. The arrangement of the counting apparatus is diagrammed. The number of ionizing particles and number of electron-nuclear showers are graphed against the depth of Pb foil penetration. (J.S.R.)

Nuc Eng I

4-19-54
RML

See B-75312, 3 May 54 for additional comments.



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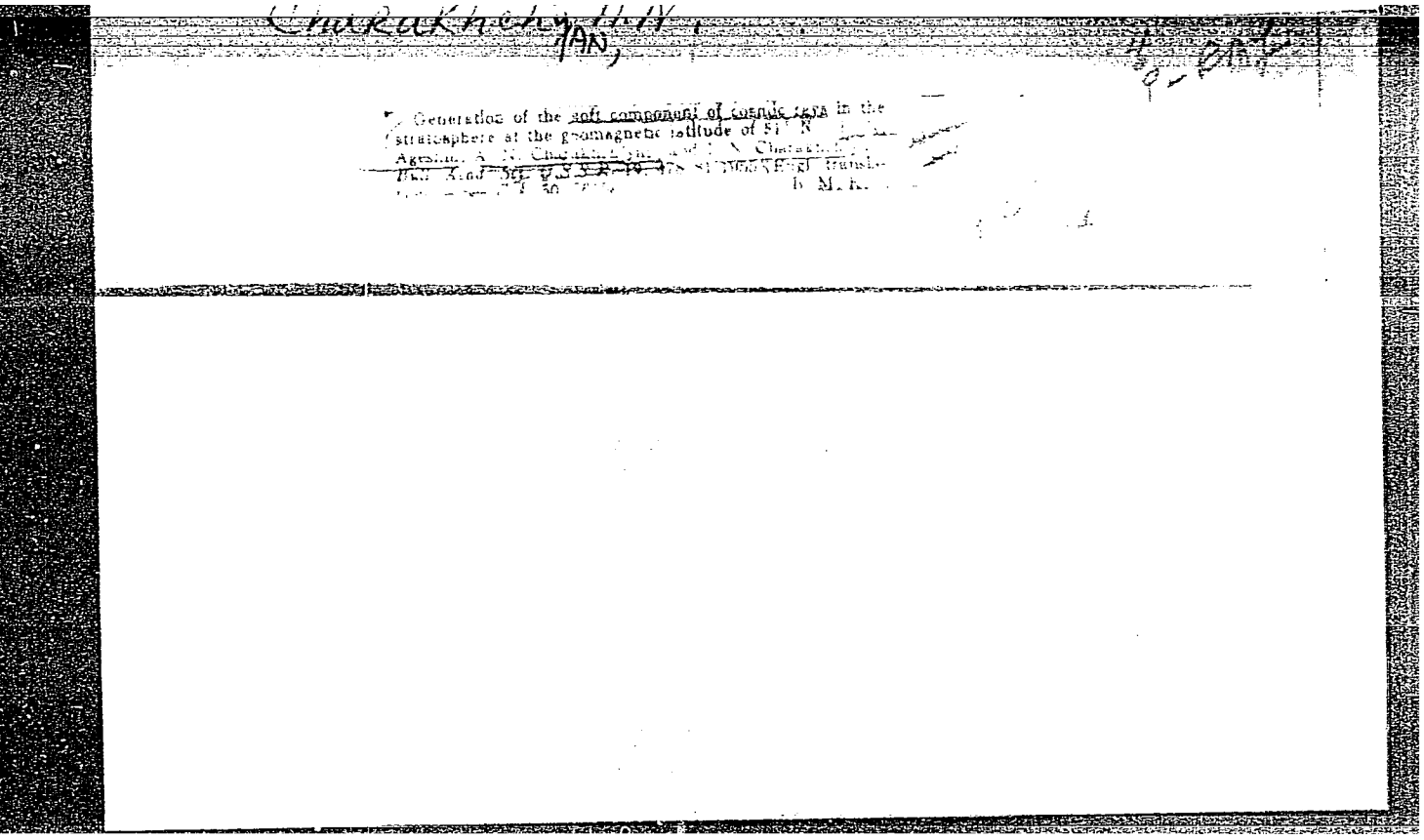
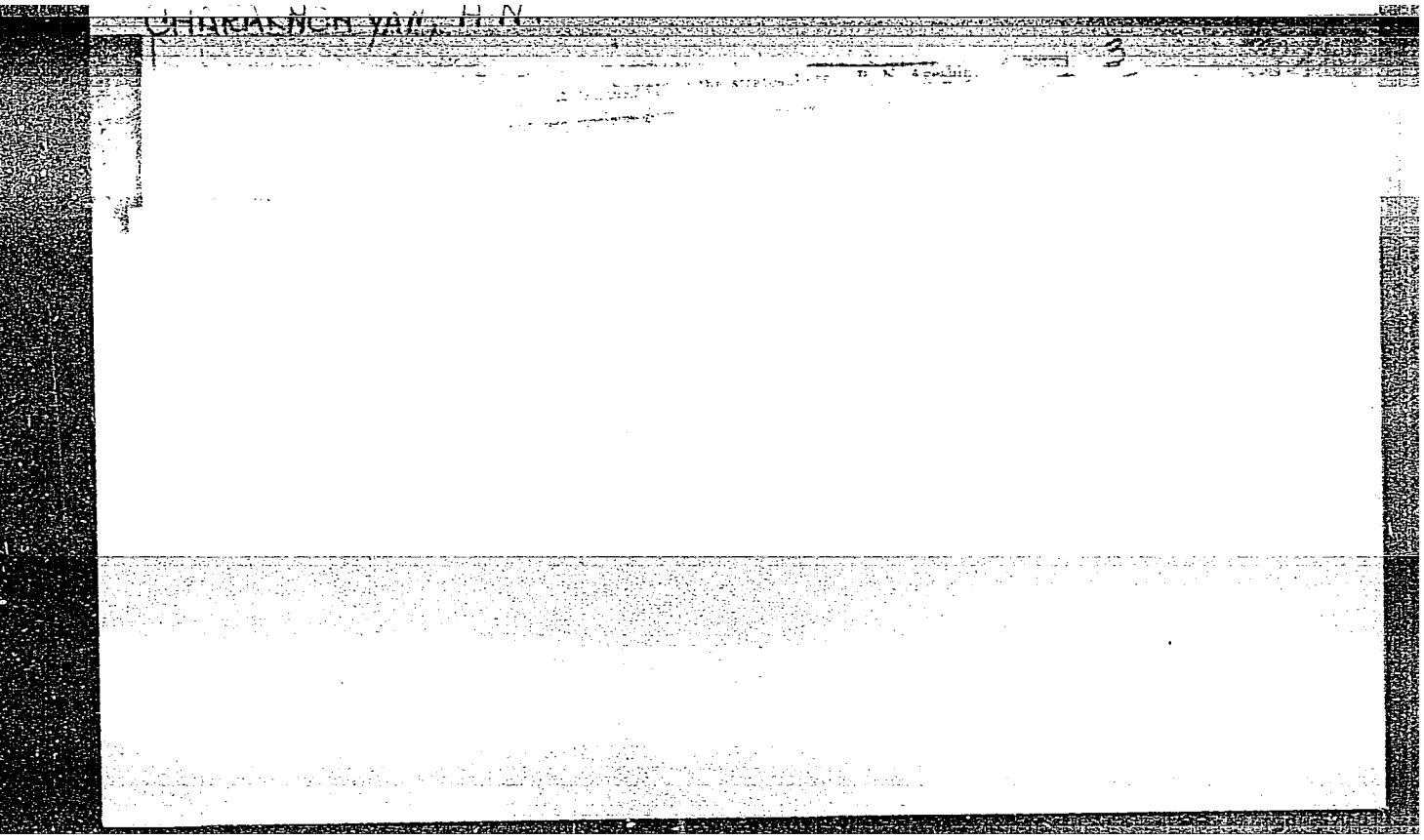
3429 THE CHARACTER OF THE ABSORPTION OF COSMIC-
RAY PARTICLES AT VARIOUS ALTITUDES S.N.Vernov

