"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRAT-WODZICKA, Halina

The most favourable period of life for prevention and early therapy of morpho-functional disorders of the masticatory apparatus. Czas. stomat.8 no.2:75-78 Feb '55.

1. Z Zakladu Ortodoncji A.M. w Lodzi Kierownik: doc.dr H. Konrad-Wodzicka. Lodz, Piotrowska 37-15.
(MASTICATION,
morpho-funct.disord.,prev. & control, favourable period of life)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRAT-WODZICKA, Halina, doc. dr.; KASPERSKA, Irena; SUWALSKI, Tadeusz, dr. med.

On the possibility of formation and stimulation of cleft jaw to growth. Czas. stomat. 18 no.5:465-470 My'65.

1. Z Katedry i Zakladu Ortodoncji Akademii Medycznej w Lodzi (Kierownik: doc. dr. H. Kondrat-Wodzicka) i z Oddzialu Chirurgii Dziecieej Wojewodzkiego Szpitala w Poznaniu (Ordynator: dr. med. T. Suwalski).

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRAT-WODZICKA, Halina, doc. dr. stom.; KROLIKOWSKA, Wieslawa; KASPERSKA, Irena

Evaluation of direct orthodontic examination in the light of electromyography carried out on the basis of observations of progenia disturbances. Czas. stomat. 18 no.5:557-563 My'65.

1. Z Kliniki Chorob Nerwowych Akademii Medycznej w Lodzi (Kierownik: prof. dr. nauk. med. E. Herman) i z Katedry i Zakladu Ortodoncji Akademii Medycznej w Lodzi (Kierownik: doc. dr. stom. H. Kondrat-Wodzicka).

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KARATAJUTE-TALIMAA, V., red.; NARBUTAS, V., red.; BLINSTRUBAS, S., doktor tekhn. nauk, red.; GARUNKSTIS, A., kand. geogr. nauk, red.; GRIGELIS, A., kand. geol.-min. nauk, red.; DALINKEVICIUS, J., doktor geol.-min. nauk, red.; KONDRATAS, A., kand. geol.-min. nauk, red.

[Problems of the Devonian stratigraphy and paleogeography of the Baltic region] Voprosy stratigrafii i paleogeografii devona Pribaltiki; doklady. Vilnius, Mintis, 1964. 145 p. (MIRA 18:6)

1. Soveshchaniye po stratigrafii i paleogeografii devona Pribaltiki. Vilnius, 1962. 2. Chlen-korrespondent AN Litovskoy SSR (for Dalinkevicius). 3. Institut geologii Gosudarstvennogo geologicheskogo komiteta SSSR, Vilnius (for Karatajute-Talimaa, Narbutas).

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

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3(5) PHASE I BOOK EXPLOITATION SOV/2485

Lietuvos TSR mokslu akademija. Geologijos ir geografijos institutas

Geografinis metraštis, I (The Geographical Yearbook, I) Vilnius, 1958. 401 p. Errata slip inserted. 1,000 copies printed.

Sponsoring Agency: Lietuvos TSR geografinė draugija.

Editorial Board: A. Basalykas, K. Bieliukas, Editor-in-Chief (President), V. Čeponis (Vice President), V. Gudelis (Vice President), K. Kaušylė, Managing Ed. (Secretary), S. Markelytė, and S. Tarvydas.

PURPOSE: This book is intended for geographers and for the general reader interested in the geography of Lithuania.

COVERAGE: The first volume of the Geographical Yearbook presents articles by 22 authors covering aspects of the climatology, geomorphology, geology of the Quaternary, limnology, economic geography, etc. of Lithuania. The publication also includes a section devoted to book reviews and a chronicle of scientific events. Articles appear in Lithuanian with English and Russian resumes. References accompany each article.

Čeponis, V. Studies of the Lithuanian Geographical Environment and the History of Its Mapping 71

Bieliukas, K. Mathematical Foundations of the Major Indices in Lake Morphometry 79

Styra, B. Problems in Studying the Natural Radioactivity of the Atmosphere 125

Gudelis, V. Some Problems in the Stratigraphy and Paleogeography of the Late Quaternary in Europe and Northern America According to New Data 135

Basalykas, A. Morphogenetic Diagnosis of Slopes 177

Petrulis, L. Graphical Method of Systematizing the Chemical Analyses of Water on the Basis of Borehole Tests 191

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Baliūnas, A. Soil Erosion in the Highlands of Eastern Lithuania 253

Brazauskas, V. The Problem of Transformation and Expedient Utilization of Tillable Land in Eastern Lithuania 269

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AVAILABLE: Library of Congress (G1.G3135)

KONDRATAS, A.

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATAS, A.

GEOGRAPHY & GEOLOGY

MOKSLINIAI PRANESIMAI.

KONDRATAS, A. Origin of mineral springs in Lithuania, p. 74.

Vol. 7, 1958.

Monthly List of East European Accession (EEAI) LC Vol. 8, No. 3
March 1959, Unclass.

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KONDRATAS, A.

GEOGRAPHY & GEOLOGY

MOKSLINAI PRANESIMAI.

KONDRATAS, A. Hydrogeological conditions in the formation of the mineral springs at Likenai, In Russian. p. 133.

Vol. 8, 1958.

Monthly List of East European Accession (EEAI) LC Vol. 8, No. 3
March 1959, Unclass.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

AUTHOR: Kondratas, A.R.

SOV-5-58-3-24/39

TITLE: New Data on the Hydrology of Mineral Waters of the Lithuanian SSR (Novyye dannyye po gidrogeologii mineral'nykh vod Litovskoy SSR)

PERIODICAL: Byulleten' Moskovskogo obshchestva ispytateley prirody, Otdel geologicheskiy, 1958, Nr 3, pp 151 - 152 (USSR)

33

ABSTRACT: This is a resume of a lecture given on Feb 27, 1958. During recent years, numerous deep bore holes were drilled in the Lithuanian SSR, whereby layers of mineral waters of different chemical composition were found in the north-eastern part of the Polish-Lithuanian artesian basin. It was established that the mineral content increased with greater depths. On the territory of the Lithuanian SSR, two districts of mineral waters can be distinguished; the northern and the southern. The author gives a description of the composition of the mineral water at different depths within these two districts.

1. Hydrology--USSR 2. Water--Chemical properties 3. Minerals --Determination

Card 1/1

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATAS, A. R. Cand Geol-Min Sci -- (diss) "Hydrogeological conditions and a hydrochemical description of fresh and mineral waters of the pre-Quaternary deposits of the Lithuanian SSR. Vil'nyus, 1959. 32 pp (Min of Higher and Secondary Specialized Education USSR. Vil'nyus State Univ im V. Kapsukas), 150 copies (KL, 52-59, 118)

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KONDRATAS, K. K.

KONDRATAS, K. K.: "The systematization of existing methods of producing architectural perspectives and an attempt at rationatization of the combined method." Min Higher Education Ukrainian SSR. Kiev Construction Engineering Inst. Chair of Descriptive Geometry and Graphics. Kiev, 1956. (DISSERTATION FOR THE DEGREE OF CANDIDATE IN TECHNICAL SCIENCE).

So.: Knizhnaya Letopis', Moscow No. 15, 1956.

