

MONISTON, R.

Two hundred thousand in a Gsepel automobile. IV. p. 6, (ALTA METER, Budapest, Hungary), Vol. 7, No. 10, Sept. 1954.

20: Monthly list of East European Accessions, (TEAL), IC, Vol. 4, No. 5, May 1955, Uncl.

MONOSTORI, R.

Soviet preheating equipment, p. 7, (AUTO MOTOR, Budapest, Hungary),
Vol. 7, No. 10, Sept. 1954.

SO: Monthly List of East European Accessions, (EEAL), IC, Vol. 4,
No. 5, May 1955, Uncl.

HONGSTORI, R.

"Two Hundred Thousand Kilometers in a Csepel Automobile", (To be contd.)
P. 4, (AUTO MOTOR, Vol. 7, No. 19, Oct. 1954, Budapest, Hungary)

SC: Monthly List of East European Accessions, (EFAL), LC, Vol. 4,
No. 1, Jan. 1955, Uncl.

MONOSTORI , R.

"Two Hundred Thousand Kilometers in a Csepel Automobile. VI.
(To Be Cont'd)", P, 6 (AUTO MOTOR, Vol. 7, No. 21, Nov. 1954,
Budapest, Hungary)

SO: Monthly List of East European Accessions (EEAL,) LC, Vol. 4,
No. 3, March 1955, Uncl.

MONOSTORI, R.

"Winter Ideas", P. 7, (AUTO MOTOR, Vol. 7, No. 21, Nov. 1954,
Budapest, Hungary)

SO: Monthly List of East European Accessions (EEAL), LC, Vol.4,
No. 3, March 1955, Uncl.

MAJDIK, Ferenc; MONOSTORINE Felsö, Katalin

Data on the chemistry of alkoxides. Pt. 3. Magyar folyoir
70 no. 2:64-66 F '64.

1. Nehézevegypari Kutató Intézet, Veszprém.

MONOSZON, Abram Isaakovich, kand.tekhn.nauk; GODYMA, A.K., inzh., red.

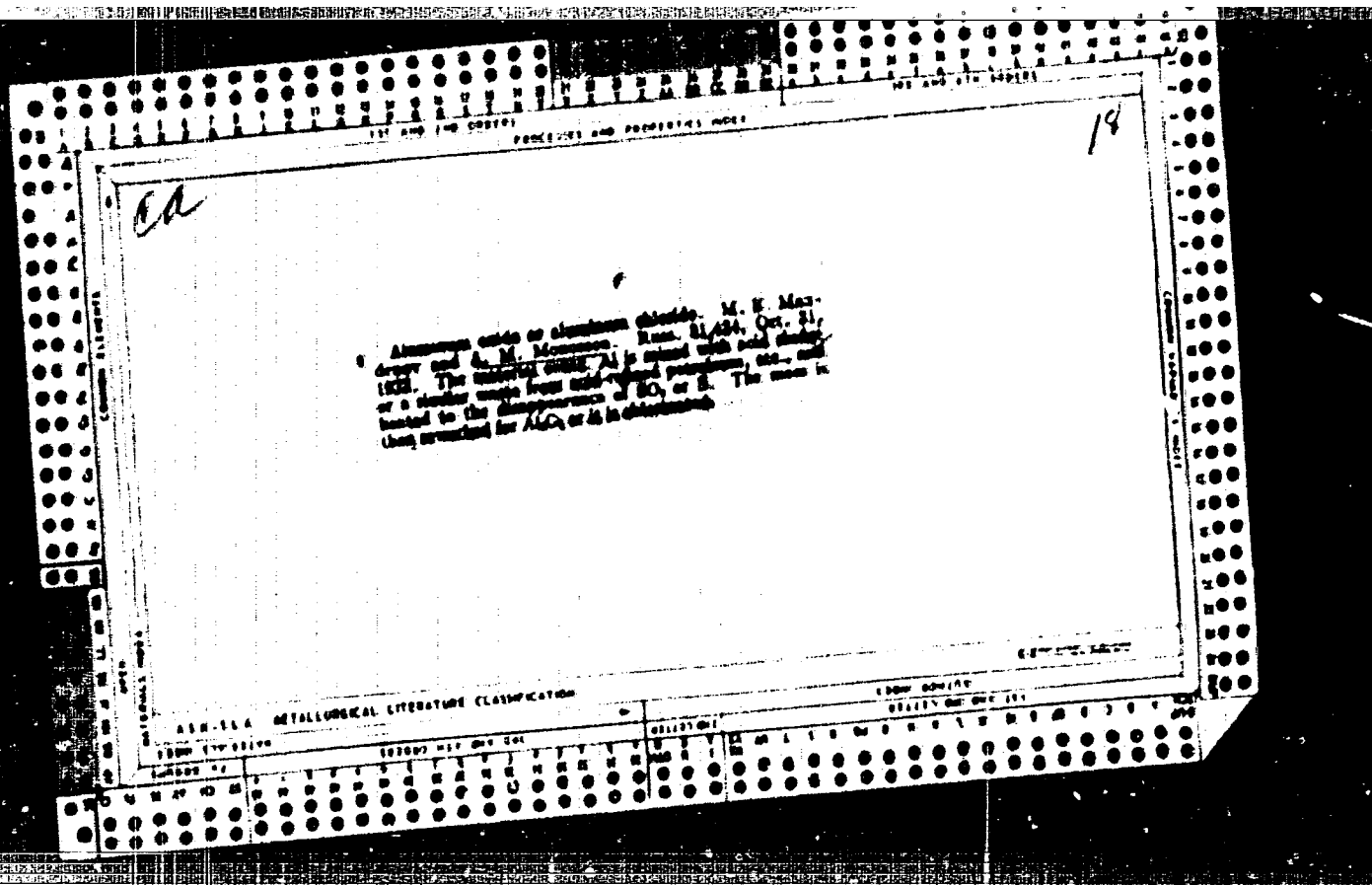
[Precast prestressed reinforced concrete conveyer galleries]
Konveieraya galerei iz sbronnogo predvaritel'no napriazhennogo
shelexobetona; opyt tresta No.19 Glavleningradstroia i instituta
"Giprosteklo." Moskva, Gosstroisdat, 1960. 35 p. (MIRA 13:4)

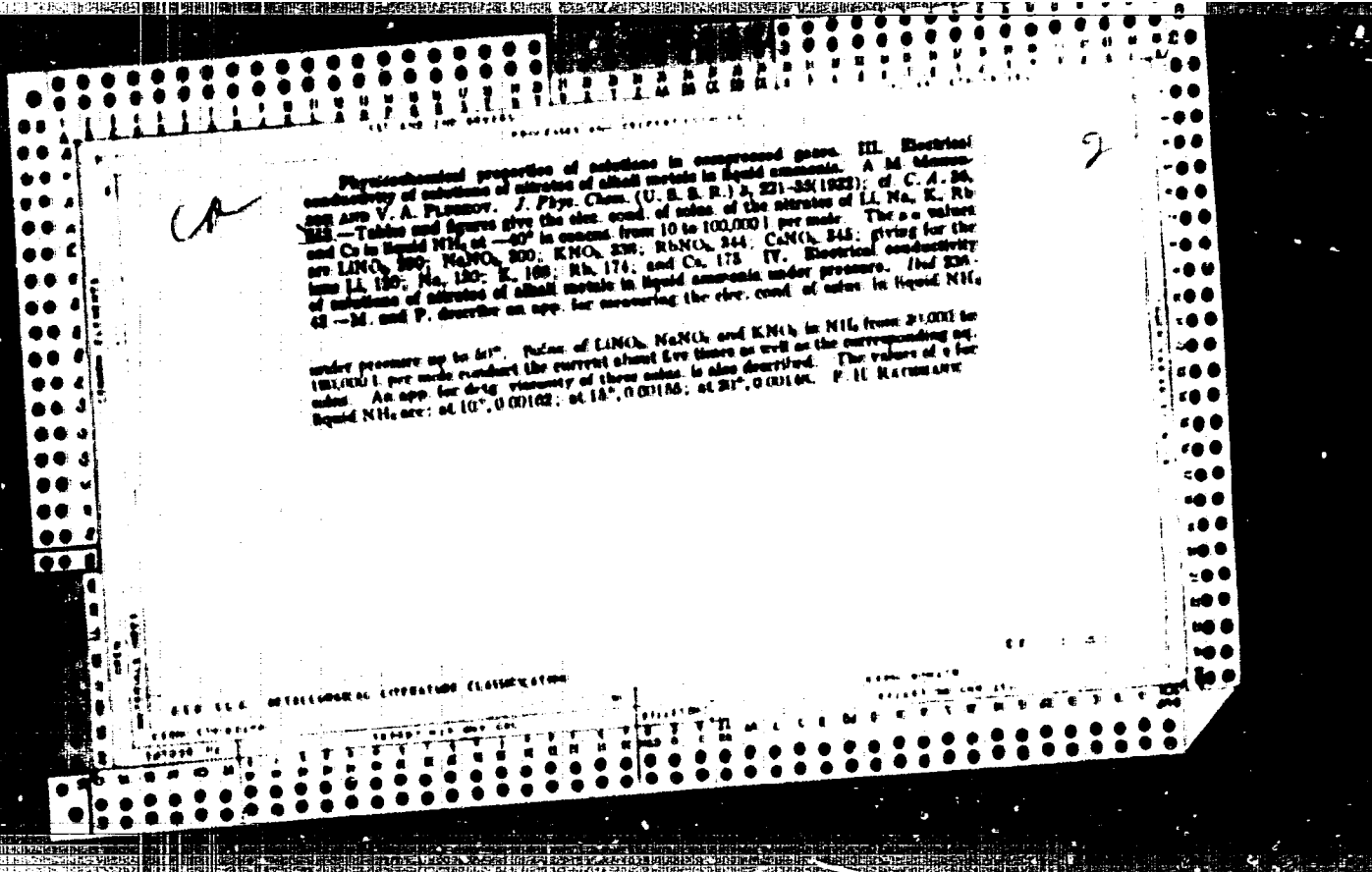
1. Akademiya stroitel'stva i arkhitektury SSSR, Moscow. Institut
organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu.
2. Rukovoditel' gruppy stroitel'nogo otdela instituta "Giprosteklo"
(for Monoszon). (Precast concrete construction) (Conveying machinery)

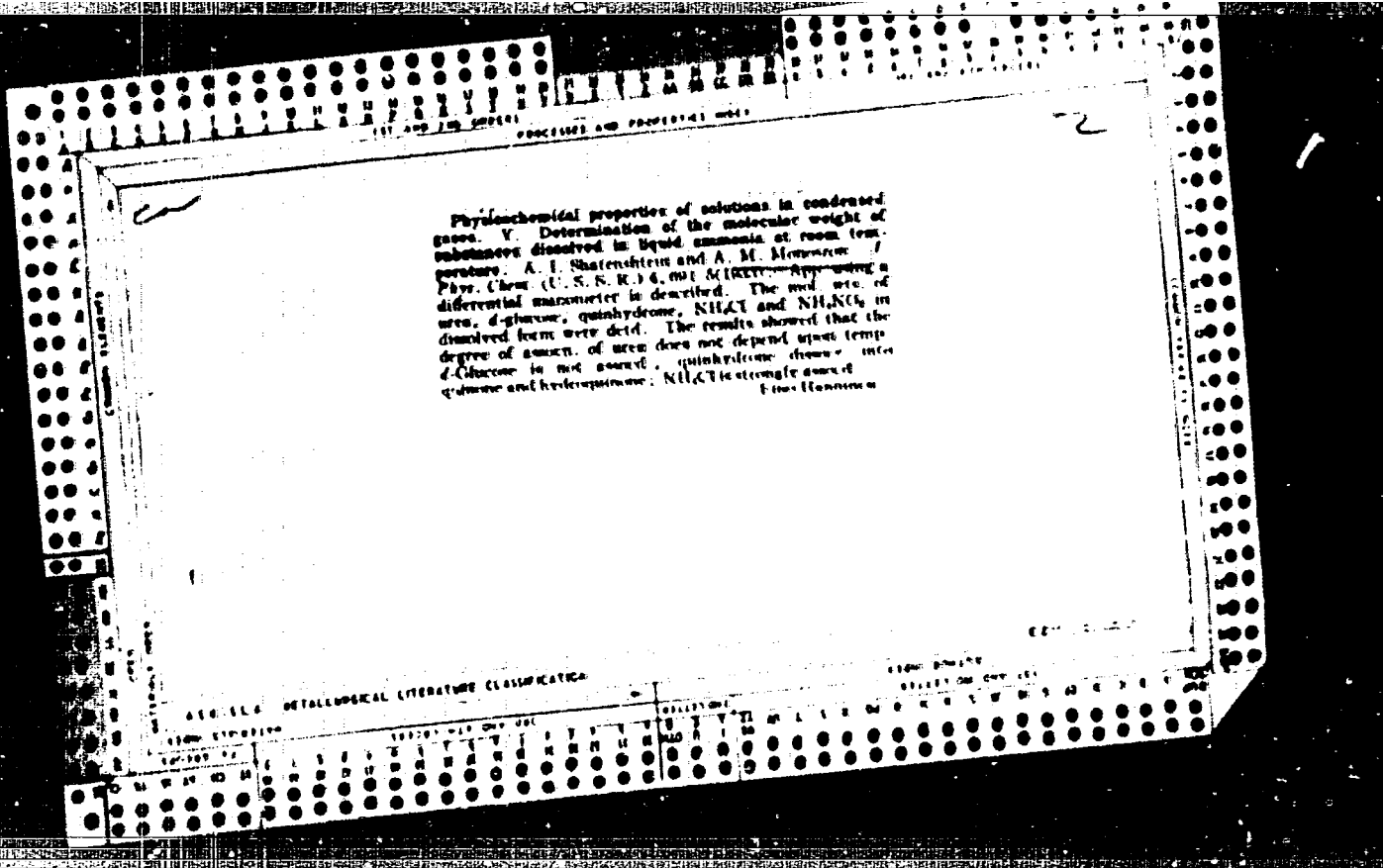
MONOSZOR, Abram Isaakovich, kand. tekhn. nauk; DOVZHNIK, G.A., retsenzent;
TSALALIKHID, M.S., retsenzent; FILIPPOV, N.A., inzh., nauchnyy
red.; BESPALOV, I.V., red. izd-va; PUL'KINA, Ye.A., tekhn.
red.

