KRITSKIY, Ye.L.; MINSTER, M.N.

New metal detectors for ferromagnetic ores. Obog. rud. 8 no.2:27-31 '63. (MIRA 17:2)

KRITSKIY, Ye.L.; MINSTER, M.N.

Industrial television sets for mining, ore dressing and metallurgical industries. Stal' 23 no.10:956-957 O '63. (MIRA 16:11)

KRITSKIY, Ye.L.; MINSTER, M.N.

Instruments and devices for controlling the level of hopper loads. TSement 29 no.4:4-5 Jl-Ag '63. (MIRA 16:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektnyy institut mekhanicheskoy obrabotki poleznykh iskopayemykh.

BAROCHINA, B.Ya.; KATUSHKIN, V.P.; MINSTER, V.Sh.; PITINOVA, L.V.; PANOVA, L.N.; TRUSOVA, T.N.

Testing of a unit for the recovery of carbon disulfide. Khim. volok. no.4:69-73 '63. (MIRA 16:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna (for Barochina, Katushkin, Minster).
2. Kalininskiy kombinat iskusstvennogo volokna (for Pitinova, Panova, Trusova).

MINTA, Przemyslaw

Peritonitis fibrosa encapsulans. Pol. przegl. chir. 37 no.8:797-798 Ag '65.

1. Z Oddzialu Chirurgicznego Szpitala Powiatowego w Bystrzycy Klodzkiej (Ordynator: dr. Z. Lelusz-Lachowicz).

BAROCHINA, B.Ya.; KATUSHKIN, V.P.; MINSTER, V.Sh.; ABOVSKIY, B.TS.; ALEKSANDROVICH, I.F.; ZERNOV, P.N.; SORINA, Ye.M.; DOLGOVA, I.M.; POZIN, Z.S.; SMYKOV, B.A.

Recovery of carbon disulfide from the steam-air mixture from centrifugal machines. Khim. volok. no.4:69-70, '64. (MIRA 18:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna (for Barochina, Katushkin, Minster). 2. Mogilevskiy zavod iskusstvennogo volokna (for all except Barochina, Katushkin, Minster).

MINTARSKI, B.; BELCHEV, M.

X-ray examination and x-ray pictures of severe intestinal obstruction. Khirurgiia, Sofia 10 no.2:130-138 1957.

1. Bulgarska bolnitsa - gr. sinidzhu, koreia Gl. lekar: G. Mitrov.
(INTESTINAL OBSTRUCTION, diag.
x-ray diag. (Bul))

MINTARSKI, B.; BELCHEV, M.

Roentgenographic examination and roentgenographic picture of the digestive tract. Khirurgiia, Sofia 10 no.12:1093-1099 1957.

1. Bulgarska bolnitsa--gr. Sinidzhu, koreia. Gl. lekar: G. Mitrov.
(GASTROINTESTINAL SYSTEM, radiography,
roentgenoscopic & roentgenographic methods (Bul))

MINTER, I.

RUMANIA/Chemistry of High Molecular Substances. I

Abs Jour: Referat. Zhurnal Khimiya, No 10, 1958, 34879.

Author : I. Minter, Simona Birnbaum.
Inst : Not given.
Title : Determination of Molecular Distribution Function in Caprolactam by Selective Resolution into Immiscible Liquid Systems.

Orig Pub: Rev. chim., 1957, 8, No 4, 271-278.

Abstract: The molecular distribution of polycaprolactam by its resolution into 2 ternary systems using cresol-gasoline and phenol-gasoline mixtures was studied.

Card : 1/1

[illegible] a closed vessel, H_2O being present in the reaction medium. Also the hydrolysis of polycaprolactam in a closed vessel in the presence of traces of H_2O is described.

Card 1/1

RUMANIA / Chemical Technology. Artificial and Synthetic Fibers. H-32

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 79817.

Author : Minter, I.
Inst : Not given.
Title : The Polyamide Ralon Fiber and Other Synthetic Fibers.

Orig Pub: Tehn. noua, 1958, 5, No 151, 3.

Abstract: An experimental unit producing the polyamide ralon fiber from a polycaproamide began its operation in RNR (Rumanian People's Republic). A combine with an ouput of 2,000 tons/year of ralon shall begin its operation in 1959 (starting stage — phenol). There are some experimental units being built for the production of poly-

Card 1/2

I. MINTER

3
2 May
1

Distr: 4E2c(j) 7

The continuous polymerization of acrylonitrile. I. Minter and Maria Coman. *Acad. rep. populare Romîne, Studii cercetări chim.* 6, 109–117(1958).—A 7.5% CH_2:CHCN aq. soln. was continuously fed into a glass app. at a rate of 360 ml./hr. with the temp. kept several hrs. at 25–35°. Efficiencies of 60–80% were obtained for polymers of mol. wt. 100,000. The polymerization was initiated by 1.5% $K_2S_2O_8$ + 0.5% $K_2S_2O_5$ and catalyzed by a 0.1% soln. of $Fe(NH_4)_2SO_4.6H_2O$ at pH 2.5. An atm. of N or CO_2 is advised. Neither H_2O_2 tried as initiator nor $CuSO_4$ tried as catalyst gave successful results. J. Segall

MINTER, I.

Distr: 4E2c(j)

4

JAS(MAJ)(EM)

1

/Linear polycondensation products with a furan ring in the macromolecular chain. I. Polyesters of 2,5-furandicarboxylic acid with ethylene glycol. I. Minter and Simona Birnbaum. *Rev. chim.* (Bucharest) 9, 420-1 (1958).—A mixt. of 2,5-furandicarboxylic (I) acid and its Me monoester was prepd. by oxidizing furfural to furoic acid, esterifying the latter, chloromethylating the Me ester, and oxidizing the $ClCH_2$ group with HNO_3. This (1 part) was then converted to the di-Me ester, m. 112°, and esterified with glycol (8 parts) in the presence of Zn acetate (0.1% based on I) at 210°, this temp. being attained gradually in 3 hrs. On removal of the glycol, condensed polyester was recovered as a granular material which may be useful as a *synthetic fiber*. Gary Gerard

WINTER, L

Preparation of some w-hydroxyacetophenones by a reaction of hydroxyacetylation of phenols with glycolonitrile. p. 111.

STUDII SI CERCETARI DE CHIMIE
Vol. 4, no. 1/2, Jan./June 1956
Rumania

Source: EAST EUROPEAN ACCESSIONS, (EEAL), Library of Congress. Vol. 5, No. 10. Oct. 1956

MINTS, A., akademik, laureat Leninskoy premii, Geroy Sotsialisticheskogo Truda

A powerful tool of the scientists. Radio no.8:20-21 Ag '65. (MIRA 18:7)

BYKOV, N.A.; MINTS, A.A.

Collaboration of track machinery stations and the division. Put' i put'khoz. 8 no.8:28-29 '64. (MIRA 17:9)

1. Nachal'nik Ternopol'skoy distantsii L'vovskoy dorogi (for Bykov).
2. Nachal'nik putevoy mashinnoy stantsii No.126, stantsiya Ternopol', L'vovskoy dorogi (for Mints).

KIBAL'CHICH, O.A.; MINTS, A.A.

Some problems of the transformation of nature and the economy of western Kazakhstan. Vop.geog. 28:102-113 '52. (MLRA 7:5)
(Kazakhstan--Economic geography) (Economic geography--Kazakhstan)

1. KIBAL'CHICH, O. A.: MINTS, A. A.

2. USSR (600)

4. Irrigation - Kazakhstan

7. Storage water irrigation in West Kazakhstan. Izv. Vses. geog. obshch. 84, No. 5, 1952.

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

MINTS, A.A.

USSR/ Geography - Agriculture

Card 1/1 Pub. 45 - 6/16

Authors : Mints, A. A.