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KONDRATAS, M.; MEDONIS, Ar., red.

[Dubysa River; tourist tour No.6] Dubysa; marsrutas nr.6. Vilnius, Valstybine politines ir mokslines lit-ros leidykla, 1961. 63 p. [In Lithuanian] (MIRA 17:9)

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KONDRATCHENKO, A.P., kandidat tekhnicheskikh nauk; REPREV, A.I., inzhener, retsenzent; DORONIN, F.N., retsenzent; ZHUK, A.A., redaktor; KARAMYSHEV, I.A., redaktor; KHITROV, P.A., tekhnicheskiy redaktor

[Problems of constructing railroad beds in mountainous areas] Voprosy sooruzheniia zheleznodorozhnogo zemlianogo polotna v gornykh usloviiakh. Moskva, Gos. transportnoe zhel-dor. izd-vo, 1951. 110 p. (MLRA 8:6)

(Railroad--Construction)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATCHENKO, A.P

GIBSHMAN, Aleksandr Yevgen'yevich; IOANNISYAN, Ashot Isayevich; KONDRATCHENKO, Anatoliy Petrovich; YAKOVLEV, Boris Vonifat'yevich; BELEN'KIY, N.P., kandidat tekhnicheskikh nauk, redaktor; VLASOV, D.I., kandidat tekhnicheskikh nauk, redaktor; KHITROV, P.A., tekhnicheskiy redaktor.

[Principles of planning railroads] Osnovy proektirovaniia zheleznykh dorog. Moskva, Gos. transp. zhel-dor. izd-vo, 1954. 459 p. (Railroad engineering) (MLRA 8:2)

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KONDRATCHENKO, A.P., dotsent.

Determination of the bridge span of small bridges. Trudy MIIT no.80/81:370-390 '55. (MLRA 9:8)

(Bridges)

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KONDRATCHENKO, A.P., kand.tekhn.nauk

Planning new railroad lines with nonstop train crossings.
Transp.stroi. 8 no.12:16-17 D '58. (MIRA 12:1)
(Railroads--Crossings)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

IOANNISYAN, A.I., prof.; GORINOV, A.V., prof.; AKIMOV, V.I., kand.tekhn. nauk; KANTOR, I.I., kand.tekhn.nauk; KONDRATCHENKO, A.P., kand. tekhn.nauk; SAVCHENKO, I.Ye., kand.tekhn.nauk; TURBIN, I.V., kand. tekhn.nauk; VLASOV, D.I., inzh., red.; KHITROV, P.A., tekhn.red.

[Problems in the planning of railroads with electric and diesel traction] Voprosy proektirovaniia zheleznykh dorog s elektricheskoi i teplovoznoi tiagoi. Moskva, Gos.transp.zhel-dor.izd-vo, 1959. 255 p. (MIRA 13:3)

1. Chlen-korrespondent AN SSSR (for Gorinov).
(Railroad engineering)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATCHENKO, A.P., kand. tekhn. nauk

Efficient time for carrying out work requiring additional capital investments. Transp. stroi. 9 no.11:45-46 N '59 (MIRA 13:3)
(Railroads--Cost of construction)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

GORINOV, A.V.,, prof.; KANTOR, I.I., dots.; KONDRATCHENKO, A.P., dots.; LOGINOV, V.N., assistent; TURBIN. I.V., ispolnyayushchiy obyazannosti dotsenta; SOLOV'YEVA, T.P., red.; KLEYMAN, L.G., tekhn. red.

[Designing a new railroad section with electric and diesel traction; handbook for the disigning of a school project] Proektirovanie uchastka novoi zheleznoi dorogi s elektrovoznoi i teplovoznoi tiagoi; posobie dlia kursovogo proektirovaniia. By A.V.Gorinov i dr. Moskva, M-vo putei soobshcheniia. Glav. upr. ucheb. zavedeniiami, 1960. 109 p. (MIRA 14:11)

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(Railroad engineering)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

GORINOV, Aleksandr Vasil'yevich, prof. Prinimali uchastiye: TURBIN, I.V., dotsent, kand.tekhn.nauk; KANTOR, I.I., dotsent, kand. tekhn.nauk; KONDRATCHENKO, A.P., dotsent, kand.tekhn.nauk; YEVREYSKOV, V.Ye., prof., retsenzent; LEBEDEV, A.I., dotsent, retsenzent; VOZNESENSKIY, G.D., dotsent, retsenzent; ISAKOV, L.M., dotsent, retsenzent; DZHGAMADZE, O.V., dotsent, retsenzent; CHERNYSHEV, G.P., inzh., retsenzent; MYSHKIN, G.N., inzh., retsenzent; ZAYTSEV, I.M., inzh., retsenzent; OZERETSKOVSKIY, V.P., inzh., retsenzent; ZARETSKIY, A.O., inzh., retsenzent; BUGROV, B.A., inzh., retsenzent; KOSTIN, I.I., prof., red.; BOBROVA, Ye.N., tekhn.red.

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1. Chlen-korrespondent Akademii nauk SSSR (for Gorinov). 2. Kafedra "Proyektirovaniye i postroyka zheleznykh dorog" Novosibirskogo instituta inzhenerov zheleznodorozhnogo transporta (for Yevreyskov, Lebedev, Voznesenskiy, Isakov, Dzhgamadze). 3. Gosudarstvennyy proyektno-izyskatel'skiy institut "Gipropromtransstroy" (for Chernyshev, Myshkin, Zaytsev, Ozeretskovskiy, Zaretskiy, Bugrov).
(Railroad engineering)

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GIBSHMAN, Aleksandr Yevgen'yevich, prof.; IOANNISYAN, Ashot Isaayevich, prof.; KONDRATCHENKO, Anatoliy Petrovich, dots.; YAKOVLEV, Boris Vonifat'yevich, dots.; ORLOV, V.N., prof., doktor tekhn.nauk, retsenzent; KARASIK, V.Ya., kand. tekhn. nauk, dots., retsenzent; BOCHKAREV, N.G., ekonomist, retsenzent; PETROV, M.A., inzh., red.; MAKUNI, Ye.V., tekhn. red.

[Fundamentals of the planning and design of railroads]Osnovy proektirovaniia zheleznykh dorog [By]A.E.Gibshman i dr. Pod red. A.I.Ioannisiana. Izd.2., perer. Moskva, Transzheldorizdat, 1962. 347 p. (MIRA 16:1)

(Railroad engineering)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATCHENKO, A.P., kand. tekhn. nauk, dotsent

Planning of railroads taking the various methods of traffic organization in account. Trudy MIIT no.158:79-120 '62. (MIRA 16:6)

(Railroad engineering)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

GORINOV, A.V., prof.; KANTOR, I.I., dots.; KONDRATCHENKO, A.P., dots.; REPREV, A.I., dots.; TURBIN, I.V., dots.; LIVSHITS, V.N., kand. tekhn. nauk; AKIMOV, V.I., kand. tekhn. nauk, retsenzent; GURSKIY, P.A., prof., retsenzent; ZAYTSEV, P.F., kand. tekhn.nauk, retsenzent; LISHTVAN, L.L., inzh., retsenzent; PRUSAKOV, M.B., inzh., retsenzent; SHINKAREV, F.S., inzh., retsenzent; SHUL'PENKOV, V.M., inzh., retsenzent; MEDVEDEVA, M.A., tekhn. red.