[Wide-span, precast, prestressed, reinforced concrete galleries]
Bol'sheproletnyye sbornye predvalitel'no napriazhenyye zbelezo-
betonnyye galerei. Leningrad, Gos. izd-vo lit-ry po stroit.,
arkhit. i stroit. materialam, 1962. 260 p. (MIRA 15:4)

1. Gosudarstvennyy komitet Soveta Ministrov SSSR po delam stroitel'-
stva (for Dovzhnik).
 2. Gosudarstvennyy proyektnyy institut stroitel'-
noy promyshlennosti (for TSalalikhin).
- (Reinforced concrete construction)
(Prestressed concrete construction)



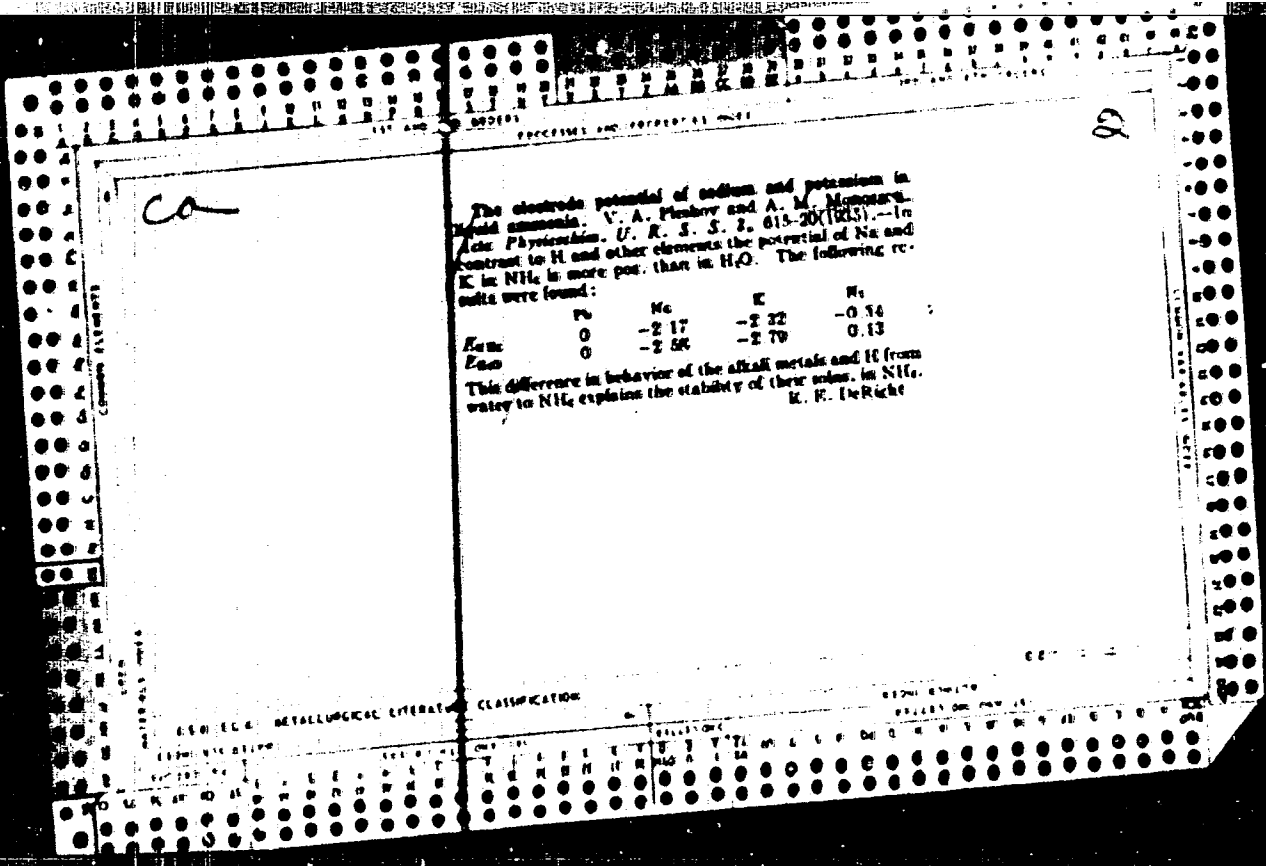


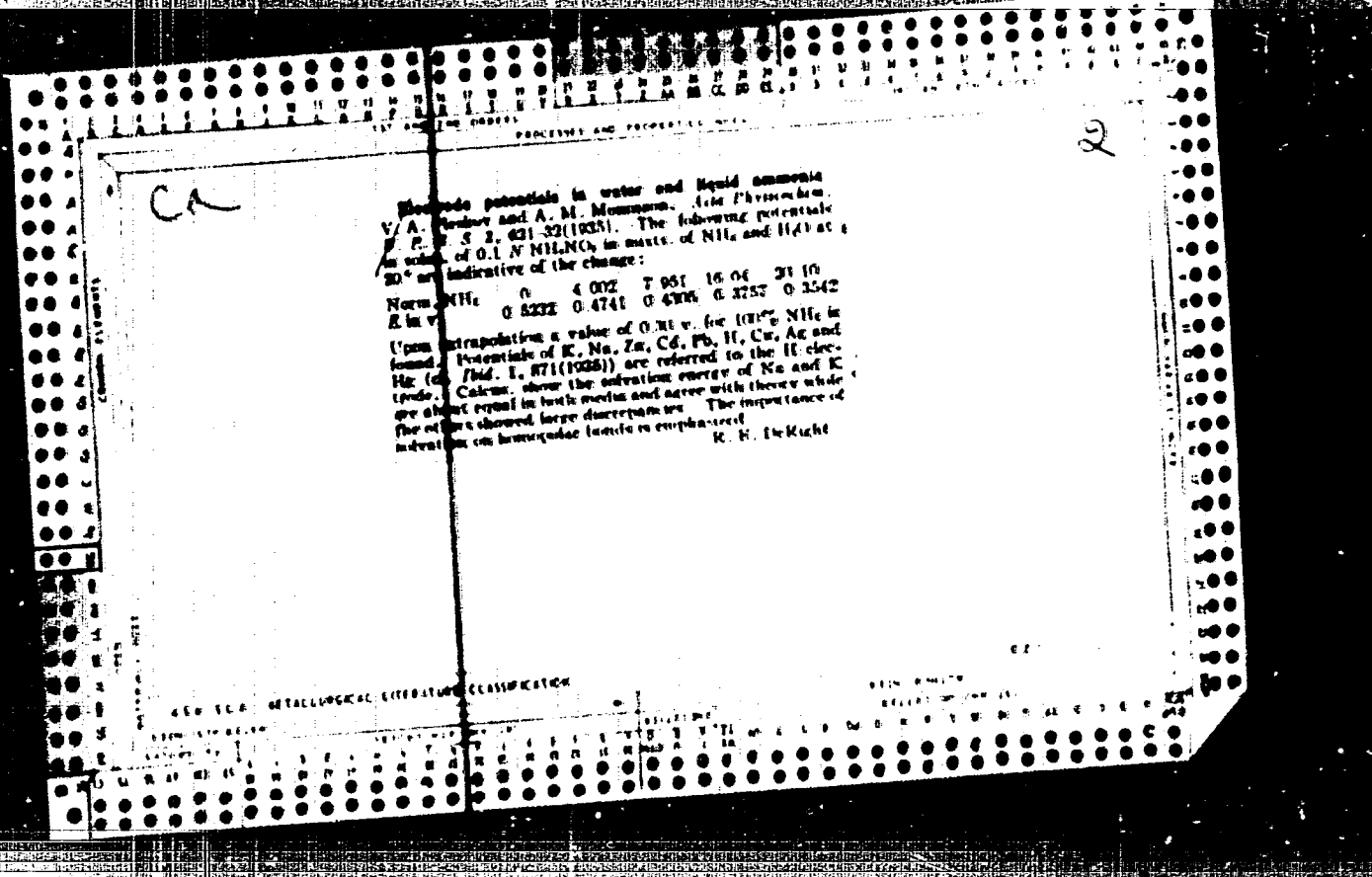


Physicochemical properties of solutions in condensed gases. VI. Electrode potentials in liquid ammonia.

V. A. Platonov and A. M. Monastirskii. *J. Phys. Chem.* (U. S. S. R.) 4, (1967) 2727-2731. With 1951.1 N 17. (NCh), as 0.01 M, the following values of electrode potential were found: Zn 0.848, Cd 0.810; Hg 0.831; Cu 0.103, Ag 0.472; Hg 0.416. The values of α (the activity coeff. of corresponding ions in 0.1 N soln.), E_0 (the normal electrode potential when $P_b = 0$), and E_{meas} (the normal electrode potential in water soln. when $P_b = 0$), resp., are for Zn 0.14, 0.851, 0.27; Cd 0.14, 0.812, 0.27; Hg 0.12, 0.0, 0; Hg 0.29, 0.817, 0.12; Cu 0.25, 0.197, 0.47; Ag 0.36, 0.666, 0.04; Hg 0.16, 0.421, 0.06. *Ann. (Hannover)*