Title : Some problems of the geography of subtropical agriculture in the Georgian Republic

Periodical : Izv. AN SSSR. Ser. geog. 6, 62 - 67, Nov - Dec 1954

Abstract : An account is given of the successful execution of a project for utilizing the subtropical regions of Georgia for growing certain plants and trees, the products of which were formerly imported; namely, tea, citrous fruits, tung tree, eucalyptus, laurel, bamboo, etc. The figures for the yearly production are given, as well as a description of the geographical conditions of the separate regions utilized. Map; table.

Institution: Acad. of Sc., USSR, Geographic Institute

Submitted: .....

MINTS, A. A.
Acad Sci USSR. Inst of Geography

MINTS, A. A.- "The humid subtropics of the Georgian SSR (geographical outline of agriculture)." Acad Sci USSR. Inst of Geography. Moscow, 1956.
(Dissertation for the Degree of Candidate in Geographical Sciences.)

SO: Knizhnaya Letopis' No. 13, 1956

LILIYENBERG, D.A.; MINTS, A.A.

Scientific conference of young scientists of the Institute of Geography of the Academy of Sciences of the U.S.S.R. Izv.AN SSSR. Ser.geol. no.1:157 Ja-F '56. (MLRA 9:7)
(Geography)

MINTS' A.A.

"Georgian S.S.R.; physical and economic geography." G.G.Gvelesiani, B.A.Klopotovskii. Reviewed by A.A.Mints. Geog. v shkole 19 no.3: 76-78 My-Je '56. (MLRA 9:9)
(Georgia--Geography) (Gvelesiani, Georgii Grigor'evich) (Klopotovskii, B.A.)

MINTS, A.A.; ORLOV, V.I.; ROSTOVTSEV, M.I.

Coordination conference on "The geography of the Soviet Union."
Izv. AN SSSR, Ser. geog. no.5:62-64 S-O '57. (MIRA 11:2)
(Geographical research)

MINTS, A.A.

30-7-28/36

AUTHOR MINTS, A.A., Candidate of Geography.

TITLE On the further Geographic Investigation of the U.S.S.R. (Issledovaniya po geografii SSSR - Russian)

PERIODICAL Vestnik Akademii Nauk SSSR, 1957, Vol 27, Nr 7, pp 105-106 (U.S.S.R.)

ABSTRACT This is a report on the consultation of the Institute for Geography of the Academy of Sciences which was held from April 2 to 4, 1957; E.M.Murzayeva (Physical geography) and S.N.Ryazantseva (economic geography) reported on the work done hitherto. In the post-war time a number of physical-geographical characteristics of Kazakhstan, western Siberia and of the European north were published. At present the Institute works on extensive physico-geographical treatises. Of special importance in this connection are the problems of methodology and the formation of districts. Many delegates participated in the discussion in which the importance of a rapid edition of the treatises was emphasized. Moreover it was suggested to the Institute to work out the characteristic of the climatic conditions of the U.S.S.R. in 12 great physico-geographical districts. From time to time consultations of coordination of the geographers of the Baltic Sea region, Transcaucasia and Siberia will be held.

ASSOCIATION Not Given.

PRESENTED BY

SUBMITTED

AVAILABLE Library of Congress.

Card 1/1

MINTS, A.A.

MINTS, A.A.

Main features of the agricultural use of the humid subtropical area of Georgia. Vop. geog. no.41:177-192 '57. (MIRA 10:12)
(Georgia--Agriculture)

MINTS, A. A. and KHOREV, B. S.

"Questions Concerning Economic-Geographical Typology of Socialist Cities Exemplified by Central Industrial Regions of The European Part of the USSR."

paper presented at the 4th Conference of Young Scientists of the Institute of Geography of the USSR Academy of Sciences, 1957 (Izv. AN SSSR, Ser Geog, 1958, No. 2, p 151-53, GORBUNOVA, M. N.)

AUTHOR: Liliyenberg, D.A., Mints, A.A. SOV-10-58-4-27/28

TITLE: A Conference of Young Scientists of the Moskvoretskiy Rayon, Moscow (Konferentsiya molodykh nauchnykh rabotnikov moskvoretskogo rayona g. Moskvy)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geograficheskaya, 1958, Nr 4, pp 152 - 154 (USSR)

ABSTRACT: From 7 to 11 April 1958, a conference of young scientists was held by the Komsomol organizations of scientific research institutes and the Moskvoretskiy RK VLKSM in Moscow. A.I. Verchenko, Secretary of the Moscow Gorkom and Ye.I. Borisov and S.I. Udachina, Secretaries of the Moskvoretskiy RK KPSS and RK VLKSM participated. Nobel Prize Winner, Academician N.N. Semenov and Academician D.I. Shcherbakov addressed the conference. The following reports were heard: A.M. Grin and D.A. Liliyenberg on "Young Scientists of the Moscow Region Striving For a Worthy Celebration of the 40th Anniversary of the Lenin Komsomol"; Yu. P. Veredchenko, I.A. Sokolov, Ya. Ya. Motuzov and B.A. Zimovets on the origin of the classification and agro-physical characteristics of soils and questions of geo-chemical zoning of the south, East Siberia and the Far East; Ye.S. Bazilevs-

A Conference of Young Scientists of the Moskvoretskiy Rayon ., Moscow

ka, Ye.V. Zamorina and V.A. Molodtsova on chemical and mineral compounds of sediments in the irrigation system, and on questions concerning the improvement of soil in the cases of Central Asia; B.P. Gradusov on electronic microscopic research of soil colloids; R.V. Nikolayeva on the continental discharge system of the Caspian Sea; L.K. Malik on methodical questions of calculating the maximum floods in the basin of the river Ob'; S.S. Savina and Ye. N. Minayeva on peculiarities in the formation of the hydro-meteorological system during the vegetation period in the south-east European part of the USSR; Yu.N. Shvareva on the influence of local physical and geographical factors on the Kolkhida climate; V.F. Klimova and N.S. Kazanskaya on the botanical and geographical profile of the Bargruzin syncline and the Amuro-Zeysk lowland; N.S. Blagovolin on the structure and geomorphological peculiarities of the Kerch'-Taman Oblast'; D.A. Liliyenberg on the form and character of the reflection of the latest tectonic movements in the East Caucasian relief; V.P. Chichagov on the morphology of the south-east Baikal region; T.M. Piotrovskaya on the formation of the relief of the Patomskoye highlands and the conditions for gold-bearing sand;

Card 2/3

A Conference of Young Scientists of the Moskvoretskiy District, Moscow

N.V. Ryabkov on the importance of geo-morphological research for planning hydro-electric constructions; K.O. Lange on theoretical questions concerning the formation process of the banks of big water reservoirs; I.P. Skorodumova on theoretical and methodical questions concerning the problem of economic zoning; A.A. Mints and B.S. Khorev on the results of analyzing the territorial connection of various mountain types; V.S. Makarov on the investigation of technical and economic indicators of iron ore deposits in the Urals; G.P. Matveyev on the agricultural problem of the Chuvash ASSR: V.L. Gorovoy, D.A. Golovkin, and A.V. Tikhonov on the economic and geographical features of various regions; G.A. Privalovskaya on the economic and geographical zoning of the Kostroma forests in the Volga region; Ya.M. Berger on the geographical conditions for the development and distribution of cotton growing in communist China.

1. Scientific personnel--USSR

Card 3/3

MINTS, A.A.

Conference on the Publication of Geographical Studies. Izv.AN SSSR.Ser.geog. no.5:150-151 S-O '58. (MIRA 11:12)
(Geography)

3(

SOV/10-59_4-25/29

AUTHORS: Velichko, A.A., and Mints, A.A.