SSSR



Generation of the soft component of cosmic rays in the stratosphere at the geomagnetic latitude of 51° N



CHARAKHCH'YAN, A.N.

8727
INVESTIGATION OF ORIGIN OF COSMIC RAY COMPONENTS IN THE STRATOSPHERE AT GEOMAGNETIC LATITUDE 51°N. P. N. Ageshin, A. N. Charakhch'yan, and T. N. Charakhch'yan (Lomonosov Moscow State Univ.). Izvest. Akad. Nauk S.S.S.R. Ser. Fiz. 19, 533-541(1955) Sept.-Oct. (In Russian)

The available data for π^0 and π^+ meson spectra generation in the stratosphere and their decay scheme make it possible to calculate the electron-photon component transmissions through the atmosphere and to determine the electron energy spectra at various elevations. Experimental study to determine the relation of the number of soft component particles to the elevation, in transmission interval, of 0.4 to 0.9, 1.2 to 2.0, 2.0 to 6.6; on 6.6 to 11.3 g cm^{-2} glass or aluminum, was made with the counter telescope at 51°N latitude. The measurements of the particle numbers in the indicated intervals were made simultaneously with four telescopes in a single exposure of the equipment in the stratosphere. Two series of measurements gave results which coincided within the limits of statistical error. The presence of a large number of low-energy electrons at shallow depth, the continuous softening of electron transmission spectra with reducing depths, and the great effect of latitudes on low-energy electrons call for new assumptions about the existence of a special mechanism for generating electron-photon components of low energies in the stratosphere. (R.V.J.)