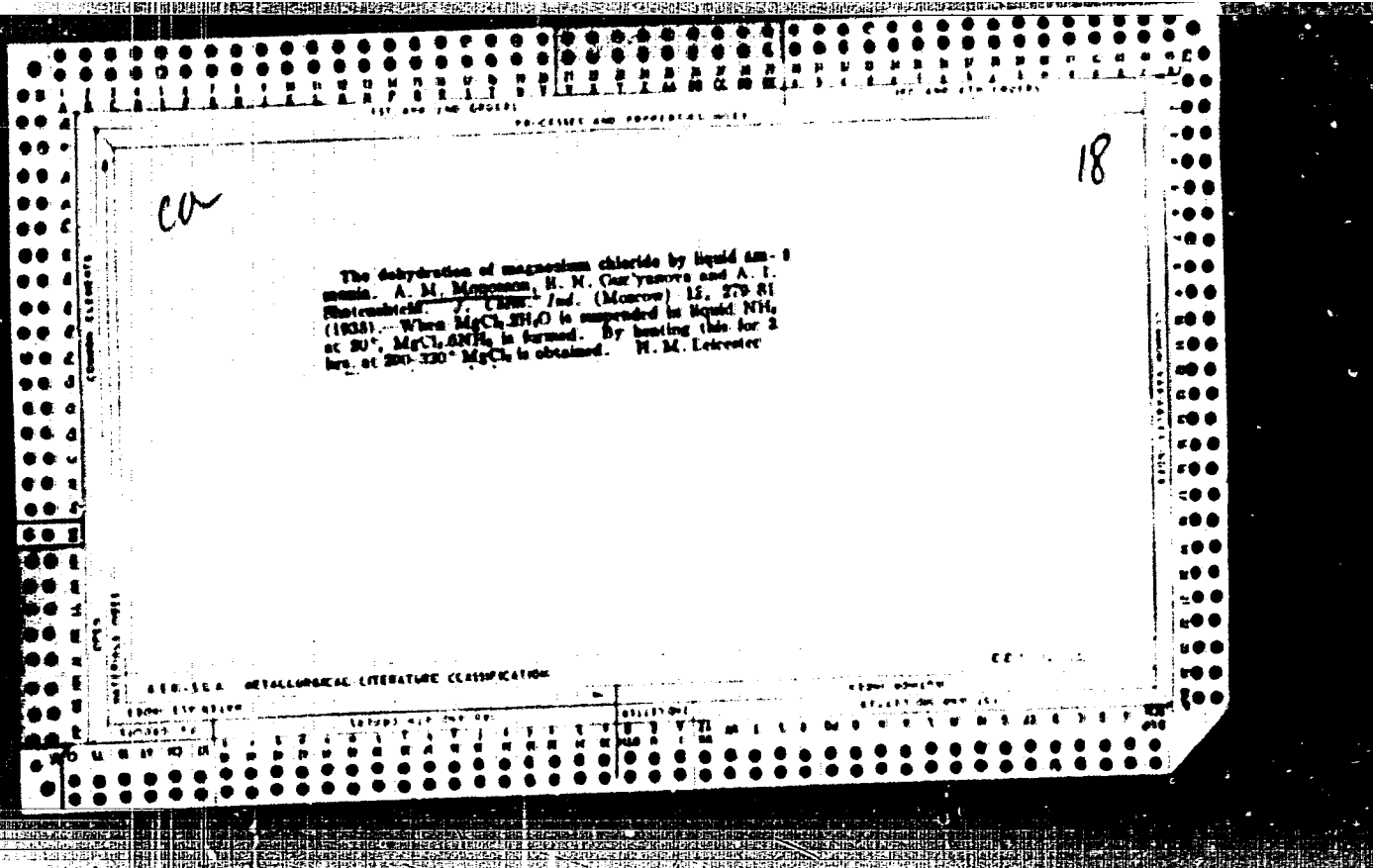
AMERICAN METALLURGICAL LITERATURE CLASSIFICATION

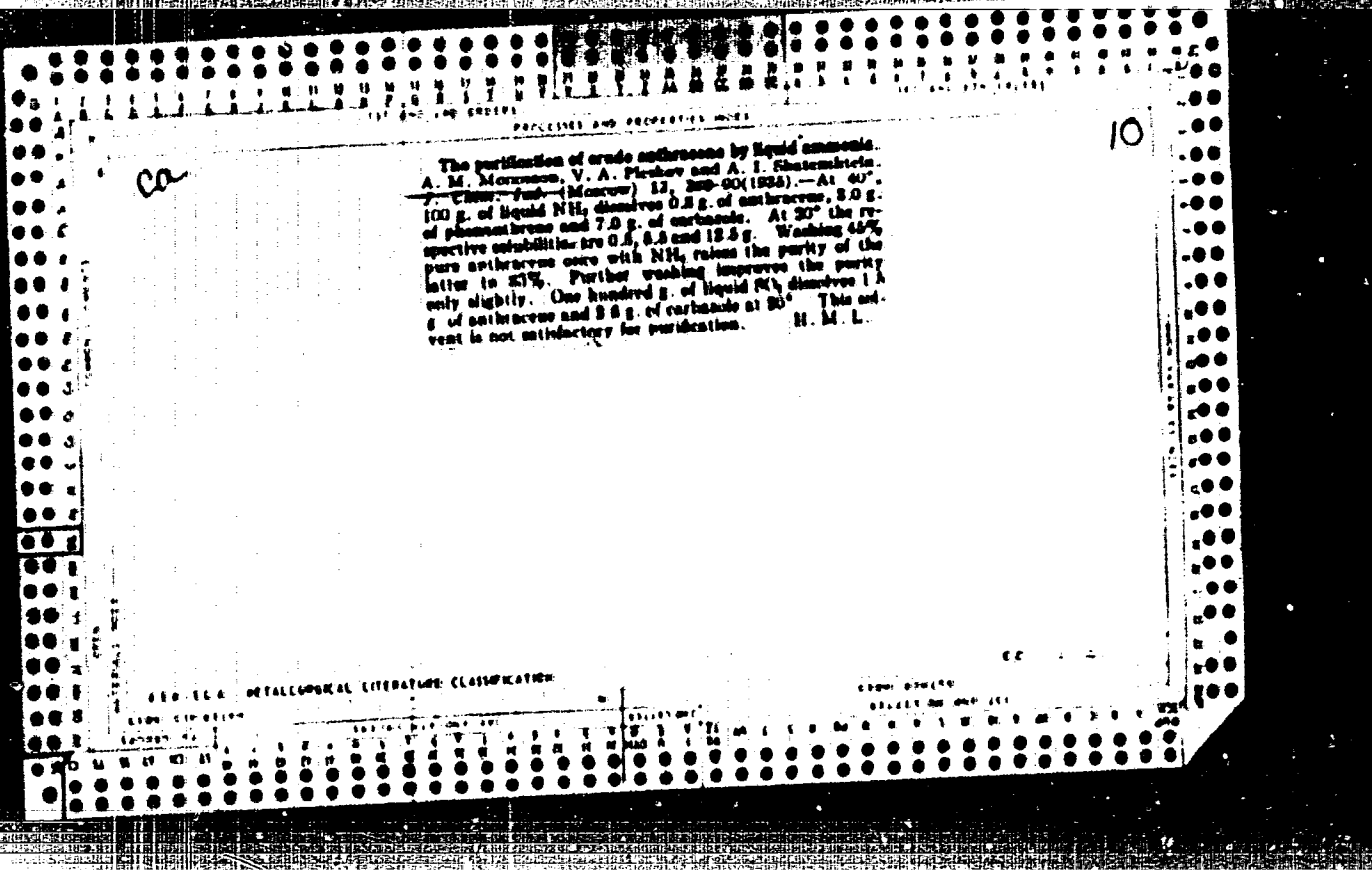




MONOSZON, A. M.

Activity of ammonium ions in liquid ammonia solutions.
 V. A. Biskup and A. M. Monoszon. *J. Phys. Chem.*
 (U. S. S. R.) 6, 811-21 (1951). The activity of NH_4^+
 and NH_4NO_3 ions in liquid NH_3 were determined by means of a
 H electrode at -10° for solutions from 1.0 to 0.001 N.
 The activity coeffs. differ considerably from those calculated
 by the Debye-Hückel method, as well as from those
 determined by Franklin, C. A. 4, 850, by a cond. method. For
 NH_4NO_3 some values of activity f for concn. C were:
 0.953 at 0.001, 0.521 at 0.001, 0.433 at 0.01, 0.216 at
 0.1 and 0.14 at 1.0 N as determined in the cell Pt, H, NH_4NO_3
 concn. C, KNO_3 , satd. NH_4NO_3 , 0.1 N Pt, H. Even on
 correcting the Debye-Hückel equation for partial dissociation
 the agreement of actual and calculated values was satisfactory
 only over the range 0.001 to 0.2 N, on using as the dielectric
 const. $K = 2.1 \times 10^{-10}$, and the av. ionic radius
 $a = 5.17 \text{ \AA}$. For NH_4^+ some values for f at C were:
 0.423 at 0.001, 0.189 at 0.01, 0.070 at 0.1 N as determined in
 the cell Pt, H, NH_4^+ concn. C, KNO_3 , satd. NH_4NO_3
 0.1 N Pt, H. The dielectric const. for liquid NH_3 at
 -10° , K for $2\text{NH}_3 \rightleftharpoons \text{NH}_4^+ + \text{NH}_2^-$ is 1.0×10^{-10} .
 V. H. Rathmann





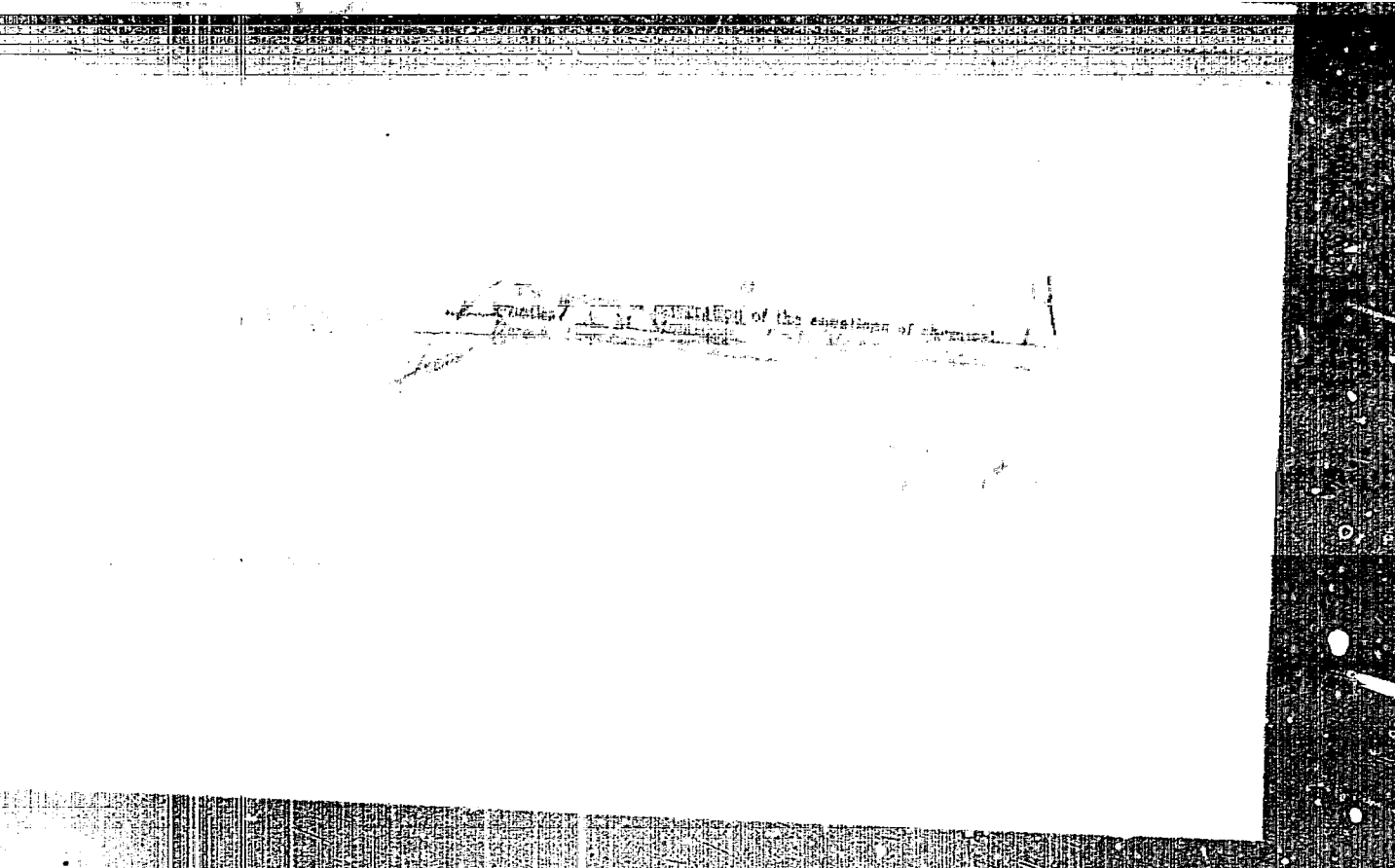
"APPROVED FOR RELEASE: 03/13/2001

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APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R001135120002-6"



MONOSZON, B.I.
MONOSZON, B.I., kandidat tehnikeskikh nauk; TSEKHNNOVITSER, Yu.O., arhitektor.

The new central market of Leningrad. *Biul.tekh.inform.* 3 no.8:22-24
Ag '57. (MIRA 10:10)

(Leningrad--Markets)

МОНСЗОН, А.И.
MONOSZON, A.I., kand.tekhn.nauk; ZAZERSKIY, K.I., inzhener.

Long-span precast reinforced concrete conveyer ways. *Бул.тех.*
inforw.] no.9:6-11 8 '57. (MIRA 10:11)
(Conveying machinery) (Prestressed concrete construction)

ZHILICH, A.G.; MONOZON, B.S.

Behavior of a hydrogen-like system in a high magnetic field.
Vest. LGU 20 no.16:26-35 '65. (MIRA 18:9)

L 14206-44 FWT(1) LJP(o) WW
ACC PR: AP6003612

SOURCE CODE: UR/0054/65/000/003/0026/0035

AUTHOR: Zhilich, A. G.; Monozon, B. S.

62

ORG: Leningrad State University (Leningradskiy gosudarstvennyy universitet)

B

TITLE: Behavior of a hydrogen type system in a strong magnetic field

SOURCE: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii, no. 3, 1965, 26-35

TOPIC TAGS: strong magnetic field, atomic spectrum, continuous spectrum, exciton, copper compound, absorption edge

ABSTRACT: The article proposes a method for an effective description of states of a hydrogen type system which border on the Landau levels on the side of both the discrete and the continuous spectrum in a sufficiently strong homogeneous magnetic field. Eigenfunctions and eigenvalues of the energies are found by using the self-consistent method of solving the Schrodinger equation. A qualitative comparison is made with an experiment in which the absorption spectrum of the yellow exciton series of Cu_2O was studied in a homogeneous magnetic field of 29000 Oe. The spec-

UDC: 530. 145. 61

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L 14206-66

ACC NR: AP6003612

trum consisted of a set of lines adjacent to the edge of the continuum, whose edge is displaced toward the violet portion as compared to the spectrum in the absence of the magnetic field. Although not enough data were available to permit a quantitative check of the theory, a qualitative agreement was obtained. Orig. art. has: 2 figures, 43 formulas.

SUB CODE: 07/

SUBM DATE: 03Jul64/

ORIG REF: 000/

OTH REF: 005

TS
Card 2/2

NONOUZON-SMOLINA, N. KH.

"Morphology of the Pollen of Some Species of the
Genus Pinus", Botan. Zhur, 34, No. 4, 1949. Inst.
Geography, Acad. Sci., -c1949-

Морозов, М. К.

U 6 110-248
 *Morozov, R. V. *Kolichestvennye zakonomernosti v rasprostraneni vetrov pylyey dube.* 551.583.3:581.16 331.556.4:581.16
 [Quantitative regularities in the amount of oak pollen spread by wind.] *Abstracts Bank S.S.S.R. Initial Geograph. Trudy*, 46 No. 235, 1950, 25 pgs., 10 tables, 21 refs. *Rezhuk*, V. P. *Rastitel'nost' Russkoi ravliny v nizhnem i srednechetvertichnom vremia.* [Vegetation of the Great Russian plain in Lower and Middle Quaternary time.] *Ibid.*, p. 3-102, bibl. p. 192-202. Mal'gina, E. A. *Opyt sopostavleniia raspredeleniia pylyey nekotorykh derevnykh porod v ikh arealakh v predelakh Evropeiskoi chasti SSSR.* [Comparison of pollen distribution of some woody species with their areal expansion over European U.S.S.R.] *Ibid.*, p. 256-279, bibl. p. 269-279. Morozov, M. Kh. *Opisaniie pylyey vidov polyni, protirastalishchikh na territorii SSSR (dla tselii pyl'covego analiza).* [Notes on pollen in varieties of weenrows of growing in the U.S.S.R.] *Ibid.*, p. 271-282, bibl. p. 262. **DLU** - This volume contains an extensive amount of quantitative data in the form of graphs, tables and charts, summarizing and analyzing the results of pollen analyses made in all parts of the U.S.S.R., Central Europe and Scandinavia. In the first named article wind roses are constructed for each site, showing direction and extent of dispersal in each of 8 directions for each direction. In the other articles spread of species of oak, pine, etc. are shown and interpreted in terms of climatic changes in various geological periods. Methods of treatment, material, and extensive coverage of literature on subject given for each article. *Subject Headings*: 1. Pollen analysis 2. Pollen dispersal by wind 3. Archaeology 4. Geobotany (Vegetation) 5. U.S.S.R. *U.R.*

6P

Поллен, Р. И.