TITLE: The Sixth Conference of Young Scientific Workers of the Institut Geografii AN USSR (Institute of Geography AS USSR)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geograficheskaya, 1959,Nr 4, pp 152-154 (USSR)

ABSTRACT: The article covers the Sixth Conference of Young Scientific Workers of the Institute of Geography AS USSR which took place in mid-March, 1958. 35 reports were read by the following scientific workers. I.S.Glukh reported on "Some Genetic Regularities in the Distribution of Atmospheric Precipitation", V.M. Kotlyakov and S.A. Yevteyev commented on structural methods in snow and ice research in the Antarctic region; L.F. Kunitsyn spoke on the connection between the relief and hydrographical network and the latest tectonic movements in the Northern

Card 1/5

The Sixth Conference of Young Scientific Workers of the Institut Geografii AN USSR (Institute of Geography AS USSR)

Trans-Ural Area. S.P. Ovchinnikova evaluated the evaporation according to the water balance method from the African continent; N.Ya. Mironova discussed evaporation problems in the gulf of Kara-Bogaz-Gol; I.M. Lebedeva and Ye.N. Minayeva reported on the impact of solar radiation on snow during its melting in the Trans-Volga region; A.V. Yashina spoke on snow radiation near the Elbrus Weather Station; Ye.Ye. Gurtovaya lectured on snow conditions in the mountains of Central Caucasus; N.N. Orlov reported on his new method to measure the amount of snow carried by winds, whereby snow-flakes are recorded by a photoelectric device; Yu.L. Rauner, Yu.L. Karpova, and N.I. Rudnev spoke on the heat balance observations they compiled at the Zagorskaya Scientific Station near Moscow; S.V. Bass lectured on spring water discharge and soil washout also studied there; N.N. Dreyer and I.N.Stezhenskaya lectured on how to

The Sixth Conference of Young Scientific Workers of the Institut Geografii AN USSR (Institute of Geography AS USSR)

calculate the maximal spring water discharge in the Yenisey and Lena rivers according to the method of M.F. Sribnyy; R.V. Nikolayeva lectured on sea levels of the Caspian sea during the V-XIX centuries and Z.I. Martynova on the lake levels in the Turgay depression during 1849-1958; L.I. Mukhina reported on the rivers and lakes of the Vitim plateau; N.V. Ryabkov discussed Pliocene forms of relief in the river valleys of the Kama basin; A.A. Velichko elucidated on loess deposits in the central areas of the Russian plain; D.A. Liliyenberg lectured on "Torrent-Like Phenomena in Daghestan" and A.Ye. Yermakov on "Classification of Torrents in Central Caucasus"; A.G. Chikishev gave a geobotanic survey of the Central Urals; N.M. Stupina lectured on the division of the Trans-Ural wood-and-steppe area into single relief types;

The Sixth Conference of Young Scientific Workers of the Institut Geografii AN USSR (Institute of Geography AS USSR)

M.Ye. Gorodetskaya explained how the hollows on the left bank of the Irtysh river near Pavlodar originated; N.K. Kritskaya gave a short physical and geographical survey on the Trans-Angara area; N.Ya. Venzher reported on her work experience in the analysis of a map of morphogenetic ground forms made by aerial photography in the Buryatskaya ASSR. D.A. Timofeyev discussed relief origin in the southern part of the Amur and Zeya rivers area; V.P. Chichagov compared morphological and morphometric methods to measure roll coefficients; O.N. Shubnikova and Yu.V. Morozov gave a zoogeographical survey on birds in the central part of the Yakutskaya ASSR; Ye.S. Shatsilo reported on the development of the **Karaganda** industrial area; A.V. Tikhonov discussed data on the distribution and specific features in the fishing economy of the **Evenkiyskiy** natsional'nyy okrug (Evenki National Area); V.L. Gorovoy and B.S. Khorev reported on the

The Sixth Conference of Young Scientific Workers of the Institut Geografii AN USSR (Institute of Geography AS USSR)

lumber industry in the Arkhangel'skaya oblast' and Gor'kovskiy ekonomicheskiy rayon (Gor'kiy Economic District) respectively; N.P. Shtutser and G.L. Mel'nikova lectured on the physical traits, population, and economy of the Land Baden-Wuerttemberg, West Germany. The conference was also attended by representatives of the Moskovskiy gosudarstvennyy universitet (Moscow State University), Tsentral'nyy institut prognozov (Central Institute of Prognoses), Institut merzlotovedeniya AN SSSR (Institute of Permafrost Research AS USSR), and other organizations. The following senior workers of the Institute of Geography AS USSR took part in the discussions: A.P. Gal'tsov, B.L. Dzerdzeyevskiy, L.D. Dolgushin, A.G. Doskach, N.B. Dumitrashko, M.I. L'vovich, S.N. Ryazantsev, M.F. Sribnyy, B.A. Fedorovich, and others.

3(

SOV/10-59-4-26/29

AUTHOR: Yu.A. Isakov

TITLE: Sixtieth Birthday of Professor A.N. Formozov

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geograficheskaya, 1959, Nr 4, pp 154-156 (USSR)

ABSTRACT: This is an article in honor of the sixtieth anniversary of the birth of Professor Aleksandr Nikolayevich Formozov, Doctor of Biological Sciences and Head of the Biogeographical Department of the Institut Geografii AN SSSR (Institute of Geography AS USSR). The article also mentions the names of the following scientists and organizations respectively: Academician I.P. Gerasimov, Professor V.G. Geptner, Professor E.M. Murzayev, the Institut prikladnoy zoologii i fitopatologii (Institute of Applied Zoology and Phytopatology), the Biologicheskiy fakul'tet Moskovskogo universiteta (Biological Department of the Mos-

Card 1/2

SOV/10-59-7- 25/25

AUTHOR: Mints, A.A.

TITLE: Discussion on the Journal of Abstracts "Geografiya" at the Moscow Branch of the Geographical Society of the USSR

PERIODICAL: Izvestiya Akademii nauk, SSSR, Seriya geograficheskaya, 1959, Nr 5, pp 139-140 (USSR)

ABSTRACT: The above mentioned periodical is published by the Institut nauchnoy i tekhnicheskoy informatsii AN SSSR (Institute of Scientific and Technical Information of the AS USSR) and it was discussed at the session of the Moscow branch of the Geograficheskoye obshchestvo SSSR (Geographical Society of the USSR). The chief editor of the periodical, V.V. Pokshishevskiy, described the periodical as a main source of information for Soviet scientists and specialists in many branches of industry. In the ensuing discussions some criticism was voiced by S.P. Khromov, Yu.K. Yefremov

Card 1/2

A Discussion of the Journal of Abstracts "Geografiya" in the Moscow Branch of the Geographical Society of the USSR

N.I. Sokolov and others on the way in which this information was issued. Some members found that the periodical reviewed too many well-known Soviet books and articles. V.V. Pokshishevskiy did not agree with this. He said that the periodical was widely read abroad and it would be wrong not to give extensive information ab..ut the achievement of Soviet geographical science.

SOV/6-59-8-15/27

3(2)

AUTHORS: Leont'yev, N. F., Candidate of Technical Sciences, Martynova, Z. I., Mints, A. A., Candidate of Geographical Sciences

TITLE: On the Atlas of Belorusskaya SSR (Ob Atlase Belorusskoy SSR)

PERIODICAL: Geodeziya i kartografiya, 1959, Nr 8, pp 58-63 (USSR)

ABSTRACT: The atlas of Belorusskaya SSR was published in 1958. It has 140 pages, and the edition comprises 15,000 copies. It contains 8 general and political administration maps, 56 general geographical maps, 8 physical maps, 48 economic maps, 9 ethnographical maps, and 9 historical maps. The climatic chart and the map of peat deposits are excellent. The forest map and geobotanical map are not entirely in agreement with one another. The fauna map is highly interesting. A scheme of the economic relations of the Republic with other areas of the USSR is also given. The characterization of the population is not exhaustive in the ethnographical maps. A particular advantage of the atlas lies in the fact that maps of individual oblast' of the Republic, namely physical, administrative, and economic maps of each of the oblast' are also inserted.
There is 1 Soviet reference.