[Design and planning of railroads] Proektirovanie zheleznykh dorog. [By] A.V.Gorinov i dr. Moskva, Transzheldorizdat, 1963. 308 p. (MIRA 16:9)

1. Chlen-korrespondent AN SSSR (for Gorinov).
(Railroad engineering)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATCHENKO, A.P., kand. tekhn. nauk

Comparing alternatives with multistage capital investments.
Transp. stroi. 13 no.5:43-46 My '63. (MIRA 16:7)

(Railroads—Finance)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

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Complexonometric determination of calcium and magnesium in blood serum and other biological fluids. Lab. delo no.9:556-561 '64. (MIRA 17:12)

1. Rovenskaya gorodskaya bol'nitsa (glavnyy vrach S.Z. Khashtan).

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATIENE, O. P.

GEOGRAPHY & GEOLOGY

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KONDRATIENE, O. The interglacial deposits in the vicinity of Druskininkai. p. 77.

Vol. 6, 1958.

Monthly List of East European Accession (EEAI) LC Vol. 8, No. 3 March 1959, Unclass.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-

KONDRATENE, O. P., Cand Geol-Min Sci (diss) "Paleogeography of neo-Pleistocene Lithuania from palinological data." Vil'nyus, 1960. 22 pp; (Ministry of Higher and Secondary Specialist Education USSR, Vil'nyus State Univ im V. Kapsukas); 250 copies; price not given; (KL, 17-60, 144)

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATIENE, O.

3(5) PHASE I BOOK EXPLOITATION SOV/2485

Lietuvos TSR mokslu akademija. Geologijos ir geografijos institutas
Geografinis metraštis, I (The Geographical Yearbook, I) Vilnius, 1958. 401 p.
Errata slip inserted. 1,000 copies printed.

Sponsoring Agency: Lietuvos TSR geografinis draugija.

Editorial Board: A. Basalykas, K. Bieliukas, Editor-in-Chief (President), V. Chomskis (Vice President), V. Gudelis (Vice President), K. Kaušyla, Managing Ed. (Secretary), S. Markelyte, and S. Tarvydas.

PURPOSE: This book is intended for geographers and for the general reader interested in the geography of Lithuania.

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Chomskis, V. Studies of the Lithuanian Geographical Environment and the History of Its Mapping 71

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(17)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-

KONDRATIENE, O.P. [Kondratiene, O.]

Interstadial sediments of the last glaciation in the Ula Valley.
Trudy AN Lit. SSR Ser. B no.3:41-51 '63. (MIRA 18:3)

1. Institut geologii i geografii AN Litovskoy SSR.

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

ACC NR: AP7000554 (A) SOURCE CODE: UR/0317/66/000/011/0034/0039

AUTHOR: Kondratenko, A. (Major general; Engineering-technical service)

ORG: none

TITLE: Military workshops repair [Military repair facilities]

SOURCE: Tekhnika i vooruzheniye, no.11, 1966, 34-39

TOPIC TAGS: ordnance, ~~ordnance test~~, military equipment repair, equipment maintenance, armed forces logistics

ABSTRACT: The author of this article states that the maintenance of radar and rocket-artillery equipment is carried out by mobile military repair shops, to each of which are assigned armorers, electronics technicians, and electrical engineers. As a rule, each repairman has mastered the skill of electronics-equipment repairman, and each armorer is also a qualified welder. [WS]

SUB CODE: 15, 19/ SUBM DATE: none

Card 1/1 UDC: none

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATENKO, A.

Computing the workday on collective farms. Bukhg.uchet 14 [i.e.16] no.9:46-49 '57. (MIRA 10:10)

1. Irpenskiy sel'skokhozyaystvennyy tekhnikum, Kiyev.
(Collective farms--Accounting)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATENKO, A.A., kand.fiziko-matematicheskikh nauk, dotsent

Energy levels of electrons in the X-rayed fluorite crystals. (MIRA 15:1)
Trudy LIEI no.36:109-120 '61.
(Fluorite crystals) (Electrons--Spectra)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATENKO, A.A.

DANILOV, M.M., doktor biol. nauk; KONDRATENKO, A.A., kand.fiz.-mat. nauk.

Fluorescence analysis for determining the degree of meat freshness. Veterinariia 35 no.1:78-82 Ja '58. (MIRA 11:2)

1. Vsesoyuznyy zaochnyy institut sovetskoy torgovli (for Danilov).
2. Leningradskiy inzhenerno-ekonomicheskiy institut (for Kondratenko).
(Fluorescence) (Meat inspection)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATENKO, A.A., kand.fiz.-mat.nauk, dots.

Polarizability of fluorite crystals submitted to X-ray irradiation during photoconductivity. Trudy LIEI no.25: 169-177 '59. (MIRA 12:11)
(Fluorite) (Photoconductivity)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATENKO, A., kand. fiz.-mat. nauk; DANILOV, M., doktor biol. nauk

Luminescence apparatus for determining product freshness.
Mias. ind. SSSR. 30 no.4:44-46 '59. (MIRA 12:12)

1.Leningradskiy nauchno-issledovatel'skiy veterinarnyy institut (for Kondratenko). 2.Zaochnyy institut sovetskoy torgovli (for Danilov).
(Meat inspection) (Luminescence)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

DANILOV, M.M., prof., doktor biol. nauk; KONDRATENKO, A.A., kand. fiz.-mat. nauk

Preservation of meat from sliming during slow air freezing.
Veterinariia 36 no.12:63-65 D '59. (MIRA 13:3)

1. Vsesoyuznyy zaochnyy institut sovetskoy torgovli (for Danilov).
2. Leningradskiy nauchno-issledovatel'skiy veterinarnyy institut (for Kondratenko).
(Meat, Frozen)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATENKO, A. A. and DANILOV, M. M.

"Luminescence and spectral express method of determination the quality o f meat and fish."

Veterinariya, Vol. 37, No. 5, 1960, p. 77

Kondratenko, Cand. Phys. Math. Sci. - Engr. Econ. Inst.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

DANILOV, M.M.; KONDRATENKO, A.A.

Luminescence spectrum method for the determination of meat quality. Vop. pit. 20 no. 1:77-82 Ja-F '61. (MIRA 14:2)

1. Iz Leningradskogo instituta sovetskoy torgovli imeni F. Engel'sa i Leningradskogo nauchno-issledovatel'skogo veterinarnogo instituta.
(MEAT—ANALYSIS) (FOOD ADULTERATION AND INSPECTION)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATENKO, A.B.; TARANENKO, A.G.; MILYAYEVA, P.K.; SEREDKINA, Ye.P.

Change in the ethyl fraction supply network to the ethyl benzene department. Prom. energe. 16 no.2:16 F '61. (MIRA 14:3)
(Benzene)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

L 32952-65 EWG(j)/EWP(e)/EPA(e)-2/EWT(m)/EPF(c)/EWP(t)/EPR/EPA(w)-2/T/
EWP(b) Pab-10/Pr-4/Ps-4/Pt-7 WW/JG/WB

ACCESSION NR: AP5014072 UR/0363/65/001/004/0449/0459

52
47
B

AUTHOR: Tresvyatskiy, S. G.; Parkhomenko, M. A.; Kondratenko, A. D.