Pollen

Morphology of pollen in the chenopodiaceae less. family. Trudy Inst. geogr. AN SSSR, No. 50, 1951.

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

MONGSON, M.D.

Report on pollen species of the goosefoot family which occur in the
U.S.A. (for purposes of pollen analysis). Trudy Inst.geog. no.52:
127-207 '52. (MLRA 7:1)

(Pollen, Fossil)

MONOSSON, M. K.

POLYAKOV, P. P.

"Description of pollen of wormwood species growing in the U.S.S.R."
M. K. Monosson. Reviewed by P. P. Polyakov. Bot. zhur. 39 no. 3:452-453
My-Je '54. (MIRA 7:?)

1. Institut botaniki Akademii nauk Kazakhskoy SSR.
(Wormwood) (Pollen)

MOHOREZON, M. K.

Morphological description of pollen of the most important species
of oak growing in the U.S.S.R. Trudy Inst.geol. 61:93-118 '54.
(Oak)(Pollen)

AUTHOR:

Monoszon, M. Kh.

20-114-3-54/60

TITLE:

On the Determination of Species of Fossil Pollen of Chenopodiaceae (O vidovykh opredeleniyakh iskopayemoy pyl'tsy sarevykh)

PERIODICAL:

Doklady Akademii Nauk SSSR, 1957, Vol. 114, Nr 3, pp. 648-651 (USSR)

ABSTRACT:

The important requirements put up by practical work with respect to the results of spore-pollen analysis and the weight of the problems to be decided thereby make it necessary to carry on determination as far as genus and species. For this purpose, careful examination of pollen of recent plants and compilation of relevant scientific works (for purpose of determination) are indispensable. The family of the Chenopodiaceae belongs to the stenopline group of families, i.e. the morphological type of structure of the pollen grains remains preserved in a uniform way in the entire family, and this independently of the circumstance that its species grow under most varied ecological conditions. For the Chenopodiaceae the multiporous furrowless spheroidal pollen is characteristic. But it is possible to single out several morphological characteristic properties which make it possible to determine with

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20-114-3-54/60

On the Determination of Species of Fossil Pollen of Chenopodiaceae

sufficient accuracy both genus and species. Within some genera the determination of species is more difficult (Suaeda, Atriplex, Corispermum and others). On the other hand, in other genera, like Salsola, the species can be determined with sufficient accuracy, because of the great variety in different characteristics. The following diagnostic characteristics were fundamental in the determination of the pollen: contour character of the grain, diameter, pore number, clearness of the pore channels in the optical cross section, quality and distinctness of the structure of the "extines", their thickness, and a clear and unstructural zone around the pores. Another element facilitating the determination of species of the Chenopodiaceae is also the constancy of different characteristics within the species (and sometimes also within the genera). Thus a very widely distributed plant, Eurotica ceratoides, has very similar pollen even if the samples under investigation come from areas which are thousands of kilometers apart. The availability of detailed descriptions and of a scientific work for purposes of determination of recent pollen made it possible for the author of the paper under review to conduct a number of determinations of species of the

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20-114-5-54/50

On the Determination of Species of Fossil Pollen of Chenopodiaceae

1 of which is Soviet.

ASSOCIATION: Institute of Geography AS USSR
(Institut geografii Akademii nauk SSSR)

PRESENTED: January 31, 1957, by V. N. Sukachev, Member of the Academy

SUBMITTED: January 29, 1957

Card 4/4

3(0)
AUTHOR: Monoszon, M. Kh. SOV/20-123-1-47,56

TITLE: Occurrences of *Eurotia ceratoides* (L.) C.A.M. Pollen in Glacial Deposits of the European Part of the USSR (O nakhodkakh pyl'tsy *Eurotia ceratoides* (L.) C.A.M. v lednikovyykh otlozheniyakh Yevropeyskoy territorii SSSR)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 1, pp 175 - 178 (USSR)

ABSTRACT: Many botanists and geographers have dealt with the problem of the character of the vegetation in the vicinity of glaciers, and many opinions have been rendered concerning this. Most investigators are inclined to believe that a special type of landscape existed in the areas around the glaciers and at some distance from them, which is not completely analogous to recent conditions. It was said to have been "cold forest steppe" with island-like forests and flooded swampy and marshy low plains. The latest paleobotanical investigations (Ref 2) also confirm the fact that a special "glacial" vegetation grew here, which had a complex and complicated character. This was accomplished through identification of

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Occurrences of *Eurotia ceratoides* (L.) C.A.M. Pollen SOV/20-123-1-47/56
in Glacial Deposits of the European Part of the
USSR

species by means of pollen-spore analyses and from macro remains, especially the family Chenopodiaceae: *Chenopodium album*, *Ch. rubrum*, *Ch. glaucum*, *Polygonum* sp., *Atriplex* sp., etc. Seeds are much rarer, since pollen production is considerably more important than seed production in this family. For the glacial deposits it is significant, that the pollen of plants with a specific ecology (chiefly of the xerophytes and especially of halophytes) were found near those ruderal species which are known today as weeds. Definite soils and climatic conditions are characterized by these plants. From this standpoint, the occurrence of several steppe species, eg. *Eurotia ceratoides* (L.) C.A.M., *Kochia prostrata* (L.) Schrad, etc., outside of their present area of distribution is interesting. *E. ceratoides* is a dwarf bush or semi-dwarf bush, up to 1 m in height, under present conditions. This plant has an erect stalk and bare leaves in steppe regions, whereas in the mountains and deserts both sides of the leaves are strongly ciliated. The present distribution (Fig 1) of these species is reviewed. There are lands everywhere with

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Occurrences of *Eurotia ceratoides* (L.) C.A.M. Pollen SOV/20-123-1-47/56
in Glacial Deposits of the European Part of the
USSR

a continental climate, dry steppe and slopes, sand, boulders, and clay, which extend into the depths of the desert and the high mountains (up to 4500 m). Fossil pollen occur systematically in the sediments of the Dneprovskaya and Valdayskaya Glacial Epochs at several localities in European USSR. The plants must have grown not far from the depositional sites of the pollen, since pollen of *Kochia prostrata* have been found only about 1 km from the plant. The fossil pollen of *Eur. ceratoides* is morphologically described, and the localities of occurrence are listed. Table 1 lists the pollen assemblages at localities where *Eur. ceratoides* were found. This plant occurred in all cases during the second half of the Ice Epoch, which was characterized by a cold and dry climate. Trees were represented by sparse birch and fir forests. The herbaceous groups with a steppe character were of considerable significance. Among these were the xerophytes and halophytes from the family Chenopodiaceae. Due to the influence of permafrost prevailing at that time, the surface became salty (Refs 5, 8). This favored the

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Occurrences of *Eurotia ceratoides* (L.) C.A.M. Pollen SOV/20-123-1-47/56
in Glacial Deposits of the European Part of the
USSR

annual northward advance of the annual xerophytes. *Eur. ceratoides* also belongs to this group, and its occurrence corresponds to these conditions. There are 1 figure, 1 table and 8 Soviet references.

ASSOCIATION: Institut geografii Akademii nauk SSSR (Institute of Geography of the Academy of Sciences, USSR)

PRESENTED: July 7, 1958, by V. N. Sukachev, Academician

SUBMITTED: June 12, 1958

Card 4/4

MONOSZOK, M.Kh.

Dissemination of goosefoot pollen by air. Trudy Inst. geog. 77:
157-165 '59. (MIRA 13:5)
(Pollen--Dissemination) (Goosefoot)

MOJOSZON, M. Kh.

Description of the pollen of some species of the family Ulmaceae
occurring in the U.S.S.R. (for the purposes of pollen analysis).
Trudy Inst.geog. 77:187-198 '59. (MIRA 13:5)
(Pollen—Morphology) (Elm)

MONOSZON, M.h.

Variations in the morphological characteristics of pollen in some oak species. Dokl. AN SSSR 140 no.6:1456-1459 0 '61. (MIRA 14:11)

1. Institut geografii AN SSSR. Predstavleno akademikom V.N. Sukachevym.

(Pollen--Morphology) (Oak)

GRICHUK, V.P.; MONOSZON, M.Kh.

Preliminary data on the flora of the Odintsovo interglacial period
near Glasovo. Probl. bot. 6:39-45 '62. (MIRA 16:5)
(Glasovo region (Kaluga Province)—Paleobotany, Stratigraphic)

M. H.

YEFREMOV, D.V.; MESHCHERYAKOV, M.G.; MINTS, A.L.; DZHELEPOV, V.P.;
IVANOV, P.P.; KATYSHEV, V.S. [deceased]; KOMAR, Ye.G.; MA-
LYSHEV, I.F.; MONOSON, N.A.; NEVYAZHSKIY, I.Kh.; POLYAKOV,
B.I.; CHESTNOY, A.V.

Six-meter synchrocyclotron built by the Institute of Nuclear
Problems, Academy of Sciences of the U.S.S.R. Atom.energ. no.4:
5-12 '56. (MIRA 9:12)
(Cyclotron)

MEMORANDUM
VEISLER, K.I.; YEFREMOV, D.V.; NINTS, A.L.; VEISBERG, M.M.; VODOP'YANOV;
P.A.; GASHEV, M.A.; ZBYDLITS, A.I.; IVANOV, P.P.; KOLOMENSKIY,
A.A.; KOMAR, Ye.G.; MALYSHEV, I.P.; NOBOSZON, N.A.; NEVYAZHSKIY,
I.Kh.; PRUFUNHOV, V.A.; RABINOVICH, M.S.; GUBCHINSKIY, S.M.; SL-
KEL'NIKOV, K.D.; STOLOV, A.M.

Ten Bev energy synchrocyclotron built by the Academy of Sciences
of the U.S.S.R. Atom.energ. no.4:22-30 '56. (MIRA 9:12)
(Cyclotron)

MONOSZON, N.A.

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., RUCINSKIJ, S.M.
SKAČKOV, S.V., STREL'COV, N.S., TARASOV, B.K.
TITLE The Main Characteristics of the Projected Proton Accelerator
for 20-60 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 eighth 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

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

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

MONOSZON, N. A., GASHEV, M. A., KOMAR, E. G., SPEVAKOVA, F. M., STOLOV, A. M.

"The Power Supply System of the 10 GeV synchrotron Electromagnet,"
paper presented at CERN Symposium, 1956, appearing in Nuclear Instruments,
No. 1, pp. 21-30, 1957

MONOSZON, N. A., KOMAR, E. G., STRELTSOV, N. S. , FEDOTOV, G. M.

"Some Structural Features of the 10 GeV Synchrotron Electromagnet,"
paper presented at CERN Symposium, 1956, appearing in Nuclear Instruments,
No. 1, pp. 21-30, 1957

MONOSZON, H.A., KOMAR, E.O., STOLOV, A.M., TITOV, V.A., SHEKTER, V. M.

"Experimental Ring-Shaped 200-650 MeV Strong-Focusing Proton Accelerator," paper presented at CERN Symposium, 1956, appearing in Nuclear Instruments, No. 1, pp. 21-30, 1957

MONOSZON, H. A., ZHURAVLEV, A. A., KOMAR, E. G., MOZALEVSKIY, I. A., STOLOV, A. M.

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

JEFRENOV, D.V.; MESCERJAKOV, M.G.; MIRC, A.L.; DZELEPOV, V.P.; IVANOV, P.P.;
KAMYSEV, V.S.; KOMAR, J.G.; MALYSEV, I.P.; MOKOSZON, M.A.; NEVJAZSKIJ,
I.Ch.; POLJAKOV, B.I.; CESTNOJ, A.V.; BENDA, Frantisek [translator]

The six meter synchrocyclotron of the Institute for Research on
Nuclear Problems affiliated to the Academy of Sciences of Soviet
Union. Jaderna energie 3 no.1:1-4 Ja '57.

1. Ustav jaderne fyziky (for Benda).

VEKSLER, V.J.; VODOPJANOV, A.F.; JEFREMOV, D.V.; MINC, A.Z.; VEISBEIN, M.M.;
GASEV, H.G.; ZEJDLIC, A.J.; IVANOV, T.P.; KOLOMENSKIJ, A.A.; KOMAR, E. G.;
MALYSEV, J.E.; MONOSZOH, M.A.; HEVJAZSKIJ, J.Ch.; PETUCHOV, V.A.;
RABINOVIC, V.A.; RUBCINSKIJ, S.N.; SIMENIKOV, K.D.; STOLOV, A.M.;
KULT, Karel, inz.

The synchrotron for particle acceleration to 10 BeV energy of the
Soviet Academy of Sciences. Jaderna energie 3 no.1:5-9 Ja '57.

1. Ustav jaderna fysiky (for Kult).

10-15-26 '57

ZHURAVLEV, A.A.; KOMAR, Ye.G.; MOZALYVSKIY, I.A.; MONOSZON, N.A.; STOLOV, A.M.

Magnetic characteristics of the 10 Bev proton synchrotron operated
by the United Institute of Nuclear Research. Atom.energ.supplement
no.4:15-26 '57. (MIRA 10:10)

(Synchrotron)

Arkhangel'skiy, F.K.

ARKHANGEL'SKIY, F.K.; GASHEV, M.A.; KOMAR, Ye.G.; MALYSHEV, I.F.;
MONOSZON, E.A.; STOLOV, A.M.; STREL'TSOV, M.S.