Card 1/1

MINTS, A.A.

Coal wealth of the U.S.S.R. Geog.v shkole 22 no.4:72-78 Jl-Ag '59. (MIRA 12:11)
(Coal)

MINTS, A.A.; KHOREV, B.S.

— Attempt at an economic and geographic typology of Soviet cities; based on data for the central industrial district. (MIRA 12:5)
Vop.geog. no.45:72-88 '59.
(Cities and towns)

MINTS, A.A.

Industrial geography of Moscow Province. Vop.geog. no.49:16-26 '60. (MIRA 13:8)

(Moscow Province--Industries)

MARTYNOVA, Z.I.; MINTS, A.A.

Geographical atlas of Tambov Province. Geod.i kart. no.5:65-68 My '61. (MIRA 14:6)

(Tambov Province--Maps)

MINTS, Aleksey Aleksandrovich; MALAYEVA, S.L.; RYAZANTSEV, S.N., otv. red.; YEROFEYEV, I.A., red.; KONOVALYUK, I.K., mladshiy red.; GOLITSYN, A.V., red. kart; VILENSKAYA, E.N., tekhn. red.

[The Moscow environs; economic and geographical features] Podmoskov'e; ekonomiko-geograficheskaia kharakteristika. Moskva, Gos.izd-vo geogr. lit-ry, 1961. 301 p. (MIRA 15:1)
(Moscow region--Economic geography)

MINTS, A.A.

Some characteristics of the formation and development of the central region. Izv. AN SSSR. Ser. geog. no.1:79-88 Ja-F '61. (MIRA 14:2)

1. Institut geografii AN SSSR.
(Economic zoning)

MINTS, A.A.; NAZAREVSKIY, O.R.

Regional conference of economic geographers of the Baltic Republics. Izv. AN SSSR. Ser. geog. no.1:166-168 Ja-F '61. (MIRA 14:2)
(Baltic States—Economic geography—Congresses)

MINTS, A.A.

The Central Region. Geog. v shkole 24 no.4:9-18 Jl-Ag '61. (MIRA 14:8)

(Central industrial region)

MINTS, A.A.

Economic-geographical regionalization of Moscow Province. Vop.geog. no.51:20-26 '61. (MIRA 14:6)
(Moscow Province—Economic geography)

DAVIDOVICH, V.G.; KOVALEV, S.A.; MINTS, A.A.; NAZAREVSKIY, O.R.;
POKSHISHEVSKIY, V.V.; POMUS, I.M.; RYAZANTSEV, S.N.;
FREYKIN, V.G.; KHOREV, B.S.

Nikolai Ivanovich Lialikov; obituray. Izv. AN SSSR. Ser. geog
no.1:166-167 Ja-F '62. (MIRA 15:2)
(Lialikov, Nikolai Ivanovich, 1900-1961)

MARTYNOVA, Z.I.; MINTS, A.A.

Atlas of the Armenian S.S.R. Geod.i kart. no.4:53-57 Ap '62.
(MIRA 15:12)

(Armenia—Maps)

DOLGOPOLOV, G.V.; KAZANSKIY, N.N.; KRYUCHKOV, V.G.; MAYERGOYZ, I.M.; MINTS, A.A.; NAZAREVSKIY, O.R.; PETRYAYEVA, D.A.; POKSHISHEVSKIY, V.V.; PRIVALOVSKAYA, G.A.; PULYARKIN, V.A.; RYAZANTSEV, S.K.; FREYKIN, Z.G.; KHOREV, B.S.

Gennadii Petrovich Matveev; obituary. Izv. AN SSSR. Ser.geog. no.6:144-145 N-D '62. (MIRA 15:12)
(Matveev, Gennadii Petrovich, 1926-1962)

MINTS, A.A.; MALAYEVA, S.L.

Main features of the rural distribution of population in the central [redacted] zone. Vop. geog. no.56:141-161 '62. (MIRA 15:7)

(Villages)

MINTS, A.A.; RYAZANTSEV, S.N.; KHOREV, B.S.

Ways to develop the regions of central Russia. Vop. geog. no.57:194-214 '62. (MIRA 15:10)
(Economic zoning) (Russia—Industries)

MARTYNOVA, Z.I.; MINTS, A.A.

Atlas of Irkutsk Province. Geod. i kart. no.5:55-60 My '63.
(MIRA 16:7)

(Irkutsk Province—Maps)

MINTS, Aleksey Aleksandrovich; MALAYEVA, S.L.; LYALIKOV, N.I., prof., retsenzent; RODIONOVA, F.A., red.; BORISKINA, V.I., red. kart; TATURA, G.L., tekhn. red.

[Central Industrial Region; a study of its economic geography] TSentral'nyi raion; ekonomiko-geograficheskii ocherk. Posobie dlia uchitelei. Moskva, Uchpedgiz, 1963. 180 p. (MIRA 16:9)

(Central Industrial Region--Economic geography)

DOLGOPOLOV, K.V., otv. red.; MINTS, A.A., otv. red.; TOKSHISHEVSKIY, V.V., red.

[Geographical problems of developing the important economic regions of the U.S.S.R] Geograficheskie problemy razvitiia krupnykh ekonomicheskikh raionov SSSR. Moskva, Mysl', 1964. 517 p. (MIRA 17:10)

1. Akademiya nauk SSSR. Institut geografii.

MARTYNOVA, Z.I.; MINTS, A.A.

A comprehensive atlas of the Azerbaijan S.S.R. Izv. AN SSSR. Ser. geog. no.3:119-123 '64. (MIRA 17:6)

MINTS, A.A.

First geographical monograph on the distribution of rural population in the U.S.S.R. Izv. AN SSSR Ser. geog no.4:153-155 '64
(MIRA 17:8)

GERASIMOV, I.P.; MINTS, A.A.

The 20th International Geographical Congress; London, July 20-28, 1964. Izv. AN SSSR Ser. geog. no.6:119-121 N-D '64
(MIRA 18:1)

MINTS, A.A.; MARTYNOVA, Z.I.

New comprehensive atlas. Geod. i kart. no.12:60-64 D '64. (MIRA 18:2)

KORZHUYEV, S.S.; VITVITSKIY, G.N.; YEGOROV, O.V.; NAUMOV, S.N.; ZOL'NIKOV, V.G.; KARAVAYEV, M.N.; KACHURIN, S.P.; KOSMACHEV, K.P.; Prinimali uchastiye: KORONKEVICH, N.I.; D'YAKONOV, F.V.; GERASIMOV, I.P., akademik, red.; PREOBRAZHENSKIY, V.S., red.; RIKHTER, G.D., red.; ABRAMOV, L.S. red.; ARMAND, D.L., red.; GELLER, S.Yu., red.; ZONN, S.V., red.; DZERDZEYEVSKIY, B.L., red.; KOMAR, I.V., red.; LAVRENKO, Ye.M., red.; LEONT'YEV, N.F., red.; LETUNOV, P.A., red.; L'VOVICH, M.I., red.; MESHCHERYAKOV, Yu.A., red.; MINTS, A.A., red.; MURZAYEV, E.M., red.; NASIMOVICH, A.A., red.; POKSHISHEVSKIY, V.V., red.p POMUS, M.I., red.; ROZOV, N.N., red.; SOCHAVA, V.B., red.; FORMOZOV, A.N., red.; YANSHIN, A.L., red.