TITLE: Studies in production of microcrystalline materials of micalike structure

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 4, 1965, 449-459

TOPIC TAGS: micaceous crystalline material, phlogopite, mica

ABSTRACT: Production of a new type of micaceous crystalline material from synthetic micas without the use of binders is considered. In order to synthesize micas of the phlogopite class, the authors studied the replacement of potassium ions by lithium, sodium, rubidium, and cesium (homovalent isomorphism), and by calcium, strontium and barium (heterovalent isomorphism) in potassium phlogopite $KMg_3(AlSi_3O_{10})F_2$. Isomorphous substitution of potassium was shown to be possible in all these cases, and the formation of solid solutions between micas obtained by homovalent and heterovalent substitution was observed. The isomorphous substitution of Mg^{2+} ions by Si^{4+} ions in potassium phlogopite micas and the formation of micas

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L 52067-65
ACCESSION NR: AP5014072

5

[illegible] $(NF)F - MgO - SiO_2 - Al_2O_3$ were also studied. The preparation of [illegible] materials of finely crystalline [illegible] described, and certain [illegible] [illegible] properties (dry friction [illegible] [illegible] machinable, [illegible] [illegible] tables.

[illegible]: Institut problem materialovedeniya Akademii nauk Ukrainskoy SSR (Institute of Materials Science Problems, Academy of Sciences Ukrainian SSR)

SUBMITTED: 09Oct64 ENCL: 00 SUB CODE: MT, IC

NO REF SOV: 009 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

USSR/Soil Science. Mineral Fertilizers. I-5

Abs Jour: Referat Zh-Biol., No 6, 25 March, 1957, 22517

Author : Kondratenko, A.F., Kondratenko, T.I.
Inst :
Title : Periods for Application of Nitrogenous Fertilizers for Hemp.

Orig Pub: Sots. s. kh. Kirgizii, 1956, No 4, 14-21

Abstract: On the northern chernozems of the Chui experimental station of long fiber crops, experiments were conducted for 3 years to study proper timing for applying nitrogenous fertilizers in doses of 120 kg/hectare for hemp cultivation. The hemp was planted over an alfalfa layer. It was shown that the south chui hemp assimilates from the soil up to 250 kg/hectare N, 100 kg/hectare P_2O_5, 300 kg/hectare K_2O, i.e. 2½ - 4 times more than the central Russian hemp. In the experiments, a relationship between the thickness of the total hemp sprouts and the concentration of soil nutrient substances was indicated:

Card : 1/2 -33-

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USSR/Soil Science. Mineral Fertilizers. I-5

Abs Jour: Referat Zh-Biol., No 6, 25 March, 1957, 22517

at high concentrations of nutrient substances created by applying increased doses of N, the thickness of sprouts is diminished by 10-15%. The period of N administration exerts a large influence on the hemp yield. The best results are obtained when 60 kg/hectare of N is administered during basic treatment of soil and 60 kg/hectare N in the first feeding.

Card : 2/2 -34-

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

M

USSR / Cultivated Plants. Plants for Technical Use.
Oil Plants. Sugar Plants.

Abs Jour : Ref Zhur - Biologiya, No 6, 1959, No. 24983

Author : Kondratenko, A. F.; Kondratenko, T. I.
Inst : Kirgizian Scientific-Research Institute of Agriculture
Title : Effect of Manure Composts on the Gambo Hemp's Harvest in Bast Crop Cultivations

Orig Pub : Tr. Kirg. n.-i. in-ta zemledeliya, 1957, vyp 1, 163-172

Abstract : On the Chuy Experimental Station of Bast Cultures in the Kirgizian SSR, problems on the utilization of agricultural waste products and waste products, obtained in the reprocessing of bast cultures, were studied during the course of three years. It was

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increased considerably. The largest hemp harvest is obtained during the introduction,

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATENKO, A.F.

Use of pulsating currents for detailed electric prospecting studies by the methods of induced polarization, establishment of a field, and resistivity. Geofiz. razved. no.9:66-74 '62. (MIRA 15:9)

(Electric prospecting)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATENKO, A.F.

Use of FM fields for studies of electric prospecting. Geofiz.razv. no.13:122-127 '63. (MIRA 17:4)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

VASIL'YEV, V.G., kand.tekhn.nauk, dots.; KONDRATENKO, A.I., inzh.; LOMAKIN, V.P., inzh.; TARASOVA, N.Ya., inzh.

Use of an electronic model in the study of the electric drive of the EVG-15 excavator. Elektrichestvo no.6:39-41 Je '60. (MIRA 13:7)

1. Khar'kovskiy politekhnicheskiy institut im.Lenina.
(Electric driving)
(Excavating machinery—Electric driving)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

Kondra Tenko. A.I.

Development of pathomorphological changes in experimental silicosis. A. I. Kondratenko. *Izvest. Akad. Nauk Kazakh. S.S.R.* ~~No. 130, Ser. Fiziol. i~~ *Med.* No. 4, 144–54 (1954)(in Russian).—Silicosis induced in rabbits by intravenous introduction of colloidal SiO_2 was followed morphologically in various organs. The early stages are characterized by overabundant blood supply, edema, and inflammation; the later stages of silicosis are expressed in proliferative and sclerotic changes of internal organs.

G. M. Kosolapoff

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATENKO, A.I.; KHAMITOVA, V.Z.

Effect of the admixture of lead and some other metals to mine dust on the development of silicosis. Trudy Inst.kraev.pat. AN Kazakh. SSR 4:188-195 '56. (MLRA 10:3)
(MINE DUSTS) (LUNGS--DUST DISEASES)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATENKO, A.L.

Efficiency promoters will report their innovations to the 22d Congress of the CPSU. Put' i put.khoz. 5 no.9:30 S '61. (MIRA 14:10)

1. Zamestitel' nachal'nika Liskinskoy distantsii puti Yugo-Vostochnoy dorogi.

(Railroads--Equipment and supplies)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATENKO, A. M.; ORMAN, S. I.

Tobacco Manufacture and Trade

Length of vacation period and its use. Tabak 13 no. 2, 1952.

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

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

L 47058-65 EWT(1)/EPF(n)-2/EWG(m)/EPA(w)-2 Pz-6/Pc-4/Pab-10/Pi-4 IJP(c)
WW/AT

S/0185/65/010/003/0346/0348

ACCESSION NR: AP5007694

AUTHOR: Kondratenko, A. M.

TITLE: On the excitation of waves in a confined plasma by a modulated current

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 10, no. 3, 1965, 346-348

TOPIC TAGS: plasma wave excitation, confined plasma, nonlinear plasma

ABSTRACT: Inasmuch as earlier investigations of wave excitation in a plasma by modulated current have been limited to an unconfined isothermal and linear plasma, the author considers wave excitation in a confined plasma and attempts to take in-[illegible] account the plasma nonlinearity. The current is assumed specified and the in-[illegible] of the wave on the motion of the current particles is neglected. Two as-[illegible] of the problem are considered. The first involves finding the field of the [illegible] arbitrary dispersion law in the linear approximation, and the second [illegible] finding the field of the wave in a nonlinear but hydrodynamic approxima-[illegible] The high-frequency and low-frequency cases are considered, and it is shown [illegible] cases the amplitude of the field of the excited wave will be limited [illegible] nonlinearity. Orig. art. has: 7 formulas.