Electric engineering and design problems in constructing large
cyclic accelerators. Elektrichestvo no.11:25-34 N '57.

(MIRA 10:10)

(Cyclotron)

VLADIMIRSKIJ, V.V.; KOMAR, Je.G.; MINC, A.L.; GOL'DIN, L.L.; KOSZAREV, D.C.;
MOWSZON, H.A.; NIKITIN, S.Ja.; RUBCINSKIJ, S.M.; SKACKOV, S.V.;
STREL'COV, N.S.; TRASOV, Je.K.; MEDONOS, S., inz. [translator]

Main characteristics of the planned proton accelerator for 50-60
BeV energy with sharp focusing. Jaderna energie 3 no.2:56-57 F '57.

MONSOON, N.A.

REF ID: A66724

2119

Alievskiy, A. I., Ivanov, B. A., Komarov, A. V., Kuznetsov, V. I., Melnik, I. B., Orlov, I. B., Pirogovskiy, V. I., Romanov, N. A., Sidorov, V. I., Sidorov, B. S., Ponomarev, B. E.

A 1.20-Meter Cyclotron with a Magnetics Pole Diameter (Table) and a Maximum Particle Energy 170 MeV

The system was developed in the Machine-Design Institute for the Institute of Atomic Energy (Moscow) in collaboration with the Institute of Atomic Energy (Moscow) and the Institute of Atomic Energy of the USSR. The design of the cyclotron was developed by B. S. Ponomarev and B. E. Sidorov under the guidance of A. I. Alievskiy and B. I. Orlov (Chief Designer of the Institute of Atomic Energy). The radial field force was measured in each of the gaps in the center of the field no less than 0.05% of the force of the field. The error at the measurement of the axial force quantity of the field was less than 0.007% of the field force

Page 1/4

In the center of the field. The position of the magnetic plane was determined by the magnetic axis developed by V. I. Pirogovskiy. For the correction of the magnetic field inside the gaps and along the axis, which are limited by the position of the magnet and the location of the electrodes, the design and the construction of the electrodes and the design of the assembly of the vacuum chamber and of the acceleration chamber and the vacuum conductors (these are a so-called nozzle) were completed by A. I. Alievskiy, I. E. Sidorov, B. S. Ponomarev under the supervision of B. I. Orlov. The whole high-frequency installation is shown in a block diagram and there is a short description of each of its elements. The high-frequency section was developed by G. B. Strakhalov, B. V. Ponomarev and B. I. Orlov. Practically under the supervision of A. S. Zaitseva. The vacuum system was developed by V. I. Melnik and B. S. Ponomarev. The design of the cyclotron for the joint operation with the accelerator. This document is a preliminary design of the cyclotron. It was developed in the Machine-Design Institute by B. S. Ponomarev. The drawing system was completed by B. S. Ponomarev.

Page 2/4

A 1.20-Meter Cyclotron with a Magnetics Pole Diameter - REF ID: A66724

Design. The magnetic quadrupole lenses of A. A. Gulyaevskiy and B. I. Orlov were used in this system. The design of the particle line was completed in this system. The maximum beam of 100-200 MeV at diameter for normal use and the beam is focused to a plane of 15.70 mm. The control desk, design equipment and the special electrical installations were designed by V. S. Lyubimov, B. S. Ponomarev, Z. S. Gerasimov working under the guidance of B. S. Ponomarev. Similar cyclotrons constructed in the USSR are in operation in Penza, Chita, Poland and USSR. In the near future cyclotrons of this type will be completed in the USSR. The design of the cyclotron for the joint operation with the accelerator. This document is a preliminary design of the cyclotron. It was developed in the Machine-Design Institute by B. S. Ponomarev. The drawing system was completed by B. S. Ponomarev.

Page 3/4

A 1.20-Meter Cyclotron with a Magnetics Pole Diameter - REF ID: A66724

B. S. Ponomarev, V. I. Romanov and G. A. Artyukov. In the center of the field. The position of the magnetic plane was determined by the magnetic axis developed by V. I. Pirogovskiy. For the correction of the magnetic field inside the gaps and along the axis, which are limited by the position of the magnet and the location of the electrodes, the design and the construction of the electrodes and the design of the assembly of the vacuum chamber and of the acceleration chamber and the vacuum conductors (these are a so-called nozzle) were completed by A. I. Alievskiy, I. E. Sidorov, B. S. Ponomarev under the supervision of B. I. Orlov. The whole high-frequency installation is shown in a block diagram and there is a short description of each of its elements. The high-frequency section was developed by G. B. Strakhalov, B. V. Ponomarev and B. I. Orlov. Practically under the supervision of A. S. Zaitseva. The vacuum system was developed by V. I. Melnik and B. S. Ponomarev. The design of the cyclotron for the joint operation with the accelerator. This document is a preliminary design of the cyclotron. It was developed in the Machine-Design Institute by B. S. Ponomarev. The drawing system was completed by B. S. Ponomarev.

Page 4/4

8(5),8(1)

SOV/105-60-1-2/25

AUTHORS:

Gaghev, M. A., Komar, Ye. G., Monoszon, N. A., Spevakova, P. M.,
Stolov, A. M.

TITLE:

The Supply System of the Electromagnet for the Proton-
synchrotron at the Consolidated Nuclear Research Institute

PERIODICAL:

Elektrichestvo, 1960, Nr 1, pp 6-10 (USSR)

ABSTRACT:

The biggest particle accelerator is at present the proton-synchrotron of the ob"vedinennyi institut yadernykh issledovaniy (Joint Institute of Nuclear Research). Protons with energies of up to 10 billions ev are obtained here. The supply system of the electromagnet is used for the production of a periodically alternating magnetic field with a repetition frequency of 5 per minute in the acceleration chamber of the proton-synchrotron. The main rated data of the supply system are: peak output 140 Mw, peak amperage 12.8 ka, peak voltage 11 kv, the energy stored in the magnetic field of the electromagnet $148 \cdot 10^6$ joule and the losses in the coil of the electromagnet 4 Mw. While connecting the coil of the electromagnet to the direct voltage, the current increases in accordance with an

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The Supply System of the Electromagnet for the
Proton-synchrotron at the Consolidated Nuclear Research Institute

SOV/105-60-1-2/25

exponential curve with a time constant of $T = 25$ seconds. When the current has reached 12.8 ka, the voltage changes its sign and the current drops. The source for the direct voltage is a system of synchronous generators driven by induction motors and of converters. The latter operate as rectifiers during the increase of the current and as inverters during the drop of the current. The schematic circuit diagram of the supply system of the electromagnet is shown in figures 1 and 2 and explained. The reduction of the output impulses in the supply system of the aggregate motors is obtained with the help of fluid slip controllers. The sealed pentode-ignitrons of type IVU 100/1500 with a mean rated current of 100 a and a return voltage of 15 kv, specially developed at the Vsesoyuznyy elektrotekhnicheskii institut (All-Union Electrotechnical Institute) are used as valves for the converter installation. The method of operation of the valves is explained in detail and the influence of distributed capacitance on the operation of the valves is pointed out. These capacitances cause strong high-frequency oscillations with frequencies of dozens of kilocycles. The measures taken for eliminating these influences are mentioned.

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The Supply System of the Electromagnet for the Proton-synchrotron at the Consolidated Nuclear Research Institute

SOY/105-60-1-2/25

in brief. The control system of the converter is supplied by an auxiliary generator (on the shaft of the main generator). The firing of the ignitrons is controlled with the help of a customary thyatron-condenser-circuit. This produces an impulse at the igniter lasting from 200 to 250 milliseconds at peak amperages of from 40 to 60 a. The phase shift between the controller impulses corresponding to the rectifier- and the inverter method of operation, amounts to approximately 140 degrees. The moment of the beginning of the method of operation as rectifier (of the converters) is controlled by a pickup with a contact system which conveys the signal to the trigger. In order to warrant the homogeneity of the magnetic field and to reduce the influence of residual magnetism on the magnetic field, the magnetic system is demagnetized during the interval of the main cycle. This is done with the help of impulses of the current of different polarity with an amplitude decreasing in accordance with a certain law. These demagnetizing impulses are produced by 2 converters with ignitrons of type IVU 100/1500. During backfiring, the converter is protected by back current quick-break switches. Each of the converters is protected against

Card 3/4

The Supply System of the Electromagnet for the
Proton-synchrotron at the Consolidated Nuclear Research Institute

SOV/105-60-1-2/25

short circuit currents by peak-current quickbreak switches. The windings of the electromagnet are protected against excess voltages by dischargers. The specific feature of the supply system investigated here is the circumstance that, during abnormal methods of operation the amperage in the converter (where the normal method of working was disrupted) is increased and the amperages in the other converters decrease, when the converters operate as inverters. To prevent this, a grid protection system is provided. Endurance tests showed that the supply system operates in a stable manner and warrants all methods of operation. There are 5 figures.

SUBMITTED: July 27, 1959

Card 4/4

7 MONOSZON, D. A.

26-2311
ATTENTION: 3/27/49/09/014/001/011
1017/004
Aronson, F. S., Glushko, V. A., Golovik, E. P.,
Mikhailov, G. M., G. S. Komarov, A. P.,
Molodtsov, G. A., Mironov, E. P., Ponomarev, A. A.,
Pislar, A. S., Petrovskii, S. P.
Plasma Studies with "Light" Research Installation
Zhurnal Tekhnicheskoy Fiziki, 1960, Vol. 30, No. 12,
pp. 1791 - 1793

TITLE: Plasma Studies with "Light" Research Installation
REFERENCE: Zhurnal Tekhnicheskoy Fiziki, 1960, Vol. 30, No. 12,
pp. 1791 - 1793
NOTE: A research installation for producing high-current pulsed discharges in a toroidal chamber with an external diameter of 2.15 m and an inner diameter of 1 m is described. The chamber is filled with hydrogen, and discharge is obtained at a pressure of about 0.15-0.2 mm Hg, and with an external magnetic field of 100-170 gauss. Discharge spectra are produced by 2-3 mega electron volts using a capacitor battery capable of storing 1-3.10⁵ joules of energy. The entire installation is shown in a photograph, and is schematically represented in Fig. 2.

Cont 1/3

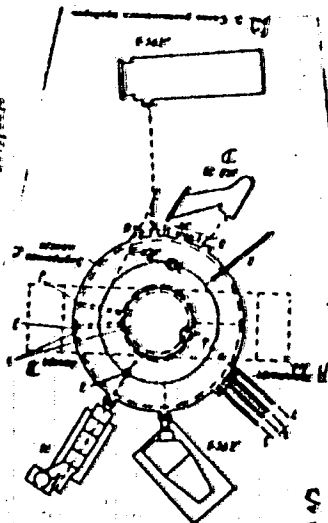
The electric and magnetic characteristics of a plasma discharge are described in detail, after which electrical discharges, spectrum analysis, and studies of the atoms first emitted by discharges, spectrum analysis, and spectrum analysis are carried out on 21. The plasma are described. The magnetic field of a discharge is not correlated to the general magnetic field with an alternating quasistationary discharge. The magnetic field from measurements of the lack of a long plasma column in the field of a discharge, and from the existence of a large external magnetic field from the existence of the electric and magnetic characteristics from the existence of the discharge. From the existence of oscillations in an inhomogeneous hydrogen distribution, which is indicated by a large quantity of plasma with a magnetic field according to her. An explanation of these effects is not possible at the moment. There are 8 figures and 22 refs.

Cont 2/3

ABSTRACT: Particle-instrumentally installed at USSR (Institute of Physics and Technical Cybernetics of the A.S. Sverdlov) Scientific Research Institute of Electrodynamics Apparatus)
PERMITTER: July 19, 1960