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A728

NARROW AIR SHOWERS IN THE STRATOSPHERE. P. S. Ageshin, A. N. Charakhch'yan and T. N. Charakhch'yan. (Lomonosov Moscow State Univ.) Izvest. Akad. Nauk S.S.S.R. Ser. Fiz. 19, 537-540(1955) Sept.-Oct. (In Russian)

Experimental measurements made in the stratosphere indicated a considerable number of coincidences caused by particles of side showers in cases where the counting telescope lacked one of its filters. The studies showed that these side showers can be interpreted as narrow air showers in the atmosphere. Schemes and diagrams of the experimental investigations are given. (R.V.J.)

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24(5) SOV/56-35-5-5/56

AUTHORS: Charakhch'yan, A. N., Charakhch'yan, T. N.

TITLE: Measurements of the Intensity of Cosmic Radiation in the Stratosphere at Various Altitudes and Latitudes (Izmereniya intensivnosti kosmicheskogo izlucheniya v stratosfere na raznykh vysotakh i shirotakh)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 5, pp 1088-1102 (USSR)

ABSTRACT: This very detailed and comprehensive work contains results obtained by measuring the altitude-dependence for particles of various ranges of the soft component of cosmic radiation. Measurements were carried out at 31 and 51° north latitude. The altitude dependence of electrons of a given energy is computed by means of the energy spectrum of muon production in the atmosphere. Calculated results agree well with measured results carried out at 31° north latitude, which indicates that the great majority of soft component particles consists of electrons produced by pions. Decay scheme: $\pi^{\pm} \rightarrow \mu^{\pm} + \nu$; $\mu^{\pm} \rightarrow e^{\pm} + 2\nu$ and $\pi^{0} \rightarrow 2\gamma$. Analysis of experimental and calculated values for 51° north latitude indicates the existence of an electron surplus with ranges below

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Measurements of the Intensity of Cosmic Radiation in the Stratosphere at Various Altitudes and Latitudes

$2 - 3$ g/cm^2. This phenomenon, which is very marked at 51°, is probably caused by γ-quanta emitted in the atmosphere in reactions involving neutron evaporation. The energy flux carried away by these surplus short range electrons comprises 10% of the total energy flux of the electron component in this latitude. The magnitude of the cosmic ray energy fluxes at the latitudes of 2°, 31° and 51° was also determined (Tables 4, 5). For the energy spectrum of primary particles an expression was derived with the help of the data concerning energy flux as well as of those concerning the intensity of cosmic radiation particles on the boundary of the atmosphere at 51 and 31° north latitude. For the primary cosmic particle flux on the equator $(N_p + N_\alpha)$ a new value was computed as amounting to 0.48 ± 0.04 particles per minute.cm^2.steradian. In conclusion, the authors thank Professor S. N. Vernov for his interest and for discussing results, and they also thank I. P. Ivanenko for valuable advice. There are 8 figures, 5 tables, and 23 references, 14 of which are Soviet.

SOV/56-35-5-5/56

Measurements of the Intensity of Cosmic Radiation in the Stratosphere at Various Altitudes and Latitudes

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR
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(Institute of Nuclear Physics at Moscow State University)

SUBMITTED: May 12, 1958

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Charakhchian, A. N.

"MEASUREMENT OF COSMIC RAY VARIATION IN THE STRATOSPHERE"
B. E. Samosudov, S. N. Vernov, V. F. Tulinov, A. N. Charakhchian and T. N. Charakhchian

Beginning with July 1, 1957 (when the IGY programme began) regular measurements have been made of cosmic ray intensity in the stratosphere at geomagnetic latitudes of 51°N and 64°N, while since March 1958 similar measurements have been taken also at geomagnetic latitude of 41°N. The measurements are made with a single G-M counter. During this period 840 stratosphere observations were made.

1. The data gathered have helped to establish the existence of a 27-day variation of cosmic rays in the stratosphere. The shape of the averaged wave is close to sinusoidal while the period is 27 or 28 days. The wave amplitude, however, changes more than 5-fold in the observed intervals. The obtained values for the amplitude of the 27-day variation in the stratosphere are 8 to 10-fold that of similar data on the Earth.

2. The existence in the stratosphere of long periodical variations of cosmic rays of extra-terrestrial origin has been discovered.

3. Values have been obtained for the cosmic ray latitude effect between latitudes of 64°N, 51°N and 41°N. It has been ascertained that the latitude effect between 64°N and 51°N undergoes substantial changes with time. The latitude effect between these latitudes in the maximum of the intensity curve amounts on the average to several per cent, and goes up abruptly with increase in altitude of observation reaching 15-20% at an altitude of approximately 30 km. Several cases of abnormal increase in

Sharakhchian, A. N. (continued)

cosmic ray intensity in the stratosphere at the latitude of 64°N have been discovered.