Card 1/2

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

ACCESSION NR: AP5007694

ASSOCIATION: Fizyko-tekhnichnyy instytut AN URSR, Kharkiv [Fiziko-tekhnicheskiy institut AN UkrSSR] (Physicotechnical Institute, AN UkrSSR)

SUBMITTED: 09Nov64 ENCL: 00 SUB CODE: ME

NR REF SOV: 004 OTHER: 001

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APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

L 51441-65 EWT(1)/EPF(n)-2/EWG(m)/EPA(w)-2 Pz-6/Po-4/Pab-10/Pi-4
[illegible] WW/AT
ACCESSION NR: AP5011072 UR/0185/65/010/004/0457/0459

AUTHOR: Kondratenko, A. M.

TITLE: Kinetic theory of electromagnetic waves in a bounded plasma

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 10, no. 4, 1965, 457-459

TOPIC TAGS: bounded plasma, plasma wave propagation, electromagnetic wave propagation, kinetic theory

ABSTRACT: The kinetic theory developed is based on a solution of the self-consistent system of equations consisting of Maxwell's equations

$$\mathrm{rot\,rot}\,\mathbf{E} = -\frac{1}{c^2}\frac{\partial^2 \mathbf{E}}{\partial t^2} - \frac{4\pi}{c^2}\frac{\partial \mathbf{j}}{\partial t} \qquad (1)$$

and the kinetic equation for a small deviation f_α from the equilibrium distribution function $f_{0\alpha}$, which is assumed to be Maxwellian, particles of sort α

$$\frac{\partial f_\alpha}{\partial t} + \mathbf{v}\frac{\partial f_\alpha}{\partial \mathbf{r}} + \frac{e_\alpha}{m_\alpha}\mathbf{E}\frac{\partial f_{0\alpha}}{\partial \mathbf{v}} = 0. \qquad (2)$$

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ACCESSION NR: AP5011072

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The notation in the equations is standard. The authors considered the propagation [illegible] electromagnetic waves [illegible] plasma of finite thickness [illegible] and extending infinitely [illegible] The boundary [illegible] the boundary [illegible] components of the [illegible] plasma and the vacuum. Dispersion [illegible] of [illegible] frequency oscillations, under the assumption that the average [illegible] of the plasma electrons is much smaller than the phase velocity of the wave. [illegible] expressions are obtained for very thick and very thin layers, for ionic- [illegible] and for unbounded plasma. [illegible] thank Ia. B. Faynberg for suggesting [illegible] Orig. art. has: 14 formulas.

[illegible]: Fizyko-tekhnichnyyi instytut AN URSR, Kharkiv [Fiziko-tekhricheskiy [illegible] (Physicotechnical Institute AN [illegible]

[illegible] ENCL: [illegible] SUB CODE: ME, EM

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APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

ACC NR: AP6033522 SOURCE CODE: UR/0185/66/011/010/1045/1055

AUTHOR: Kondratenko, A. M. -- Kondratenko, A. N.

ORG: Physicotechnical Institute, AN URSR, Kharkiv (Fizyko-tekhnichnyy instytut AN URSR)

TITLE: Kinetic theory of the passage of waves through a plasma layer in a waveguide

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 11, no. 10, 1966, 1045-1055

TOPIC TAGS: plasma magnetic field, waveguide, absorption coefficient, plasma electromagnetic wave

ABSTRACT: The problem of passage of electromagnetic waves through a plasma layer in a waveguide with metal walls is considered. The plasma is in an intense electromagnetic field, so that motion of plasma particles across the field is ignored. The coefficients of wave energy absorption by the layer are established for the following cases: a) weak spatial dispersion, when $\omega a \gg v_e$ in a homogeneous layer with the motion of ions ignored and an arbitrary law of plasma electron reflection from the layer boundaries; b) a layer inhomogeneous at the edges, ignoring the thermal motion of particles; c) a thin $(v_e \gg \omega a \gg v_i)$ homo-

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

ACC NR: AP6033522

geneous layer and the mirror of plasma particle reflection from the boundaries; d) a thin layer of arbitrary inhomogeneity and the diffuse law of particle reflection from the boundaries. Orig. art. has: 52 formulas. [Based on author's abstract]

SUB CODE: 20/09/SUBM DATE: 03Jan66/ ORIG REF: 006/ [KP]

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37183
S/185/62/007/004/005/018
D407/D301

24.6710
3.2310

AUTHOR: Kondratenko, A. M.

TITLE: On the nonlinear theory of ion cyclotron resonance

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 7, no. 4, 1962, 366-369

TEXT: The author obtains, in approximation of a small nonlinearity, the dispersion relation in which the phase velocity depends not only on the frequency, but also on the amplitude of the ion velocity. A study of nonlinear theory is important in connection with the possible heating of the ion component of a plasma by means of ion cyclotron resonance. A plasma in a waveguide in a constant magnetic field $H_0 \parallel z$ is considered. From the hydrodynamic equations one obtains a nonlinear system of equations; this system has, close to resonance ($\beta^2 \to 0$,

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$u_0 \gg cE_0$), the form

$$\frac{\partial u_r}{\partial t} - \omega_i u_\varphi = - [(u\nabla)u]_r , \qquad (6)$$

$$\frac{\partial u_\varphi}{\partial t} - \omega_i u_r = - [(u\nabla)u]_\varphi .$$

($\beta = \frac{V}{c}$). A narrow waveguide is considered. In order to solve system (6), one assumes that $k_\perp r \ll 1$, and expands the Bessel functions (of the solutions) in powers of $k_\perp r$, retaining the first nonvanishing terms; (u_0 is the amplitude of ion velocity, E_0--the amplitude of the electric field strength, $\omega_i = eH_0/Mc$).

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$$u_{0\,max} = c\left(4\,\frac{\omega_i^2}{k_\perp^2\,c^2}\cdot\frac{E}{H_0}\right)^{1/3}, \qquad (15)$$

where E is the amplitude of the "true" field strength of the electric field of the electromagnetic wave. For the maximum energy of ions, one obtains

$$\mathcal{E}_{max} = \frac{M\omega_i^2}{2k_\perp^2}\,(8n)^{2/3}, \qquad (18)$$

where

$$n = \frac{ck_\perp}{2\omega_i}\cdot\frac{E}{H_0} \ll 1.$$

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There are 3 references: 2 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: T. Stix, Phys. Rev., 106, 1146, 1957.

ASSOCIATION: Fizyko-tekhnichnyy instytut AN URSR (Physico-technical Institute of the AS UkrRSR), Kharkiv

SUBMITTED: June 20, 1961

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

37184
S/185/62/007/004/006/018
D407/D301

24.6710
3.2310

AUTHOR: Kondratenko, A. M.