[Yakutia] IAkutiia. Moskva, Nauka, 1965. 464 p. (MIRA 18:8)

1. Akademiya nauk SSSR. Institut geografii. 2. Institut geografii AN SSSR (for Korzhuyev, Vitvitskiy). 3. Yakutskiy filial Sibirskogo otdeleniya AN SSSR (for Yegorov). 4. Moskovskiy oblastnoy pedagogicheskiy institut im. N.K.Krupskoy (for Naumov). 5. Pochvennyy muzey AN SSSR (for Zol'nikov). 6. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova (for Karavayev). 7. Proizvodstvennyy nauchno-issledovatel'skiy institut stroitel'stva Gosstroya SSSR (for Kachurin). 8. Institut geografii Sibiri i Dal'nego Vostoka Sibirskogo otdeleniya AN SSSR (for Kosmachev).

MINTS, A.A.

Problems of the comprehensive evaluation of natural conditions and natural resources in the light of the [redacted] geograph. Izv. AN SSSR. Ser. geog. no.2:65-76 Mr-Ap '65. (MIRA 18:4)

1. Institut geografii AN SSSR.

GERASIMOV, I.P.; MINTS, A.A.; NAZAREVSKIY, O.R.; FEDOROVICH, B.A.

Present state of the geographical science in Kazakhstan (in connection with the 3d conference of geographers of Kazakhstan). Izv. AN SSSR. Ser. geog. no.5:117-119 S-O '65. (MIRA 18:10)

MINTS, A.A.; MURATOV, V.M.; FRIDLYAND, V.M.

Hungarian geographers in the search of new ways for practical application of the results of scientific research. Izv. AN SSSR. Ser. geog. no.5:120-123 S-O '65. (MIRA 18:10)

GOKHMAN, V.M.; KOMAR, I.V.; MINTS, A.A.; MURZAYEV, E.M.; POMUS, M.I.; POPOV, K.M.; NAZAREVSKIY, O.R.

Vadim Viacheslavovich Pokshishevskii, 1905- ; his 60th birthday. Izv. AN SSSR. Ser. geog. no.5:135-136 S-O '65.

(MIRA 18:10)

MINTS, A.A.

Discussion of the methodological plan for determining the effectiveness of the location of industries. Izv. AN SSSR. Ser. geog. no.5:149-150 S-O '65. (MIRA 18:10)

MINTS, A .A.

Fourth plenary session of the Commission on Methods of Economic Regionalization of the International Geographical Union. Izv. AN SSSR. Ser. geog. no.6:124-126 N-D '65. (MIRA 18:11)

MINTS, A.G.

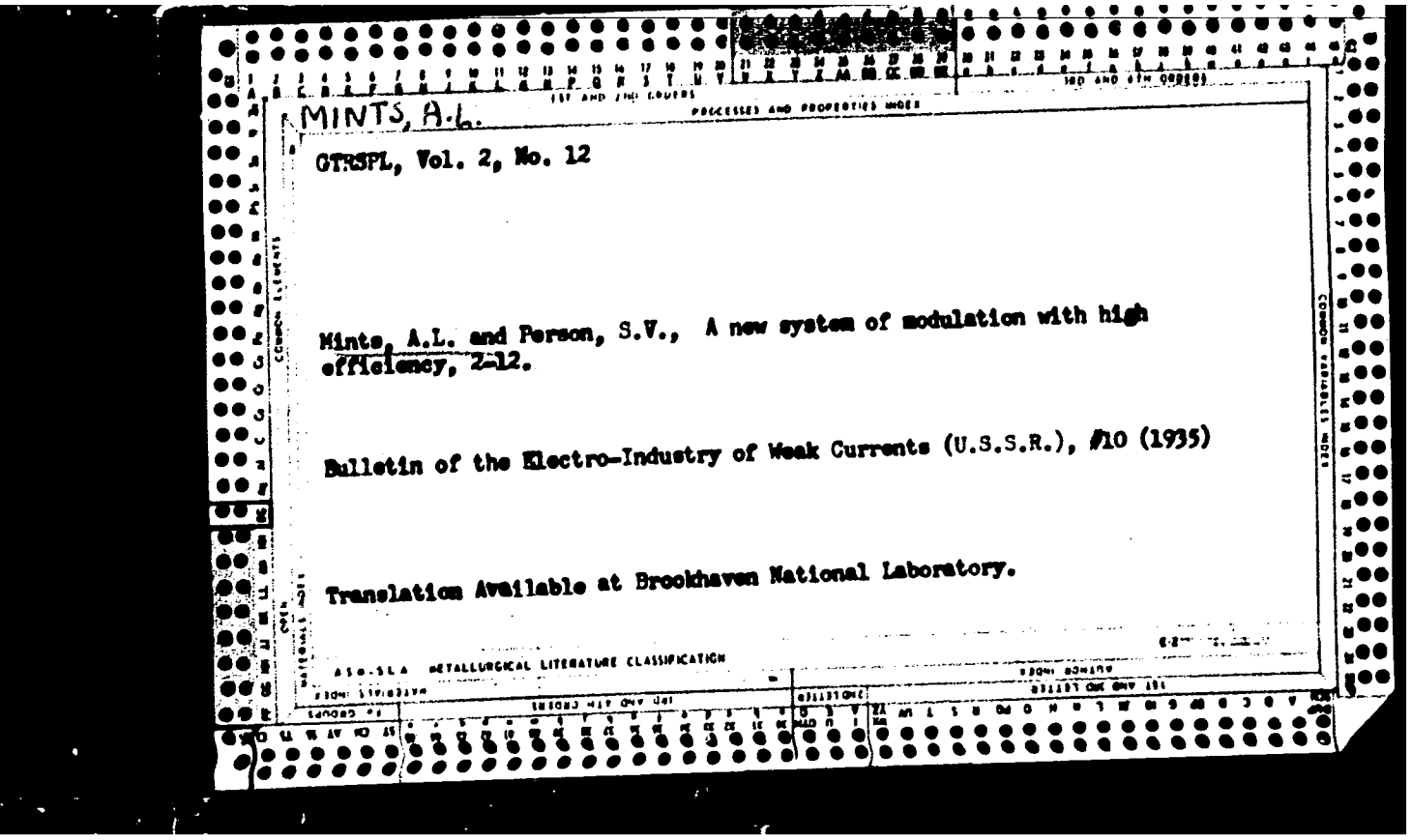
Adaptability of young fish to the oxygen content of water.
Vop. ikht. no.11:102-115 '58. (MIRA 12:1)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut morskogo rybnogo khozyaystva i okeanografii.
(Fishes--Physiology)
(Oxygen--Physiological effect)
(Adaptation (Biology))

MINTS, A.G.; KHAYRULINA, Ye.N.

Organizing pond fish farming in peat banks. Trudy sov. Ikht. kom. no.14:107-112 '62. (MIRA 15:12)

1. Vserossiyskiy nauchno-issledovatel'skiy institut prudovogo rybnogo khozyaystva (VNIPRKh).
(Fishponds)
(Fish culture)



MINTS, A.L.

GTRSPL, Vol. 2, No. 12

Mints, A.L. and Person, S.V., A new system of modulation with high efficiency, 2-12.

Bulletin of the Electro-Industry of Weak Currents (U.S.S.R.), #10 (1935)

Translation Available at Brookhaven National Laboratory.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

MINTS, Aleksandr L'Vovich

Moshchnoe radiostroenie v SSSR. [Powerful radio construction in the USSR]. (Radio, 1947, no. 11, p. 19).

DLC: TK540.R76

500-kilovattnaia radiostantsiia. [500 kilowatt radio broadcasting station]. Moskva Sviaz'tekhizdat, 1934. 50 p.

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

MINTS. Aleksandr L'vovich.