Cont 3/3

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Sheet 4/7

Legend: 1) 2) 3) 4) 5) 6) 7) 8) 9) 10) 11) 12) 13) 14) 15) 16) 17) 18) 19) 20) 21) 22) 23) 24) 25) 26) 27) 28) 29) 30) 31) 32) 33) 34) 35) 36) 37) 38) 39) 40) 41) 42) 43) 44) 45) 46) 47) 48) 49) 50) 51) 52) 53) 54) 55) 56) 57) 58) 59) 60) 61) 62) 63) 64) 65) 66) 67) 68) 69) 70) 71) 72) 73) 74) 75) 76) 77) 78) 79) 80) 81) 82) 83) 84) 85) 86) 87) 88) 89) 90) 91) 92) 93) 94) 95) 96) 97) 98) 99) 100) 101) 102) 103) 104) 105) 106) 107) 108) 109) 110) 111) 112) 113) 114) 115) 116) 117) 118) 119) 120) 121) 122) 123) 124) 125) 126) 127) 128) 129) 130) 131) 132) 133) 134) 135) 136) 137) 138) 139) 140) 141) 142) 143) 144) 145) 146) 147) 148) 149) 150) 151) 152) 153) 154) 155) 156) 157) 158) 159) 160) 161) 162) 163) 164) 165) 166) 167) 168) 169) 170) 171) 172) 173) 174) 175) 176) 177) 178) 179) 180) 181) 182) 183) 184) 185) 186) 187) 188) 189) 190) 191) 192) 193) 194) 195) 196) 197) 198) 199) 200) 201) 202) 203) 204) 205) 206) 207) 208) 209) 210) 211) 212) 213) 214) 215) 216) 217) 218) 219) 220) 221) 222) 223) 224) 225) 226) 227) 228) 229) 230) 231) 232) 233) 234) 235) 236) 237) 238) 239) 240) 241) 242) 243) 244) 245) 246) 247) 248) 249) 250) 251) 252) 253) 254) 255) 256) 257) 258) 259) 260) 261) 262) 263) 264) 265) 266) 267) 268) 269) 270) 271) 272) 273) 274) 275) 276) 277) 278) 279) 280) 281) 282) 283) 284) 285) 286) 287) 288) 289) 290) 291) 292) 293) 294) 295) 296) 297) 298) 299) 300) 301) 302) 303) 304) 305) 306) 307) 308) 309) 310) 311) 312) 313) 314) 315) 316) 317) 318) 319) 320) 321) 322) 323) 324) 325) 326) 327) 328) 329) 330) 331) 332) 333) 334) 335) 336) 337) 338) 339) 340) 341) 342) 343) 344) 345) 346) 347) 348) 349) 350) 351) 352) 353) 354) 355) 356) 357) 358) 359) 360) 361) 362) 363) 364) 365) 366) 367) 368) 369) 370) 371) 372) 373) 374) 375) 376) 377) 378) 379) 380) 381) 382) 383) 384) 385) 386) 387) 388) 389) 390) 391) 392) 393) 394) 395) 396) 397) 398) 399) 400) 401) 402) 403) 404) 405) 406) 407) 408) 409) 410) 411) 412) 413) 414) 415) 416) 417) 418) 419) 420) 421) 422) 423) 424) 425) 426) 427) 428) 429) 430) 431) 432) 433) 434) 435) 436) 437) 438) 439) 440) 441) 442) 443) 444) 445) 446) 447) 448) 449) 450) 451) 452) 453) 454) 455) 456) 457) 458) 459) 460) 461) 462) 463) 464) 465) 466) 467) 468) 469) 470) 471) 472) 473) 474) 475) 476) 477) 478) 479) 480) 481) 482) 483) 484) 485) 486) 487) 488) 489) 490) 491) 492) 493) 494) 495) 496) 497) 498) 499) 500) 501) 502) 503) 504) 505) 506) 507) 508) 509) 510) 511) 512) 513) 514) 515) 516) 517) 518) 519) 520) 521) 522) 523) 524) 525) 526) 527) 528) 529) 530) 531) 532) 533) 534) 535) 536) 537) 538) 539) 540) 541) 542) 543) 544) 545) 546) 547) 548) 549) 550) 551) 552) 553) 554) 555) 556) 557) 558) 559) 560) 561) 562) 563) 564) 565) 566) 567) 568) 569) 570) 571) 572) 573) 574) 575) 576) 577) 578) 579) 580) 581) 582) 583) 584) 585) 586) 587) 588) 589) 590) 591) 592) 593) 594) 595) 596) 597) 598) 599) 600) 601) 602) 603) 604) 605) 606) 607) 608) 609) 610) 611) 612) 613) 614) 615) 616) 617) 618) 619) 620) 621) 622) 623) 624) 625) 626) 627) 628) 629) 630) 631) 632) 633) 634) 635) 636) 637) 638) 639) 640) 641) 642) 643) 644) 645) 646) 647) 648) 649) 650) 651) 652) 653) 654) 655) 656) 657) 658) 659) 660) 661) 662) 663) 664) 665) 666) 667) 668) 669) 670) 671) 672) 673) 674) 675) 676) 677) 678) 679) 680) 681) 682) 683) 684) 685) 686) 687) 688) 689) 690) 691) 692) 693) 694) 695) 696) 697) 698) 699) 700) 701) 702) 703) 704) 705) 706) 707) 708) 709) 710) 711) 712) 713) 714) 715) 716) 717) 718) 719) 720) 721) 722) 723) 724) 725) 726) 727) 728) 729) 730) 731) 732) 733) 734) 735) 736) 737) 738) 739) 740) 741) 742) 743) 744) 745) 746) 747) 748) 749) 750) 751) 752) 753) 754) 755) 756) 757) 758) 759) 760) 761) 762) 763) 764) 765) 766) 767) 768) 769) 770) 771) 772) 773) 774) 775) 776) 777) 778) 779) 780) 781) 782) 783) 784) 785) 786) 787) 788) 789) 790) 791) 792) 793) 794) 795) 796) 797) 798) 799) 800) 801) 802) 803) 804) 805) 806) 807) 808) 809) 810) 811) 812) 813) 814) 815) 816) 817) 818) 819) 820) 821) 822) 823) 824) 825) 826) 827) 828) 829) 830) 831) 832) 833) 834) 835) 836) 837) 838) 839) 840) 841) 842) 843) 844) 845) 846) 847) 848) 849) 850) 851) 852) 853) 854) 855) 856) 857) 858) 859) 860) 861) 862) 863) 864) 865) 866) 867) 868) 869) 870) 871) 872) 873) 874) 875) 876) 877) 878) 879) 880) 881) 882) 883) 884) 885) 886) 887) 888) 889) 890) 891) 892) 893) 894) 895) 896) 897) 898) 899) 900) 901) 902) 903) 904) 905) 906) 907) 908) 909) 910) 911) 912) 913) 914) 915) 916) 917) 918) 919) 920) 921) 922) 923) 924) 925) 926) 927) 928) 929) 930) 931) 932) 933) 934) 935) 936) 937) 938) 939) 940) 941) 942) 943) 944) 945) 946) 947) 948) 949) 950) 951) 952) 953) 954) 955) 956) 957) 958) 959) 960) 961) 962) 963) 964) 965) 966) 967) 968) 969) 970) 971) 972) 973) 974) 975) 976) 977) 978) 979) 980) 981) 982) 983) 984) 985) 986) 987) 988) 989) 990) 991) 992) 993) 994) 995) 996) 997) 998) 999) 1000)

Sheet 5/7

MOTIVOS ZONE N.A.

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SECRET

Abstract: The study is concerned with the design of a magnetron...
The magnetron is a vacuum tube device which converts electrical energy into microwave energy...
The design of the magnetron is based on the principle of the cyclotron...
The magnetron is used in a variety of applications...
The design of the magnetron is based on the principle of the cyclotron...
The magnetron is used in a variety of applications...

1. The magnetron is a vacuum tube device which converts electrical energy into microwave energy...
The design of the magnetron is based on the principle of the cyclotron...
The magnetron is used in a variety of applications...
The design of the magnetron is based on the principle of the cyclotron...
The magnetron is used in a variety of applications...

APPROXIMATE: Research Laboratory for the Study of Electromagnetic Phenomena (Scientific Research Institute of Electric Physical Separation)

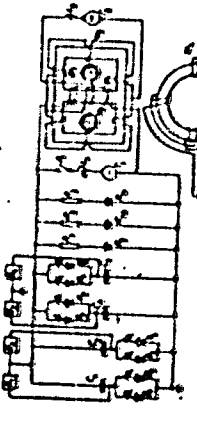


FIG. 4
Legend to FIG. 4: 1) $R_1 - R_2$ are vacuum rectifiers. 2) $d_1 - d_2$ are diodes. 3) C_1 and C_2 are capacitors for degenerating and for the longitudinal field.

MONOSTROM, N.A.

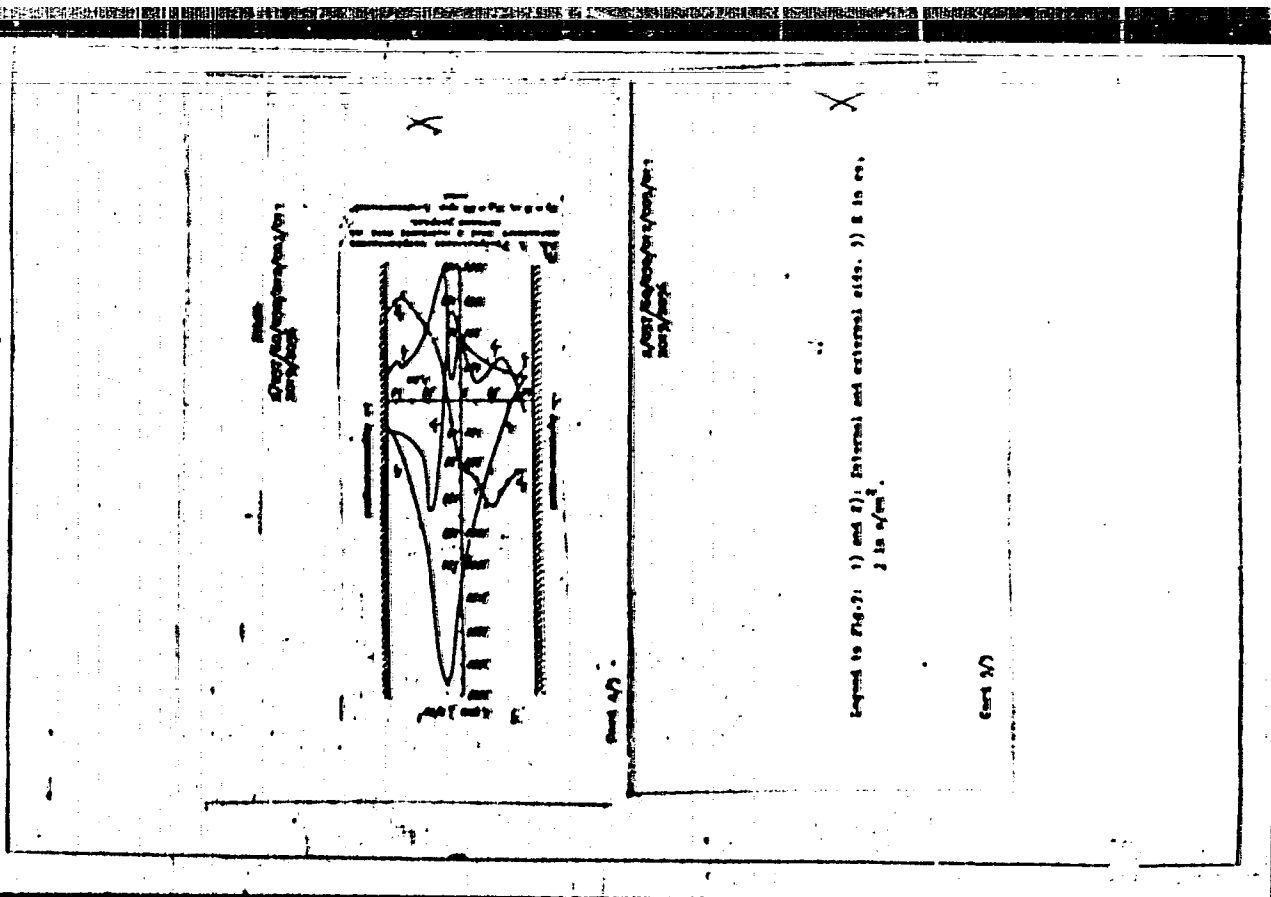
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The authors studied the electric and magnetic fields of the...
 in regions of a highly graded, during the course of a...
 field of a...
 the field strength of the potential field...
 the field strength and current...
 of the discharge...

discharge... has an intensity of (0.3-1)10¹⁴ current...
 on... and...
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The meter shows... from an analysis of the distribution...
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APPROXIMATE: ...
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E039/E420

268731
AUTHORS: Monoszon, N.A., Strel'tsov, N.S., Ostrovskiy, N.A.

TITLE: The basic electromagnetic parameters of the 7 Gev proton synchrotron

PERIODICAL: Pribory i tekhnika eksperimenta, no.4, 1962, 10-15

TEXT: The basic parameters of the electromagnet system are given in detail, e.g. number of C-magnets 98; number of quadrupole lenses 14; azimuthal length of each block 1910 mm; maximum strength of magnetic field 8475 Gc; radius of curvature of equilibrium orbit in C-blocks 31 m; aperture of chamber 110 x 80 mm²; rise time of the magnetic field 1.55 sec; number of working cycles per minute 10 to 12. The tolerances in the geometrical dimensions necessary to produce a field of the required accuracy are considered, together with the characteristics of the steel used. Special coils are provided to compensate for perturbations produced by residual magnetism at the beginning and end of the working cycle, and for the effect of eddy currents in the steel. A decrease in magnetic permeability of the magnetic system can also be allowed for. Cross-
Card 1/2

L0739

S/120/62/000/004/004/047
E194/E420

AUTHORS: Monoszon, N.A., Stolov, A.M., Gashev, M.A.,
Spevakova, F.M., Yavno, A.Kh., Kornakov, Ye.V.,
Kulakov, F.M., Nadgornyy, V.P., Gorshkova, Ye.G.

TITLE: The supply system for the electromagnet of a proton
synchrotron of 7 GeV

PERIODICAL: Pribory i tekhnika eksperimenta, no.4, 1962, 27-33

TEXT: The article describes the supply system for an electro-
magnet, the field of which increases at the steady rate of
 6.7×10^3 Oe/sec to reach a maximum value of 9300 Oe in 1.55 sec
and then falls off exponentially in 0.8 sec, the repetition
frequency is 10 to 12 cycles per minutes. The voltage on the
electromagnet is increased from 5000 to 10250 V with a maximum
current of 2500 A. An induction motor of 3500 kW, 6 kV,
740 rpm drives through a fluid coupling a 6 phase alternator of
peak output 37500 kW, 8.2 kV, and an auxiliary generator of
250 kW, 380 V for auxiliary supply to the 12-phase ignitron
rectifier. During the current decrement period the rectifier
operates as an inverter. A description of the smoothing circuit
Card 1/2

The supply system for the electro-... S/120/62/000/004/004/047
E194/E420

is given. Particular fault conditions of the circuit are analysed and the protective devices fully described. The performance is illustrated by oscillograms. Schematic and block circuit diagrams are given and an outline drawing of the ignitrons. There are 8 figures.

ASSOCIATION: Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury GKAE (Scientific Research Institute for Electrophysical Apparatus GKAE)

SUBMITTED: April 10, 1962

Card 2/2

24.6780

S/120/62/000/004/031/047
E140/E420

AUTHORS: Monozzon, N.A., Stolov, A.M., Spevakova, F.M.