TITLE: On wave excitation in a plasma by a modulated current

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 7, no. 4, 1962, 371-375

TEXT: An unbounded plasma is considered in a constant magnetic field $H_0 \| z$. It is assumed that a current with a.c. and d.c. components flows through the plasma. The electric field strength E and the particle velocity v are sought in the form of Fourier integrals:

$$E(r,t) = \int E(k,\omega) e^{i(kr - \omega t)} dk\, d\omega \quad \text{etc.} \qquad (4)$$

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After calculations, one obtains the dispersion equation for waves which propagate in a plasma in the presence of a constant magnetic field, viz.:

$$An^4 + Bn^2 + C = 0, \qquad (7)$$

where

$$A = \varepsilon_{11}\sin^2\theta + \varepsilon_{33}\cos^2\theta,$$

$$B = -\varepsilon_{11}\varepsilon_{33}(1 + \cos^2\theta) - (\varepsilon_{11}^2 + \varepsilon_{12}^2)\sin^2\theta,$$

$$C = \varepsilon_{33}(\varepsilon_{11}^2 + \varepsilon_{12}^2). \qquad (8)$$

Eqs. (7) and (8) yield the values of n_1 and n_2 (the refraction indexes of the ordinary and extraordinary waves). Expressions are given for the dielectric constants of a hydrogenic

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plasma. Two cases of current flow are considered: (a) parallel to the magnetic field, (b) perpendicular to it. In the first case, one obtains for the electric field strength:

$$E_y(0,y,t) = \pm \frac{\pi}{c} j_0 \frac{(n_{1,2}^2 - \varepsilon_{33})(\alpha^2 - \varepsilon_{11})}{\varepsilon_{11}(n_1^2 - n_2^2)(n_{1,2}^2 - \alpha^2)^{1/2}} e^{i(k_3 y - \omega t)}, \quad (12)$$

where $\alpha = c/v_0$, v_0 being the velocity of the current particles. Formulas are obtained for the refraction indexes. The relative energy-losses of the current particles per unit path are

$$-\frac{eE_y}{\xi_i} = 2\pi r_i n_0 \frac{\alpha^3 \omega_e^3 \mu^{1/2}}{\omega_{0e}^3 \Delta^{1/2}}, \quad (14)$$

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where r_i is the proton radius, ξ_i--the energy of current ions, and n_0--the ion-current density. With ion energies of the order of 100 kev, the losses, determined by Eq. (14), are by 2 orders of magnitude greater than those obtained by R. Kippenhanh and H. Vries (Ref. 2: Zs. Naturforsch., 15a, 506, 1960). This is due to the fact that the excitations of the natural plasma-frequencies were not taken into account in Ref. 2 (Op. cit.). In the second (perpendicular) case, one obtains for the refraction indexes:

$$n_1^2 = \alpha^2 \left[1 + \frac{\mu \varepsilon_{33}^2}{\alpha^4} \left(1 - \frac{\alpha^2}{\varepsilon_{33}} \right) \right],$$

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$$n_2^2 = -\frac{\mu\varepsilon_{33}^2}{\alpha^2}\left(1 - \frac{\alpha^2}{\varepsilon_{33}}\right). \qquad (23)$$

Waves with n_2 are not excited, whereas the wave with refraction index n_1 causes relative losses of particle energy per unit path, equal to

$$-\frac{eE_y}{\xi_1} \simeq 2\pi r_i n_0 \frac{\alpha^3 \omega_1^3}{\mu^{1/2}\omega_{0e}^3}. \qquad (25)$$

There are 1 figure and 3 references: 2 Soviet-bloc and 1 non-

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

Soviet-bloc.

ASSOCIATION: Fizyko-tekhnichnyy instytut AN URSR (Physico-technical Institute of the AS IkrRSR), Kharkiv

SUBMITTED: June 20, 1961

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATENKO, A.M.; NERSESOV, I.L.

Some results of a study of a change in the velocity of longitudinal waves and the relation of the velocities of longitudinal and transverse waves in the focal zone. Trudy Inst. fiz. Zem. no.25:130-150 '62. (MIRA 15:11)

(Seismic waves)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATENKO, A.M.

Nonlinearity theory of a plasma wave guide. Ukr. fiz. zhur. 8 no.4:488-490 Ap '63. (MIRA 16:8)

1. Fiziko-tekhnicheskiy institut AN UkrSSR, Khar'kov.
(Wave guides) (Electromagnetic waves)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATENKO, A.N. [Kondratenko, A.M.]

Nonlinear theory of ionic cyclotron resonance. Ukr.fiz.zhur. 7 no.4:366-370 Ap '62. (MIRA 15:8)

1. Fiziko-tekhnicheskiy institut AN UkrSSR, g. Khar'kov.
(Plasma (Ionized gases)) (Cyclotron resonance)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATENKO, A.N. [Kondratenko, A.M.]

Wave excitation in a current modulated plasma. Ukr.fiz.zhur. 7 no.4:371-377 Ap '62. (MIRA 15:8)

1. Fiziko-tekhnicheskiy institut AN UkrSSR, g. Khar'kov.
(Plasma (Ionized gases)) (Ions--Migration and velocity)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATENKO, A.N.

"Decay" type of wave instability in plasma wave guides. Zhur. tekh. fiz. 33 no.11:1397-1399 N '63. (MIRA 16:12)

1. Fiziko-tekhnicheskiy institut AN UkrSSR, Khar'kov.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

ACCESSION NR: AT4036045 S/2781/63/000/003/0091/0096

AUTHOR: Kondratenko, A. N.

TITLE: Contribution to the nonlinear theory of ion cyclotron resonance

SOURCE: Konferentsiya po fizike plazmy* i problemam upravlyayemogo termoyadernogo sinteza. 3d, Kharkov, 1962. Fizika plazmy* i problemy* upravlyayemogo termoyadernogo sinteza (Plasma physics and problems of controlled thermonuclear synthesis); doklady* konferentsii, no. 3. Kiev, Izd-vo AN UkrSSR, 1963, 91-96

TOPIC TAGS: cyclotron resonance phenomena, ionized plasma, plasma heating, plasma magnetic field interaction, plasma thermal excitation, waveguide, microwave plasma

ABSTRACT: The nonlinear theory of ion cyclotron resonance is analyzed in view of the proposed possibility of using ion cyclotron

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EWT(d)/EWT(1)/EWT(m)/EPF(n)-2/EWP(v)/EWP(k)/EWP(h)/EWP(1)
Pg-4/Pq-4/Pr-4/Ps-4/Pae-2/Pu-4/Pk-4/Pl-4 IJP(c)

ACCESSION NR: AP5006573

controlling slave system.
feature: In order to control the slave system
the transducer, the signal windings of

for Aircraft Technology) Gosudarstvennyy komitet po aviatsionnoy tekhnike (State Committee

SUBMITTED: 04Jun63 ENCL: 00 SUB CODE: IE

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

EWT(1)/EWG(k)/EPA(sp)-2/EEC-4/EPA W ...

A-4-48259

AUTHOR: Kondratenko, A. N.