The achievements of Soviet radio-engineering for 30 years. Moskva (Pravda) 1948.
2[illegible] p. (50-19015)

TK6548.R9M5

HINTS, A. L.

"Stalin's Responsibility Concerning the Development of Radio Technology."
Voyennyy Svyazist, No 12, 1949.

MINTS, A.

Mints, A., "Stalin's Responsibility Concerning the Development of Radio Technology." Voyennyy Svyazist, No 12, 1949.

1. MINTS, A. [L.]

2. USSR (600)

4. Television

7. Soviet radio engineering during the past thirty-five years. Radio no. 11, 1952.

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

USSR/ Miscellaneous - Radio amateurs

Card 1/1 Pub. 89 - 4/31

Authors : Mints, A., Correspondent-Member of the Academy of Sciences of the USSR, Laureate - Winner of Stalin Prize

Title : Radio-engineering enthusiasts

Periodical : Radio 11, 8-10, Nov 1954

Abstract : The development of radio in the USSR from the beginning of the Revolution until the present time is attributed to the enthusiasm and hard work of the Soviet radio-amateurs and specialists. The technical progress in the field of radio and the gradual stages of its development in the USSR are reviewed. The names of the pioneers in the Soviet radio-movement are listed, and the means employed, in order to enlarge the circle of people actively engaged in radio-work, are described.

Institution : ...

Submitted : ...

SAVEL'IEV, V.; DEM'YANOV, V.; MINTS, A.

Ion traps. Radio no.12:39-41 D '55. (MIRA 9:4)
(Television--Picture tubes)

KLIMTS, A.L., NEVIANSKIY, I.N., POLYAKOV, B.I., [illegible]

R.F. system for the 680 MeV machine

CERN-Symposium on High Energy Accelerators and Pion Physics

Geneva 11-23 June 56
In Branch #5

MINTS, A.L. (U.S.S.R) VLADIMIRSKIY, V.V., KOMAR, E.G.

Basic considerations on the 7 GeV and 50-60 GeV
A.G. proton synchrotrons.

CERN-Symposium on High Energy Accelerators and Pion Physics

Geneva 11-23 June 56
In Branch #5

MINTS, A.L.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1480

AUTHOR EFREMOV,D.V., MEŠČERJAKOV,M.G., MINC,A.L., DŽELEPOV,V.P.,IVANOV,P.P., KATYŠEV,V.S., KOMAR,E.G., MALYŠEV,I.F., MONOSZON,N.A., NEVAŽSKIJ,I.CH., POLJAKOV,B.I., ČESTNOJ,A.V.

TITLE The 6m-Synchrocyclotron of the Institute for Nuclear Problems in the USSR.

PERIODICAL Atomnaja Energija, 1, fasc.4, 5-12 (1956)
Issued: 10 / 1956 reviewed: 11 / 1956

The 5m-synchrocyclotron, which was built in 1949, was rebuilt in 1953 by the addition of a new vacuum chamber with a diameter of 6 m of the poles of the electromagnet. The energy of the accelerated protons was thereby increased to 680 MeV and the average amperage in the exterior orbits now amounts to 0,3 microampères. Also a new high frequency resonance system was built. The synchrocyclotron, after being reconstructed in the manner described, now furnishes intense bundles of positive and negative pions (up to 400 MeV) and of neutrons up to 600 MeV. By a minor modification of certain elements of the resonance system it is possible to obtain also deuterons of up to 420 MeV and α-particles of up to 840 MeV.
The individual parts (electromagnet, resonance system high frequency generator, vacuum system, ion source, emission of particles), the arrangement of these parts and control of the synchrocyclotron are described in detail.
The main items of nuclear research carried out by means of this instrument are: The elastic scattering of protons by protons, of neutrons by protons, and of

neutrons by neutrons; the production of charged and neutral pions on the occasion of collisions between nucleons and nucleons; the interaction of pions with nucleons. Furthermore, the interaction of nucleons and pions with atomic nuclei is studied.

Summary: This accelerator is at present the largest of its type throughout the world. It is used systematically by ten physical and chemical institutes of the Academy of Science in the USSR for purposes of nuclear research. The accelerator works regularly for 100 to 105 hours a week. It is possible to work out investigations of 13 bundles of protons, neutrons and pions of high energy.
The accelerator is the product of the work performed in the course of several years by numerous scientists, engineers, and constructors. It was built by the cooperation of many, particularly electrotechnical factories. In connection with the development of various of its parts a considerable amount of physical, electrotechnical, radiotechnical, electronic, and vacuumtechnical research work was performed. Many difficulties could be foreseen, others were overcome in the course of initial work. The upper energy limit for this method of acceleration is apparently near ~ 1000 MeV.

INSTITUTION:

MINTS, A.L.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1508
AUTHOR VEKSLER,V.I., EFREMOV,D.V., MINC,A.L., WEJSBEJN,M.M., BODOP'JANOV,F.A., GAŠEV,M.A., ZEJDLIC,A.L., IVANOV,P.P., KOLOMENSKIJ,A.A., KOMAR,E.G., MALYŠEV,L.F., MONOSZON,N.A., NEVAZSKIJ,I.CH., PETUCHOV,V.A., RABINOVIČ,M.S., RUBČINSKIJ,S.M., SINEL'NIKOV,K.D., STOLOV,A.M.
TITLE The 10 BeV Synchrophasotron of the Academy of Science in the USSR
PERIODICAL Atomnaja Energija, 1, fasc.4,22-30 (1956)
Issued: 10 / 1956

A short survey of the most important parameters and components of this accelerator is given. At first the share taken by various institutes in the development and construction of the accelerator is dealt with. The equipment of the accelerator is ready, and final work is in the act of being performed. The frequency of the accelerating voltage is modified in a manner that is proportional to the velocity of the protons (autophasing). The annular magnet consists of 4 quadrants separated by straight intervals of 8 m length (with an average diameter of 28 m). One of these intervals contains a device for the introduction of the particles, two others contain the accelerating electrodes. One of the intervals serves as an outlet for the particles. The photons are previously accelerated by means of a linear accelerator of from 8,5 to 9 MeV, after which they pass through a straight stretch of 10 m length and are then introduced into the chamber of the synchrophasotron after a revolution of 75^{o}. The orbit fluctuates slowly round the respective immobile equilibrium orbit passing

Atomnaja Energija, 1, fasc.4, 22-30 (1956) CARD 2 / 2 PA - 1508

through the center of the accelerating chamber and the particles perform rapid fluctuations round the respective orbit. In the case of a relative error of the frequency of ± 0,1% the radial shifts of the particles can attain $\Delta r = \pm 6$ cm. The amplitude of the radial phase oscillations was damped from 50 cm at the beginning to 1 cm at the end. A domain which is free from resonance was acertained. On the other hand the resonances with free oscillations, which are extremely dangerous in connection with the process of acceleration may in some cases be used for the improvement of the effect produced by the injection. Several problems connected with the construction of the accelerator are mentioned.
The electromagnet and its feed system. A system based upon the accumulation of energy in working loads serves the purpose of feeding the electromagnet. After the maximum field strength of 13.000 ørstedt is attained, the energy accumulated in the electromagnet is now transformed back into kinetic energy of working loads by the synchron machines which now act as motors. The main parameters of the system are: Maximum capacity 140.000 kVa, maximum amperage 12.800 a, maximum energy 11.000 V, four aggregates with parallel operation, 96 valve ignitors.
The vacuum system is based upon the two-vacuum system with an inside high vacuum chamber and exterior pre-vacuum chamber. In conclusion the high frequency system as well as the control of the injection processes and of the acceleration of the particles are discussed.