TITLE: The influence of parasitic parameters of the proton synchrotron electromagnets on the asymmetry of the magnetic field and methods of compensating it

PERIODICAL: Pribory i tekhnika eksperimenta, no.4, 1962, 168-171

TEXT: The strictest requirements on symmetry of the magnetic field occur at the point of injection, where the excitation current is lowest. At the start of each acceleration cycle a constant potential is applied to the electromagnet winding with a fairly steep wavefront. The presence of parasitic conductance and shunt capacitance in the system (Fig.1, equivalent circuit) gives rise to transient asymmetry. The article describes a potentiometric system of correction for these distortions. There are 7 figures.

VB

ASSOCIATION: Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury GKAE (Scientific Research Institute for Electrophysical Apparatus GKAE)

Card 178

MONOSZON, N.A

5/003/62/002/006/003/019
B102/B104

34 0730
AUTHORS:

Vladimirskiy, V. V., Komar, Ye. G., Mints, A. L.,
Gol'din, L. L., Monoszon, N. A., Kubchinskiy, S. M.,
Tarasov, Ye. K., Vasil'yev, A. A., Vodop'yanov, P. A.,
Koshkarev, D. G., Kuryshov, V. G., Valyshev, I. P., Stolov,
A. M., Strel'tsov, N. S., Yakovlev, B. M.

TITLE: The design of the 7-Bev proton synchrotron

PERIODICAL: Atomnaya energiya, v. 12, no. 6, 1962, 472-474

TEXT: The history of the first Soviet cyclic accelerator with rigid focusing is briefly described, and the most important data on its planning and operation are presented. Planning was started in 1955. The parameters of this proton accelerator, the energy of which exceeds the antineutron production threshold, were so chosen that the dependence of the orbital circumference on the particle momenta was completely compensated. This was achieved by employing 14 quadrupole magnets with orbits of negative curvature. Technical data: output current, 10^{10} protons/pulse; maximum field strength, 8475 oe; length of equilibrium orbit, 254.2 m; radius of
Card 1/2

The design of the 7-bev ...

3/03/62/017/004/005/013
B102/B104

curvature of the trajectories in the bending magnets (C), 31 m, and in the compensation magnets (K), ∞ ; number of magnetic sectors, $2\pi C + 14K$; gap length between the C-magnets, 304.0 mm; gap length around the K-magnets, 417.5 mm; index of the decrease in field strength, 460; internal height and width of the chamber, 80 and 110 mm, respectively; number of betatron oscillations per revolution, 12.75, and per periodic element, 0.31; number of magnets per periodic element, 6; total critical energy, 19.2 Bev; maximum deviation of the periodic orbit with 100% deviation of the momentum from the equilibrium momentum, 1.47 m; rate of energy increase per revolution, 4.3 keV; duration of one cycle, 1.55 sec; 10^{-12} cycles/min; particle revolution frequency at the beginning of the cycle, 0.11 Kc/sec, and at the end, 1.19 Kc/sec; frequency of synchrocyclotron oscillations, 3600 and 130 cps; weight of the electromagnet steel, 2500 tons; maximum power of the supply system, 25 Mw; Van de Graaff injector (particle energy, 2.8 MeV; field strength 20 G); admissible deviations from field strength and field gradients, $\sim 10^{-3}$; deviations at the chamber edge due to nonlinearities, $\sim 10^{-2}$; admissible frequency deviation of the accelerating field at the beginning of the cycle, 10^{-5} , and at the end, $5 \cdot 10^{-5}$. There are 1 figure and 1 table.

SUBMITTED: March 12, 1962
Card 1/2

MONOSZON, N.A.; STOLOV, A.M.; GASHEV, M.A.; SPEVAKOVA, F.M.;
YAVNO, A.Kh.; KORMAKOV, Ye.V.; KULAKOV, P.M.; MADGORNYI, V.P.;
GORSKOVA, Ye.G.

Power supply system of the electromagnet of the 7 bev. proton
synchrotron. Prib. i tekhn. eksp. 7 no.4:27-33 JI-Ag '62.
(MIRA 16:4)

1. Nauchno-issledovatel'skiy institut elektrofizicheskoy
apparatury Gosudarstvennogo komiteta po ispol'sovaniyu atomnoy
energii SSSR.

(Electromagnets) (Synchrotron)

VLADMIRSKIY, V.V.; KOMAR, Ye.O.; MINTS, A.L.; GOL'DIN, L.L.;
MOROSOV, N.A.; KUBCHINSKIY, S.M.; TARASOV, Ye.K.; VASIL'YEV, A.A.;
VODOP'YANOV, Y.A.; KUSHKAROV, D.G.; KURYSHEV, V.S.; MALYSHEV, I.F.;
STOLOV, A.M.; STRKL'TSOV, N.S.; YAKOVLEV, B.M.

The 7 bev. proton synchrotron. Prib. i tekhn. eksp. 7 no.4:5-9
Jl-Ag '62. (MIRA 16:4)

I. Institut teoreticheskoy i eksperimental'noy fiziki Gosu-
darstvennogo komiteta po ispol'sovaniyu atomnoy energii SSSR,
Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury
Gosudarstvennogo komiteta po ispol'sovaniyu atomnoy energii
SSSR i Radiotekhnicheskij institut Gosudarstvennogo komiteta
po ispol'sovaniyu atomnoy energii SSSR.
(Synchrotron)

I 41026-19 INT(4)/EPA(4)-2/INT(4)-2 Feb-10/Pt-7 IJP(e) GS
ACCESSION NO: AT0607910 S/0000/64/000/000/0058/0054

AUTHOR: Dornikov, M. I.; Monpason, N. A.; Titov, V. A.; Shukylo, I. A.; Kocer, B. I.

TITLE: A high-energy accelerator with a supplementary control beam of particles

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963.
Trudy. Moscow, Atomizdat, 1964, 50-64

DESCRIPTORS: High energy accelerator, particle accelerator, particle beam

Data is presented to evaluate the technical feasibility of
a 1000-Gev proton synchrotron with a supplementary control beam with
experience in the design of high energy accelerators. The main be-
ams and tolerances of the main orbit are determined. An
auxiliary beam would be employed to determine the imperfections of the magnets and
the instability of the foundation, thus permitting the needed corrections to be
made in the main orbit of particles. An auxiliary chamber of large cross-section
would permit determination of the beam's position at various cross-sections and the

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L. 1086-2
ACCESSION NO. AT5007915

accurate calculation of the height and radius of the magnets. Corrections similar to those required by the displacement of the orbit of the auxiliary beam would be introduced during the operation of the machine when the foundation is unstable. The aperture of the main beam has been chosen to be 6 x 3 cm, close to that planned at Brookhaven. The auxiliary beam would have no bearing on the tolerated errors and instability of the magnetic fields of the main electromagnet, since it would control only the symmetric configuration of the blocks of the electromagnet, considered the main problem in the case of very large orbital radiuses. With an electrostatic control system having a potential of 35 kv between the plates, it is calculated, the constant potential difference of only 10^{-6} of the main potential would exert no influence on the position of the auxiliary beam. The stray fields in the straight sections would have negligible effect on the main beam, because the auxiliary beam in the electrostatic system is situated in a zone of small stray fields (one oversted), easily shielded (by permalloy) just as in the case of the magnet system of the auxiliary beam. The alternative of an optical auxiliary beam for alignment was not considered since a proton beam was found simplest to employ. No attempts were made to shield stray fields in the straight sections of the main electromagnet, which is a general problem for all accelerators and not therefore considered in the present report. The stray fields' effect on the orbit of the auxiliary beam in small

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L. A. 100-8

ACCESSION NO: AT5007912

(one earned) and reduced by a factor of 90-100 by normal shielding such as is used in Soviet linear accelerators. Orig. has 3 figures. 4 tables.

ASSOCIATION: Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury imeni B. V. Yul'ina (UFAE BSR) (Scientific Research Institute of Electrophysical Apparatus, (UFAE BSR))

SUBMITTED: 28May64

ENCL: 00

SUB CODE: NP

NO REF (Q/): 001

OTHER: 000

Card 3/3

L 43088-65 ENT(m)/EPA(w)-2/ENA(m)-2 Pub-10/Pt-7 IJP(c) JT/38

ACCESSION NR: AT5007918

S/0000/64/000/000/0197/0201

AUTHOR: Vledimirskiy, V. V.; Gol'din, L. L.; Koshkarov, D. G.; Tarasov, Ye. K.;
Yakovlev, B. M.; Gustov, G. K.; Komar, Ye. G.; Kulikov, V. V.; Malyshov, I. F.;
Kangozon, N. A.; Popkovich, A. V.; Stolov, A. M.; Stral'tsov, N. S.; Titov, V. A.;
Vodop'yanov, E. A.; Kur'min, A. A.; Kur'min, V. F.; Mintz, A. L.; Rubchinskij,
S. M.; Uvarov, V. A.; Zhadanov, V. M.; Filaretov, S. G.; Shiryayev, E. I.

TITLE: 60-70 Gev Proton Synchrotron

SOURCE: International Conference on High Energy Accelerators. Dubna, 1968. Trudy.
Moscow, Atomizdat, 1968, 197-201

TOPIC TAGS: high energy accelerator, synchrotron

ABSTRACT: A 60-70 Gev proton synchrotron with strong focusing is being constructed
not far from Serpukhov, as has been reported earlier (e.g. "Research Institute for
Electro-Physical Equipment, Leningrad," in Proceedings of the International Confer-
ence on High Energy Accelerators and Instrumentation (CEFA, 1959), p. 873). The
present report describes parameter changes and improvements in precision structural
characteristics of the accelerator, and the present state of construction in mid-
1968. The parameters of the magnet are presented in a table. A small change in
the original plans permitted an increase in the length of a part of the free
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L 43088-65

ACCESSION NR: AT5007910

sections, some of which are utilized for input and exit of beams. The super-period design is described. The lengthened sections were obtained as a consequence of shortening the focusing and defocusing blocks by 112 cm. The focusing properties of the magnetic channel were diminished consequently, but very little; and the limiting energy was lowered by 2-3 Gev. The construction of the magnet is described. Each of the magnetic blocks is divided lengthwise into 5 sub-blocks which are enveloped by the common winding. These sub-blocks consist of laminar two-millimeter silicon steel. These steel sheets were stamped out without subsequent mechanical working, and were subjected to sorting and intermixing in order to smooth out their magnetic characteristics. The sub-blocks are constricted by lateral welded plates without adhesion. Provision was made for windings on the poles in order to correct for pole nonlinearity and for variations in the drop reading. These windings make it possible to introduce artificial quadratic (square) nonlinearity that changes the dependence of the frequency of transverse oscillations during a pulse. In order to correct for straying of the residual field, provision has been made for windings on the yoke in series with the main winding. The sub-blocks must undergo calibration on a magnet stand in order to make correcting systems more precise and to determine the most convenient disposition of the sub-blocks along the ring. The winding of the electromagnet is made of aluminum busbars with hollow cores for cooling water. The length of the busbar is so selected that there would be no

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ACCESSION NR: AT5007910

2

welded joints inside the coils. The winding consists of 4 sections, two of which are disposed on the upper pole and two on the lower. The most important characteristics of the electromagnet and power supply system are described in a table. Also described are the vacuum chamber and accelerating field (obtained by 58 paired resonators with ferrite rings, which operate at the 30-th harmonic of revolution and give accelerating potential of 350 kilovolts). The ring tunnel and the general arrangement of the accelerator are shown in figures and described. The building for the injector and portions of the ring tunnel from the injector to the experimental room have been completed in the main and are ready for installation of equipment. This room, in the form of a single-aisle building without internal supports, permits one to work on beams brought into the inner and outer sides. A 90-meter arch covers this room, whose overall length is 150 meters. Provisions have been made for a second experimental room at the southwest part of the ring. Orig. has 4 figures, 2 tables.

ASSOCIATION: Institute teoreticheskoy i eksperimental'noy fiziki GKAE SSSR
(Institute of Theoretical and Experimental Physics, GKAE SSSR), (2) Nauchno-
issledovatel'skiy institut elektrofizicheskoy apparatury imeni D. V. Yefremova
GKAE SSSR (Scientific Research Institute of Electrophysical Apparatus, GKAE SSSR).

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ACCESSION NR: AT5007918

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(3) Radiotekhnicheskiy Institute AN SSSR (Radio Engineering Institute, Academy of Sciences SSSR). (4) Gosudarstvennyy proyektnyy Institut GOSPLAN SSSR (State Planning Institute, GOSPLAN SSSR).

SUBMITTED: 26May64

ENCL: 00

SUB CODE: EE, NP

NO REF SOV: 002

OTHER: 001

and
Cont. 4/4

MONOZON, A. A.

L 13271-65 DTI(L)/EAC(W)/DIT(R)/DIA(S)-2/LPA(W)-2/SEC(T)/T/SEC(H)-2/DIA(R)-2
Pz-6/Po-4/Pab-30/Ps-26 IAP(S)/ASD(B)/AD(P)-3/ASD/SEC(B)/DIT(R)/E-3(GC)/SEC(T)
DIA(T)

ACCESSION NR: AP4047415

8/0089/64/017/004/0287/0294

AUTHORS: Gashev, M. A.; Gustov, G. K.; D'yachenko, K. K.; Komar, Ye. G.; Maly'shev, I. P.; Monozon, N. A.; Popkovich, A. V.;
Ratnikov, B. K.; Rozhdestvenskiy, B. V.; Romyantsev, N. N.; Saksaganskiy, G. L.; Spevakova, P. M.; Stolov, A. M.; Stral'tsov, N. S.;
Yavno, A. Kh.