TITLE: Kinetic theory of plasma waveguide in a strong magnetic field

SOURCE: IVUZ. Radiofizika, v. 7, no. 4, 1964, 652-656

TOPIC TAGS: plasma waveguide, kinetic theory, plasma wave propa- ... plasma oscillation, particle collision, plasma temperature

ABSTRACT: Earlier studies of plasma waveguides with slow waves were based on the hydrodynamic theory, which disregards important ... connected with thermal motion of particles, such as wave ... which is particularly important at low phase velocities. Consequently the author considers the propagation of electromagnetic oscillations in a cylindrical plasma waveguide bordering on vacuum and situated in a strong magnetic field, using the kinetic equation

Card 1/2

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

L 15183-65
ACCESSION NR: AP4048259

with self-consistent field and neglecting the short-range collisions between the particles. Both isothermal and non-isothermal plasmas are considered. The values of the phase velocity and the damping [illegible]ents are determined as functions of the waveguide radius, [illegible] temperature [illegible]
[illegible] Ya. B. Fa[illegible] [illegible]
[illegible]ance.' Orig. art. has: 19 formulas.

ASSOCIATION: None

SUBMITTED: 21Dec63 ENCL: 00

SUB CODE: ME, EC NR REF SOV: 006 OTHER: 004

Card 2/2

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

ACCESSION NR: AP4036521 S/0089/64/016/005/0399/0402

AUTHOR: Kondratenko, A. N.

TITLE: On the nonlinear theory of electronic cyclotron resonance

SOURCE: Atomnaya energiya, v. 16, no. 5, 1964, 399-402

TOPIC TAGS: electronic cyclotron resonance, nonlinear theory, plasma wave guide, hydrodynamic plasma equation system, plasma electron, cyclotron, cyclotron resonance

ABSTRACT: A plasma waveguide is considered which is in a longitudinally constant magnetic field H_0. An axially symmetric electromagnetic wave of frequency ω is propagated along the field. The selfconsistent hydrodynamic nonlinear equation system is given which describes the behavior of plasma electrons in the field of the wave. The approximate solution of the equations in the nonrelativistic case shows that when $\omega \simeq \frac{eH_0}{mc}$, the velocity amplitude is very high. The limitation of the amplitude caused by the nonlinearity becomes instrumental before it is affected by dissipation. The nonlinear interaction changes the magnetic permeabi-

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

ACCESSION NR: AP4036521

lity of the plasma. "The author is grateful to Ya. B. Feinberg for suggesting the work and for his guidance." Orig. art. has: no figures, 33 equations.

ASSOCIATION: None

SUBMITTED: 15Jul63 DATE ACQ: 03Jun64 ENCL: 00

SUB CODE: NP, ME NO REF SOV: 005 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

ACCESSION NR: AP4009936 S/0057/64/034/001/0154/0161

AUTHOR: Kondratenko, A.N.

TITLE: Contribution to the non-linear theory of a plasma waveguide

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34,no.1, 1964, 154-161

TOPIC TAGS: plasma, plasma waveguide, non-linear waves, non-linear waves in plasma

ABSTRACT: The propagation of low frequency electromagnetic waves in a cylindrical plasma filament (plasma waveguide) is treated with non-linear effects taken approximately into account. The wave frequency is assumed to be small compared with the Langmuir frequency and the wavelength to be long compared with the radius of the plasma filament. The ions are assumed to be stationary, and the system is described by a self-consistent combination of Maxwell's equations for the field and the hydrodynamic equations (including the electrostatic and Lorentz forces) for the electrons. The dependent variables are expanded in a Fourier series in the axial phase and in powers of the parameter eE/mfv, where E is the electric field of the wave at the axis of the waveguide, f is the frequency, v is the phase velocity, and e and m are the electron charge and mass. The expansion coefficients are functions of the radial

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

ACC.NR: AP4009936

coordinate r. They are obtained by a method of successive approximations with successive corrections to the phase velocity (corresponding to successive removal of secularities). Not only the equations of motion, but also the boundary conditions at the boundary between the plasma and the vacuum are non-linear. The non-linearity of the boundary conditions is due to three factors: polarization of the plasma, the wave-like motion of the boundary, and the velocity of the electrons at the boundary. Only the last factor is taken into account, the other two being negligible in the low frequency long wavelength approximation treated. The successive approximations are calculated for second harmonic waves through terms cubic in the expansion parameter. Third harmonic terms cubic in the expansion parameter also exist, but these are not evaluated. It is found that the non-linear interaction in the plasma waveguide alters the radial dependence of the fields of the fundamental wave, increasing the azimuthal magnetic field and decreasing both the radial and the longitudinal electric fields at a given point. "In conclusion, the author takes the occasion to express his sincere gratitude to Ya.B.Faynberg for suggesting the topic and for valuable advice and constant interest in the work, to G.Ya.Lyubarskiy for discussing the results, and to V.I.Kurilko and V.I.Miroshnichenko for assistance in the work." Orig.art.has: 74 formulas.

Card 2/2

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

ACCESSION NR: AP4028945 S/0057/64/034/004/0606/0610

AUTHOR: Kondratenko, A.N.

TITLE: Contribution to the nonlinear theory of a plasma waveguide in a strong magnetic field

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.4, 1964, 606-610

TOPIC TAGS: plasma, plasma waveguide, plasma waveguide nonlinear theory, nonlinear wave propagation, E wave propagation

ABSTRACT: The equations for the propagation of E-waves (longitudinal and radial electri field, azimuthal magnetic field) in a cylindrical plasma waveguide are solved approximately with some nonlinear terms taken into account. The calculation is performed in the hydrodynamic approximation, with space charge effects and the motion of the ions neglected and the electron pressure assumed to be proportional to a power of the density. The longitudinal magnetic field is assumed to be so great that the transverse motion of the electrons can be neglected. With these approximations, the equations are specialized to describe E-wave propagation and are written in a form in which the phase velocity appears as a parameter. The terms of the equa-

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ACCESSION NR: AP4028945

tions are expanded in powers of the ratio of the electron velocity to the phase velocity, and powers higher than the third are dropped. The resulting equations are solved by a method of successive approximations described in more detail elsewhere (A.N.Kondratenko,ZhTF 33,1397,1963). The solution is carried to the third approximation, which includes terms cubic in the field strengths. In obtaining the second and third approximation, it is assumed that the ratio of the waveguide radius to the wavelength is small, and powers of this ratio higher than the second are dropped. The third approximation indicates the formation of harmonics, but this question is not pursued. Expressions for the fields are obtained in the third approximation, and the dispersion equation is derived. The phase velocity increases with increasing wave amplitude. The nonlinear terms increase the radial electric and azimuthal magnetic fields but leav the longitudinal electric field unaltered. "I take the occasion to express my sincere gratitude to Ya.B.Faynberg for suggesting the topic and guiding the work." Orig.art.has: 41 formulas.

ASSOCIATION: none

SUBMITTED: 20Ma/63 DATE ACQ: 28Apr64 ENCL: 00

SUB CODE: PH NR REF SOV: 006 OTHER: 002

Card 2/2

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATENKO, A.N. [Kondratenko, A.M.]

Excitation of waves in a confined plasma by modulated current. Ukr. fiz. zhur. 10 no.3:346-348 Mr '65. (MIRA 18:6)

1. Fiziko-tekhnicheskiy institut AN UkrSSR, Khar'kov.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

KONDRATENKO, A.N. [Kondratenko, A.M.]