INSTITUTION:

MINTS, A.L.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1509

AUTHOR VLADIMIRSKIJ,V.V., KOMAR,E.G., MINC,A.L., GOL'DIN,L.L., KOŠKAREV,D.G., MONOSZON,N.A., NIKITIN,S.JA., RUBCINSKIJ,S.M. SKAČKOV,S.N., STREL'COV,N.S., TARASOV,E.K.

TITLE The Main Characteristics of the Projected Proton Accelerator for 30-60 BeV with Strong Focussing.

PERIODICAL Atomnaja Energija, 1, fasc. 4, 31-33 (1956)
Issued: 19.10.1956

The maximum energy selected is certainly sufficient for the multiple production of mesons and for the production of the antiparticles of all known types of elementary particles. With a particle energy of from 50 to 60 BeV the kinetic energy in the center of mass system attains 9 nucleon masses on the occasion of the collision of a proton with a single nucleon. The peak power used for feeding the magnet is about 100 megawatts. The weight of the magnet system is less than 22.000 t. For the stabilization of the phase near transition energy a system for the compensation of the oscillations of the length of the particle orbit is used in this project by means of which the critical energy is shifted to infinity. With this compensation process the enforced oscillations of particles, the energy of which is distinguished from the equilibrium momentum, are used. Every eigth magnet has an inversely directed magnetic field, and the order of this magnet is periodically changed. This compensation system makes it possible to attain rather high frequencies of the transversal oscillations of the particles, viz. 13,75 and 12,75 per revolution in the case of radial and vertical

oscillations respectively. The maximum field strength in the orbit is from 10.000 to 12.000 Ørstedt and the length of the orbit is 1483 m. The main parameters of the orbit, the tolerances for the accuracy of the magnetic field, the data concerning the feeding of the magnetic system, and the most important data concerning the high frequency system are shown in tables. Among others the following values are given: Total number of magnets: 120, radius of the curvature of the principal magnet: 166,1 m; permitted deviation of momentum: 0,5%; permitted deviation of field strength: 0,25%; duration of the increase of the magnetic field: 3,8 sec, 6 cycles per minute; maximum strength of excitation current: 12 000 a; maximum voltage: 8 000 V; peak power: 96 000 kVA; frequency of the accelerating field at the beginning and at the end of the cycle of acceleration: 2,624 and 6,068 megacycle respectively. The magnets must consist of 5 parts weighing 38 t each, but they have one common winding. The total weight of the magnets together with constructional elements amounts to 22 000 tons. The peak power of 100 megawatts is generated by means of generators with flywheels. A linear accelerator for 100 MeV serves as injector. The proton absorbs ~ 100 keV per revolution.

INSTITUTION:

P MINTS, A.L.

109-5-1/15

AUTHOR: Mints, A.L.

TITLE: Radio-Engineering and Electronics Problems Associated with the High-Power Cyclic Accelerators for Heavy Charged Particles (Problemy radiotekhniki i elektroniki moshchnykh tsiklicheskikh uskoriteley tyazhelykh zaryazhennykh chastits)

PERIODICAL: Radiotekhnika i elektronika, 1956, Nr 5, pp. 543-559 (USSR)

ABSTRACT: Essentially, the article consists of two parts: The first part (para 1-5) describes the principles and gives a historical outline of particle acceleration and accelerators; The second part (para 6-8) describes the electronic equipment of 3 Soviet built or designed high-power particle accelerators.

The first part sets forth the well-known facts of Western origin. The only claimed Soviet achievement is referred to (para4) as an "outstanding discovery of a Soviet physicist V.I. Veksler made in 1944" who "managed to eliminate the limitation of maximum energies of ions in cyclotrons". (V.I.Veksler, - New Method of Acceleration of Relativistic Particles, DAN SSSR, 1944, vol. 44, p. 393).

The second part detailed below describes in general features the electronic equipment of the 700-Mev synchro-cyclotron, the 10-Bev proton-synchrotron, and (the design stage of the) 50-Bev proton-synchrotron.

Card 1/6

Radio-Engineering and Electronics Problems Associated with the High-Power Cyclic Accelerators for Heavy Charged Particles

The 700-Mev synchro-cyclotron built at the Institute of Nuclear Problems (Institut yadernykh problem, AN SSSR) has the following characteristics: D-c electromagnet pole diameter 6 m; pole gap 600 mm; field intensity in the center of the gap 16.800 oersted; electromagnet weight 7.000 metric tons; radius of the useful magnetic field 278 cm; volume of the vacuum chamber 30 m^3; operating pressure in the chamber $6x10^{-6}$ mm Hg; high frequency of the electric field 26.0 to 13.6 mc throughout the acceleration cycle; accelerating voltage at the duant 15-20 kv; duant capacity to chamber 1.300 pf; reactive power within the duant system 20.000 kva; frequency of acceleration cycles 100 c/sec. The oscillatory circuit includes a frequency variator. The characteristic impedance at the duant edge is 7.5 ohms, at the transmission line 10.0 ohms. The maximum frequency used with the proton acceleration is twice as high as that used with deuton and α-particles acceleration. Both are still at a safe distance from the frequencies of spurious oscillations. I. Kh. Nevyazhskiy and B.I. Polyakov helped in solution of this problem. A special timing device allows to synchronize the operation of various equipment used in nuclear studies with the functioning of the synchro-cyclotron. The magnetic field pattern was explored with a specially developed beat-frequency instrument having a carbonyl-iron core probe that showed the sensitivity of $\pm 3x10^{-4}$ at 17.000-oersted field.

Radio-Engineering and Electronics Problems Associated with the High-Power Cyclic Accelerators for Heavy Charged Particles

The 10-Bev proton-synchrotron built at the Electro-Physical Laboratory, Academy of Sc., USSR (Elektrofizicheskaya laboratoriya AN SSSR) has the following characteristics:
The a-c ring-shaped electromagnet has III-shaped cross section and a 400-mm gap in the center of the middle leg; pole pieces are 2 m wide; the ring orbit for particles has the radius of 28 m. The ring electromagnet is divided into 4 sections, between each two being a straight-line 8-m long gap for injection equipment, accelerating electrodes, and particle extractors. The ring orbit is 200 m long. The gap magnetic field intensity grows from 150 to 13,000 oersteds over the acceleration cycle. The protons make about 4.5 million revolutions, i.e. travel about 900,000 km over the acceleration cycle. The vacuum chamber is exhausted by 56 high-vacuum steam-oil pumps located around its perimeter; chamber pressure is kept under 2 to 5×10^{-6} mm Hg.

Four a-c generators with aggregate capacity of 150,000 kva supply the electromagnet. Each generator has 55-ton flywheel for recuperation of energy and smoothing out the bumps on the power-supply system. The vacuum chamber has the volume of 160 m^3. Five acceleration cycles are possible in one minute; each cycle takes 3.3 sec.

109-5-1/15

Radio-Engineering and Electronic Problems Associated with the High-Power Cyclic Accelerators for Heavy Charged Particles

A number of electronic problems were solved in connection with the 10-Bev proton-synchrotron. A special master oscillator was developed for frequencies 150 kc through 1.5 mc controlled by the magnetic field intensity with accuracy better than $\pm 13^{-3}$. Transit-tube type 200-kw power amplifiers were developed. New precision methods for measurement of instantaneous frequency values and instantaneous field intensity values were developed. The stability of modulation characteristic of the master oscillator tested for 100 hrs was found to be better than $\pm$ 0.007%; the slope of the characteristic 70 kc/v. The relative level of spurious modulation in the 600 to 2,000-c range at the harmonics of the supply-network frequency was under 5×10^{-7} while the spectral density of the noise modulation was under 0.05 c^2/c. Two alternate devices were developed for the magnetic-field intensity control of the frequency; S.M.Rubchinskiy and F.A.Vodop'yanov were leading in the latter development.