TITLE: Main technical characteristics of the "Tokamak-3" experimental thermonuclear installation

SOURCE: Atomnaya energiya, v. 17, no. 4, 1964, 287-294

TOPIC TAGS: thermonuclear pinch, thermonuclear fusion, plasma research, plasma pinch/Tokamak-3

ABSTRACT: The "Tokamak-3" is intended for the investigation of a toroidal quasi-stationary discharge in the strong longitudinal magnetic field. The toroidal discharge is produced in the vacuum cham-

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ACCESSION NR: AP4047415

ber by a vortical electric field, and acts as an equivalent secondary turn of a pulse transformer. The produced plasma pinch is stabilized with a longitudinal magnetic field of a toroidal solenoid, inside which the vacuum chamber is located. The magnetic core of the pulse transformer carries the primary vortical-field winding, the demagnetization winding, and the winding for induction heating. The setup is fed from special power systems. The electromagnetic system, the power supply, and the vacuum system are described in some detail. The longitudinal field intensity reaches 40 kG. The vortical field values are 250 and 50 V per turn with pulse durations 10 and 50 milliseconds, and with programming of the waveform such as to maintain a constant current in the plasma pinch. The power supply delivers a peak power of 77,000 kW, maximum 7000 A, no-load voltage 11 kV, and stored energy 180 million Joules. The vortical field is fed from four capacitor banks rated 1000 μF at 20 kV, 11,000 μF at 10 kV, 78,000 μF at 5 kV, and 30,000 μF at 5 kV. The capacitor-bank parameters can be varied over a wide range. The vacuum in the liner does

Cont 2/3

1221-65
ACCESSION NR: AP4047415

not exceed $1-2 \times 10^{-7}$ mm Hg during the interval between gas admission, with the pressure in the outside chamber being $1-2 \times 10^{-6}$ mm Hg. Orig. art. has: 8 figures.

ASSOCIATION: None

SUBMITTED: 23Nov63

ENCL: 00

SUB CODE: NP, ME

NR REF SOV: 000

OTHER: 0001

Card 3/3

L 58913-65 SWT(m)/EPA(w)-2/EMA(m)-2 Pt-7 IJF(c) OS

ACCESSION NR: AT5007938

S/0000/24/000/000/0547/0555

AUTHOR: Giazov, A. A.; Denisov, Yu. M.; Dmitriyevskiy, V. P.; Zmolodchikov, B. I.; Zaslavin, N. L.; Koi'ga, V. V.; Komochnikov, M. H.; Kropin, A. A.; Dzhalapov, V. P.; Gashv, M. A.; Malyshev, I. F.; Monoszon, N. A.; Popkovich, A. V.

TITLE: Relativistic 700-Mev proton cyclotron

SOURCE: International Conference on High Energy Accelerators. Dubna, 1962. Trudy. Moscow, Atomizdat, 1964, 547-555

TOPIC TAGS: proton accelerator, relativistic particle

ABSTRACT: Current theoretical concepts and experimental data conclusively show that to understand the microcosm further it is necessary to increase the beam intensity of accelerators by a factor of 10^3 and produce accelerators with energies up to thousands of Bev's. For the past 5-6 years constant gradient accelerators (500-900 Mev cyclotrons) have appeared to be the best way to produce particles with energies up to 1 Bev (1 Gev) with beam currents of the order of 1 milliamperes instead of 1 microampere (as found in synchrocyclotrons). The present report describes the design for a 700-Mev proton cyclotron developed by the Laboratory of Nuclear Prob-

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L 59913-65

ACCESSION NR: AT5007938

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blems of the OIYaI jointly with the NIIIEFA GKAE SSSR and other scientific research institutes with rated current proton beam up to 500 microamperes. The choice of energy was made on the basis of the fact that at 700 Mev the cross-sections for formation of pions in nucleon-nucleon and nucleon-nuclei collisions are close to maximum, and also because of the possibility of utilizing the electromagnet of the 640-Mev synchrocyclotron of the OIYaI for the new accelerator. The following new problems were considered in the design because there is now no similar operational high-energy accelerator: (a) verification of the linear theory and development of the nonlinear theory of spatial stability and of the phase motion of particles in the accelerator; (b) creation in a large space of a magnetic field with complex configuration and its stabilization with an unusually high degree of accuracy; (c) production of apparatus for the measurement of strongly nonhomogeneous magnetic fields (gradients up to 4000 oa/cm) with an accuracy better than 10^{-4} ; (d) production of high-frequency oscillators with power up to 2 MW at a frequency of 12 megacycles per second (12 Mc), with frequency stability of the order of 10^{-8} , which operate with a resonance system with amplitude of the accelerating high-frequency voltage of up to 100 kilovolts; (e) design of an accelerator and its auxiliary systems which ensure effective operation and maintenance under conditions of high levels of activity; (f) development of a highly effective system for the channeling of proton beam from the accelerator, and also solution of the problems connected with

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L 58713-65

ACCESSION NR: AT8007090

2

producing beams of secondary particles and their channeling and focusing; (g) development of plans for the protection of personnel and instruments from radiation. The paper concludes that the relativistic cyclotron offers wide new possibilities for nuclear research in radiobiology, solid state physics, etc. Orig. art. has: 7 figures, 3 tables.

ASSOCIATION: (I) Ob'yedinennyy institut yadernykh issledovaniy, Dubna (Joint Institute of Nuclear Research, Dubna); (II) Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury imeni D. V. Yefremova GKAE SSSR (Scientific Research Institute of Electrophysical Equipment, GKAE SSSR)

SUBMITTED: 28 May 64

ENCL: 00

SUB CODE: NF

NO RET GOV: 009

OTHER: 002

Am
Card 2/2

TSESARSKAYA, S. I.; MONOSSON, S. M.; SHEYMAN, Ye. A.; YAKHNIS, B. L.; GOLDENBERG, A. I.; GORLOVSKAYA, Ye. P.; KYLKBANOVA, M. A.

Role of roentgenological method in examination of children for B.C.G. vaccination. Probl. tuberk., Moskva no.4:31-36 July-Aug. 1950. (CJML 20:1)

I. (Candidate Medical Sciences S. I. Tserkaya -- Odessa Tuberculosis Institute; S. M. Monosson and E. A. Sheyman -- Leningrad Tuberculosis Institute; Prof. B. L. Yakhnis and Candidate Medical Sciences A. Ya. Gol'berg -- Khar'kov Tuberculosis Institute; E. P. Gorlovskaya -- Kiev Tuberculosis Institute.

MIEKOV, Aka.; KOBUROV, T.; MOHOV, Al.

Complications and mortality according to materials of the N. I. Pirogov
Institute for Urgent Medical Assistance. Suvrem. med., Sofia 8 no.7:
28-35 1957.

1. Iz Instituta za bursu medicinska pomoshch "N. I. Pirogov". Gl.
Lekar: B Devetakov.

(HYPERTENSION, statist.
compl. & mortal.)

MONOV, A1.

Treatment of morphine coma with N-allylnormorphine. Suvr.
med. 1) no.6:36-38 '62.

1. Is Instituta za burza meditsinska pomošt "N.I. Pirgov"
(Glaven lekar Khr. Zdravkov).
(NALORPHINE) (MORPHINE) (COMA)

MONOV, A. I. Cand Agr Sci--(diss) "^{Use} ~~Utilization~~ of herbicides ^{for} in the
^{control} ~~prevention~~ of weeds in fiber-flax ^{croplands} under conditions of Moskovskaya Oblast."
Mos, 1959. 21 pp (Mos Order of Lenin Agr Acad in K. A. Timiryazev), 110 copies
(KL, 52-59, 128)

SAYEV, G.K.; MARKOV, K.Iv.; KLAYM, S.B.; MONOV, A.P.

Phosphatase and dehydrogenase activity in sensitive and resistant
to penicillin staphylococci. Antibiotiki 4 no.4:91-95 J1-Ag
'59. (MIRA 12:11)

1. Kafedra biokhimi i kafedra mikrobiologii pri Vyashem
meditsinskom institute v Sofii, Bolgariya.

(PENICILLIN pharmacol)

(STAPHYLOCOCCUS metab)

(PHOSPHATASES metab)

(DEHYDROGENASES metab)

MCNOV, I.

Utilizing the time of work and the expenditure of labor by
checkrow planting with the SKG-6 sowing machine. p.16
MASHINIZIRANO ZEMEDLIE. (Ministerstvo na zemedelieto)
Sofiya. Vol. 7, No. 3, Mar. 1956

SOURCE: East European Accessions List, EEAL Library of
Congress, Vol. 5, No. 11, November 1956

GAIDAROV, N.; MASLINKOV, Iv.; MONOV, Iv.; KHRISTOV, M.; KHARALANOV, St.;
DIMITROV, I.

Mechanised harvesting of maize. Isv mekh selsko stop BAN
1:115-132 '61.

MONOV, M.

Epizootiology of spirchaetosis in the Vratsa District,
and some experiments in controlling the disease. Izv
Vet inst zaraz parazit 7 201-206 '63.

MONCV, M.

Kidney coccidiosis in goslings. Izv Vet inst zaraz parazit 8:
231-238 '64.

OLOVYANISHNIKOV, Nikolay Panteleymonovich; MONOVA, Ye.S., red.;
BELOVA, N.N., tekhn. red.

[Defense against weapons for mass destruction in a rural
region] Zashchita ot oruzh'ia massovogo porazhen'ia v
sel'skoi mestnosti. Moskva, Sel'khozizdat, 1963. 46 p.
(MIRA 16:8)

(Civil defense)

GRIZLOV, V.F., kand. sel'khoz. nauk; BULGAKOV, I.F.; KUTEVNIKOV,
F.V., kand. tekhn. nauk; SHUTOV, G.A., red.; MOROVA, Ye.S.,
red.

[Oilseed and opium poppy] Mak maslichnyi i opinyi. Mo-
skva, Sel'khozizdat, 1963. 141 p. (MIRA 18:2)

1. Starshiy agronom Gosudarstvennogo tresta po vyrashchivaniyu
i zagotovke lekarstvenno-rastitel'nogo syr'ya (for Bulgakov).

DOROSIN, L.M., kand. Biol. nauk, prof.; KAMVA, Ye. G., prof.

[Bacterial fertilizers: materials of a conference] Bakt-
terial'nye udobreniia; materialy soveshchaniia. Pod ob-
shch. red. L.M. Dorosinskogo. Moskva, Kolos, 1964. 198 p.

(MIRA 1964)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut
sel'skokhozyaystvennoy mikrobiologii.

FUSTOVOYT, V.S., akademik, red.; SUSLOV, V.M., kand. ekon. nauk, otv. red.; ALEKSEYEVA, Ye.I., , kand. sel'khoz. nauk, red.; BUZINOV, P.A., red.; VASIL'YEV, D.S., kand. sel'khoz. nauk, red.; VOSKRESENSKAYA, G.S., red.; GUNDAEV, A.I., red.; IGNAT'YEV, B.K., kand. sel'khoz. nauk, red.; MAKSIMOVA, A.Ya., red.; MOSKALENKO, V.I., red.; PANCHENKO, A.Ya., red.; TIKHONOV, O.I., red.; SHPOTA, V.I., kand. sel'khoz. nauk, red.; MONOVA, Ye.S., red.; LAPSHINA, O.V., red.

[Oilseed and aromatic crops; transactions for 1912-1926]
Maslichnye i efiromaslichnye kul'tury; trudy za 1912-1962 gg. Pod obshchei red. V.S.Pustovoita. Moskva, Sel'khozizdat, 1963. 575 p. (MIRA 17:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut maslichnykh i efiromaslichnykh kul'tur. 2. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Pustovoyt). 3. Direktor-Vsesoyuznogo nauchno-issledovatel'skogo instituta maslichnykh i efiromaslichnykh kul'tur (for Suslov).

CHERNOGOROV, P.V.; BOBRCV, A.V.; Prinimali uchastnye: BABARYKIN, N.V.;
MONOYENKO, I.P.; MONLEY, I.P.; KUTUYEVA, F.S.; OKUL'SKIY, M.K.;
GAL'PERIN, I.B.; VASINA, Z.M.; BERESHTEIN, S.I.; BALINSKIY, V.R.

Effect of foundry iron prepared by a non-blast-furnace method on
the quality of foundings. Lit.proizv. no.7:9-12 J. '60.

(MIRA 13:7)

(Cast iron--Metallurgy)

(Foundries--Quality control)

ACC NR: APT005042

SOURCE CODE: UR/0181/66/008/012/3559/3566

AUTHOR: Zhilich, A. G.; Monoson, B. B.

ORG: Leningrad State University im. A. A. Zhdanov (Leningradskiy gosudarstvennyy universitet)

TITLE: Quasiclassical analysis of the spectrum of a hydrogenlike system in a strong magnetic field

SOURCE: Fizika tverdogo tela, v. 8, no. 12, 1966, 3559-3566

TOPIC TAGS: magneto-optic effect, spectral analysis, adiabatic approximation, strong magnetic field, exciton, semiconductor theory

ABSTRACT: This is a continuation of an earlier attempt (Vestnik LGU v. 16, 26, 1965) to use the spectrum of a hydrogenlike system in a strong magnetic field for a study of magneto-optic effects in semiconductors near the absorption edge and in other spectral regions in which Mott excitons participate. In the present paper the authors propose an adiabatic method for analyzing a hydrogenlike system in a strong magnetic field. The method consists of an investigation of the eigenvalues of the Schrodinger equation for a particle moving in a Coulomb field in a homogeneous magnetic field and deriving from this analysis an equation for the energy spectrum. The present results are compared with the earlier ones and with results by others. A criterion for the applicability of the adiabatic approximation is established. Results are compared qualitatively with an experiment on the magneto-optic absorption in the region of the

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