4. A correlation between 27-day variations of cosmic retiation and the floccula on the Sun, and a correlation between the long period cosmic ray variation and Sun spots has been established.

Report presented at the International Cosmic Ray Conference, Moscow, 6-11 July 1959

21(7)

AUTHORS: Vernov, S. N., Corresponding Member, Academy of Sciences, USSR, Tulinov, V. F., Charakhch'yan, A. N. SOV/20-122-5-11/56

TITLE: The 27-Day Variations of the Intensity of Cosmic Radiations in the Stratosphere (27-dnevnyye variatsii intensivnosti kosmicheskikh luchey v stratosfere)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 5, pp 788 - 791 (USSR)

ABSTRACT: The authors carried out a long series of measurements of the intensity of cosmic radiation in the stratosphere by means of spherical probes. These measurements form part of the program of the International Geophysical Year; they were duly begun on July 1, 1957 at two geomagnetic latitudes: 1) near Moscow ($\lambda = 51^{\circ}$, station Dolgoprudnaya, Nauchnaya stantsiya Fizicheskogo instituta AN SSSR)(Scientific Station of the Physics Institute AS USSR) and 2) near Murmansk ($\lambda = 64^{\circ}$, station Loparskaya, Severnaya

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The 27-Day Variations of the Intensity of Cosmic Radiations in the Stratosphere

SOV/20-122-5-11/56

Nauchnaya Stantsiya AN SSSR (Northern Scientific Station AS USSR)). The present paper gives some results obtained by measurements carried out at the latitude of 51° from July 1, 1957 to February 1, 1958, and at the latitude of 64° from July 1, 1957 to October 1, 1957. These measurements were carried out by means of the radiometeorograph RK-1, which contained a thin-walled self-quenched counter of the type STS-6. The pulses of this counter were transmitted by means of a radio-transmitter. A short report is made on the measurements of the height and on the gauging of the counters. The authors describe the results relating to the maximum of the intensity curve in the pressure interval of 50-90 g/cm^2. These results, which are shown by a diagram, seem to indicate a periodicity in the variations of the intensity of cosmic radiation in the stratosphere, viz. for both of the aforementioned latitudes. In the stratosphere the amplitude of the wave is from 8 to 10 times as great as the amplitude of the

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wave on sea level. Therefore the variations investigated are to a great extent caused by the primary cosmic particles of low energies. According to the data available for magnetic storms there is not in every case a connection between the variation of the intensity of cosmic radiation and the existence of magnetic storms. A semiperiod of the aforementioned variations lasted 14.3± 1 days. Next, a procedure for the more exact determination of this period is discussed. The authors thank P.N.Ageshin, V.V.Bayarevich, A.G.Bednyakov, V.A.Gladyshev, A.M.Istratova, A.F.Krasotkin, Yu.N. Komarov, F.Kh.Mochakov, I.K.Marshanov, and G.V. Churbanova for preparing the apparatus and for carrying out the experiments; they further thank Ye.S.Glokova, L.I. Dorman, and A.Ye.Chudakov for their discussing the results obtained. There are 3 figures and 5 references, 2 of which are Soviet.

The 27-Day Variations of the Intensity of Cosmic Radiations in the Stratosphere

SOV/20-122-5-11/56

ASSOCIATION: Fizicheskiy institut im. P.N.Lebedeva Akademii nauk SSSR (Physics Institute imeni P.N.Lebedev of the Academy of Sciences USSR)

SUBMITTED: May 24, 1958

Card 4/4

CHARAKHCHIAN, A. N.

"Energy spectrum of primary cosmic radiation"
A. N. Charakhchian, T. N. Charakhchian

Based on intensity data for the electronic μ -mesonic and nucleonic components of cosmic radiation at geomagnetic latitudes of 2°, 31° and 51°, values were obtained for the total flux of cosmic radiation energy at these latitudes. Furthermore, using cosmic radiation intensity data at the boundary of the atmosphere at latitudes of 51° and 31°, an expression was obtained for the energy spectrum of primary cosmic particles. A new value was obtained for the primary flux of cosmic ray particles $(N_p + N\alpha)$ at the equator (2°), namely 0.48 ± 0.04 particles min^{-1}, cm^{-2} $sterad^{-1}$.

report presented at the International Cosmic Ray Conference, Moscow, 6-11 July 1959

VERNOV, S.N.; TULINOV, V.F.; CHARAKHCH'YAN, A.N.

Measurement of cosmic ray variations in the stratosphere. Var. kosm. luch. pod zem., na ur. moria i v strat. no.1:48 '59. (MIRA 13:2)

(Cosmic rays)