Power amplifiers were developed under the direction of I. Kh. Nevyazhskiy by Yu.M. Lebedev-Krasin, G.M. Drabkin, and V.F. Trubetskoy.

The injection and the acceleration of h-f field had to be switched on with the accuracy $\pm$ 5 to 10 microseconds. Special devices insuring that accuracy were developed by S.M. Rubchinskiy, M.M. Veysbeyn, and A.A. Vasil'yev.

Card 4/6

Radio-Engineering and Electronics Problems Associated with the High-Power Cyclic Accelerators for Heavy Charged Particles

The 50-Bev proton-synchrotron is being designed by the Academy of Sciences. It will be built by 1960 or later. Strong magnetic focusing is expected to reduce the aperture of the electromagnet gap. Thanks to this fact, the magnet weight and the capacity of its supply generators are expected to be smaller than those of the 10-Bev proton-synchrotron.

The following draft data on the new proton-synchrotron are available:

No. of acceleration cycles per min.	6
Energy gain by protons in one revolution	100 kev
Accelerating field frequency:	
initial	2.424 mc
end of cycle	6.068 mc
Frequency deviation tolerance:	
initial	2×10^{-3}
end of cycle	2.6×10^{-6}
Harmonic modulation tolerance:	
initial	31×10^{-7}
end of cycle	12.5×10^{-9}
Noise modulation tolerance	4.8×10^{-3} c^2/c

Radio-Engineering and Electronics Problems Associated with the High-Power Cyclic Accelerators for Heavy Charged Particles

The design of the complex electronic equipment for the Soviet particle accelerators was done by a group of very experienced electronics engineers under the direction P.P. Ivanov and I.V. Tarkovskiy.

Particularly great contributions to the design of the h-f systems of the synchro-cyclotron and the 10-Bev proton-synchrotron were made by V.M. Lupulov and I.F. Malyshev.

There are 11 figures, 2 tables, and 18 references, 15 of which are Slavic.

ASSOCIATION: The Academy of Sciences, USSR

SUBMITTED: May 4, 1956

AVAILABLE: Library of Congress

MINTS, A. L.

"Some Peculiarities and Fundamental Data of the High-Frequency System of a 6-meter Phasotron," A. L. Mints, I. Kh. Nevyazhskiy, and B. I. Polyakov, Radiotekhnika i Elektronika, No 7, Jul 56, pp 893-902

The technical peculiarities, construction, and fundamental parameters of the high-frequency system (26.5 to 13.6 megacycles), of a 6-meter phasotron of the Institute of Nuclear Problems of the Academy of Sciences USSR are presented.

Participants and their contributions to the project were V. M. Lupulov and I. F. Malyshev, dealing with the mechanical problems; engineers G. P. Grudinskaya, G. I. Zhileyko, B. T. Zarubin, V. G. Kul'man, and A. L. Savenkov, dealing with the radio engineering problems; and I. G. Klyatskin, N. K. Titov, and V. F. Trubetskoy, dealing with the construction of the high-frequency system of a 5-meter phasotron.

54M.1305

MINTS, A. L.

3

"A Coupling System of Frequency of the Accelerating Field and the Intensity of the Magnetic Field of a 10 Bev Synchrophasotron," by A. L. Mints, S. M. Rubchinskiy, M. M. Veysbeyn, F. A. Vodop'yanov, A. A. Kuz'min, and V. A. Uvarov, Radiotekhnika i Elektronika, No 7, Jul 56, pp 910-927

The requirements of a system relating f and H of a synchrophasotron at 10 Bev are considered. The tolerances of the adiabatic instability of f and N, the parasitic harmonic and the noise modulation of the frequency, and the amplitudes of the accelerating voltage were determined.

The block diagrams of the system are described together with the program frequency regulation with the help of the fundamental or auxiliary accelerator electromagnet. The fundamental elements of an integrator, functional transformer, and wide-band, frequency-modulated oscillator are also described.

Persons who worked on the project are Z. A. Budyanskaya, A. A. Vasil'yev, I. M. Gromev, A. I. Dzergach, Yu. F. Dushin, and N. V. Kovalev.

SUM. 1305

MINTS, A.L.; RUBCHINSKIY, S.M.; VEYSBEYN, M.M.; VASIL'YEV, A.A.

Injection process control systems and particle acceleration in the proton synchrotron. Radiotekh. i elektron. i no.7:974-985 Jl '56. (MLRA 10:1)

(Synchrotron)

MINTS, A. L.

Category : USSR/Electronics - Vacuum Technique H-9

Abs Jour : Ref Zhur - Fizika, No 2, 1957, No 4386

Author : Mints, A.L., Kristi, N.M.,
Title : Certain Features of Dynamic Vacuum Systems

Orig Pub : Zh. tekhn. fiziki, 1956, 26, No 8, 1815-1822

Abstract : A discussion of problems of pumping out slit-like cavities, contained within the pumped out volume. It is shown that if the dynamic vacuum system contains "pockets", which serves as internal sources of gas separation, it is best to isolate these pockets as much as possible, rather than open them. A method is described for transferring rotation of high power inside a vacuum volume from a chamber with forevacuum pressure through a narrow ring gap without packing.

Card : 1/1

MINTS, A.L., NEVYAZHSKIY, I. Kh., POLYAKOV, B. I.

"Radio-Frequency System for the 680 MeV proton Synchrocyclotron," paper presented at CERN Symposium, 1956, appearing in Nuclear Instruments, No. 1, pp. 21-30, 1957

MINTS, A. L., YEFREMOV, D. V. MESHCHERYAKOV, M.G., DZHELEPOV, V. P., IVANOV, P.P. KATYSHEV, V. S., KOMAR, E. G., MONOSZON, N. A., NEVIAZHSKIY, I. Kh., POLYAKOV, B. I., CHESTNOY, A. Y.

"The USSR Academy of Sciences' 6 Metre Synchrocyclotron," paper presented at CERN Symposium, 1956, appearing in Nuclear Instruments, No. 1, pp. 21-30, 1957

MINTS, A.L., RUBCHINSKIY, S.M., VEYSBEYN, M.M., VODOPYANOV, F.A. VASIL'YEV, A.A.

"Some Technical Characteristics of the 10 GeV Proton Synchrotron Electronic System," paper presented at CERN Symposium, 1956, appearing in Nuclear Instruments, No. 1, pp. 21-30, 1957

E. L. MINTS, VLADIMIRSKIY, V. V., KOMAR, E. G.

"Project of a Proton Ring Accelerator for 7 GeV," paper presented at CERN Symposium, 1956, appearing in Nuclear Instruments, No. 1, pp. 21-30, 1957

MINTS, A. L., VLADIMIRSKIY, V. V., KOMAR, E. G.

"Main Characteristics of a Projected Strong-Focusing 50-60 GeV Proton Accelerator," paper presented at CERN Symposium, 1956, appearing in Nuclear Instruments, No. 1, pp. 21-30, 1957

MINTS, A. A.

"A New Branch of Science" by A. Mints, Corresponding Member of the Academy of Sciences USSR, director of the Electronics Laboratory of the Academy of Sciences USSR, Moscow, Pravda, 11 Apr 57

In the process of developing the new accelerator, "practically a new branch of science was born: the radiotechnology and electronics of powerful accelerators of charged particles."

"The exceptional working conditions and the unusually wide range of accelerating voltage frequency required the creation of entirely new electronic devices. Among these was a wide-range, high-frequency generator with a carefully developed system to maintain the correspondence between the magnetic field and generator frequency. The generator was developed by S. M. Rubchinskiy and F. A. Vodop'yanov and had an accuracy of 0.1 percent."

"The high-frequency oscillations of the master generator are strengthened by devices with 200-kilowatt output cascades. They feed the accelerating electrodes, following a suggestion by Yu. M. Lebedev-Krasin."

Sum. 1345