Kinetic theory of electromagnetic waves in a confined plasma.
Ukr. fiz. zhur. 10 no.4:457-459 Ap '65. (MIRA 18:5)

1. Fiziko-tekhnicheskiy institut AN UkrSSR, Khar'kov.

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L 52018-65 EPF(n)-2/EPA(w)-2/EWT(1)/EWG(m) Pi-4/Po-4/Pz-6/Pab-10 IJP(c) AT/
WW

ACCESSION NR: AP5012065 UR/0057/65/035/005/0961/0963

AUTHOR: Kondratenko, A.N.

TITLE: On the damping of waves with phase velocity greater than the velocity of light

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 5, 1965, 961-963

TOPIC TAGS: plasma, plasma wave, plasma wave absorption, particle motion

ABSTRACT: It is shown that in a bounded plasma waves with phase velocity greater than c (the velocity of light) can be damped by interaction with the plasma electrons, although this is not the case in an unbounded plasma. The author discusses an infinite plasma layer of thickness 2a between two conducting plates separated by a distance 2b > 2a, and considers waves propagating parallel to the layer. From earlier work (Yadernyy sintez, 5, No. 3, 1965) the author quotes a condition for resonance between the waves and the electron thermal motions, in the [illegible] n it was assumed that the plasma particles are specularly reflect- [illegible] the boundaries of the plasma (the author asserts that this assumption is not essential). For a high phase velocity this condition reduces to v = 2fa/n, where v

Card 1/2

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L 52016-65

ACCESSION NR: AP5012065

[illegible] thermal velocity perpendicular to the layer, f is the frequency, and n is an integer. It is concluded that harmonics corresponding to large values of n will be [illegible] damped and that, since the harmonics cannot propagate [illegible] perpendicularly in the [illegible] plasma for geometric reasons, the wave will be damped. An expression for the impedance of the plasma is quoted from the earlier work and a dispersion equation is derived from it. For frequencies close to the Langmuir frequency this [illegible] equation has a root describing waves with phase velocity greater than c. [illegible] to infinity while a remains finite, the phase velocity of these waves [illegible] conclusion. I wish to thank A.I.Akhiezer and V.F.Alexeyin for [illegible] for discussion the results [illegible] 8 formulas.

ASSOCIATION: None

SUBMITTED: 09Nov64 ENCL: 00 SUB CODE: ME

NR REF SOV: 001 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

L 54762-65 EWT(1)/EPF(n)-2/EWG(m)/EPA(w)-2 Pz-6/Po-4/Pab-10/Pi-4 IJP(c)

ACCESSION NR: AP5015622 UR/0057/65/035/006/1015/1023

AUTHOR: Kondratenko, A.N.

TITLE: On damping of waves propagating in a bounded plasma perpendicular to a magnetic field

SOURCE: Zhurnal tekhnicheskoy fiziki, v.35, no.6, 1965, 1015-1023

TOPIC TAGS: plasma wave propagation, plasma magnetic field, wave damping, wave dispersion

ABSTRACT: The author discusses the propagation of electromagnetic waves in an infinite plasma layer of finite thickness located in an external magnetic field perpendicular to the layer. The calculations are based on the kinetic equations without the collision integrals. Specular reflection of the plasma particles is assumed at the boundaries of the plasma layer. The electron and ion distribution functions and the field strengths are expanded in Fourier series in the coordinate normal to the plasma layer, and the dielectric constants

Card 1/2

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ACCESSION NR: AP5015622

and dispersion equation are derived. Thermal velocities are neglected in certain stages of the derivation. The resulting dispersion equation can be factored in the following limiting cases: the external magnetic field is weak; the external magnetic field is strong; [illegible] velocity is small; the wave frequency is close to the electron Larmor frequency; [illegible] low. The [illegible] previously discussed the case of a weak external field [illegible] sintez 5, No.3,1965); neglect of the thermal motions is not [illegible] in the case of low wave frequency. The other limiting cases [illegible] separately and the damping constants are derived. [illegible]: 74 formulas.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN UkrSSR, Khar'kov (Physico-technical Institute, AN UkrSSR)

[illegible]TED: 21Sep64 ENCL: 00 SUB CODE: ME

NR REF SOV: 005 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

L 3616-66 EWT(1)/ETC/EPF(n)-2/EWG(m)/EPA(w)-2 IJP(c) AT

ACCESSION NR: AP5024028 UR/0057/65/035/009/1546/1551

533.9

34
31
B

AUTHOR: Kondratenko, A.N. 44,55

TITLE: On the kinetic theory of electromagnetic waves in a plasma layer 21,44,55

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 9, 1965, 1546-1551

TOPIC TAGS: plasma electromagnetic wave, plasma wave propagation, plasma temperature, surface effect, kinetic equation, dispersion equation

ABSTRACT: The propagation of electromagnetic waves in a plasma layer of thickness 2a is discussed on the basis of the kinetic equation with self-consistent field but no collision terms. In this problem the frequency $f_0 = a/v_0$ is important (v_0 is the electron thermal velocity). For the boundary condition on the distribution function, it is assumed that the fraction p of the plasma particles that strike the plasma surface are specularly reflected and the rest escape from the plasma into the surrounding vacuum. The dispersion equation for E-waves (electromagnetic waves with a nonvanishing longitudinal electric field component) is derived by an approximate method that may be valid only when p is less than unity. The resulting dispersion equation is very different from the dispersion equation previously derived by the author (Ukr. fiz. zhur., 10, 457, 1965) with different boundary condi-

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

L 13451-66 EWT(d)/EWT(1)/EEC(k)-2/ETC(F)/EPF(n)-2/EWG(m) IJP(c) GG/AT/WS-2

ACC NR: AP6002437 SOURCE CODE: UR/0057/65/035/012/2154/2159

AUTHOR: Kondratenko, A.N.; Miroshnichenko, V.I.

ORG: none

61
B

21,44,55

TITLE: Kinetic theory of the passage of electromagnetic waves through a plasma layer. 1.

8

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 12, 1965, 2154-2159

TOPIC TAGS: ~~plasma~~ electromagnetic wave, electromagnetic wave reflection, electromagnetic wave absorption, plasma surface, ~~electron temperature~~, electron reflection, kinetic equation

ABSTRACT: The authors calculate the reflection, transmission, and absorption of plane electromagnetic waves incident at an arbitrary angle on an infinite plane layer of plasma of finite thickness, the incident waves being polarized with the electric vector normal to the plane of incidence. The calculations are based on Maxwell's equations and the kinetic equation for the deviation from Maxwellian form of the distribution function for the plasma electrons. Ion motions are neglected. There are imposed on the distribution function boundary conditions which correspond to assumption of a fixed probability p for specular reflection of a plasma electron arriving at the plasma - vacuum boundary. The fate of the fraction 1 - p of the electrons that are not reflected is not discussed. With the aid of these boundary conditions an ex-

21,44,55

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ACC NR: AP6002437

pression is derived for the current in the plasma, and a system of coupled equations is derived for the spatial Fourier components of the electric field within the plasma. These equations are solved for the two limiting cases when the distance traversed by a plasma electron during a period of the wave owing to the thermal velocity is very large or very small compared with the thickness of the plasma layer, and expressions are obtained for the reflection, transmission, and absorption coefficients of the electromagnetic waves. These coefficients depend significantly on the electron reflection probability p. For the case when the plasma layer is thin (or the electron thermal velocity is high) and the electron reflection probability p is not too close to unity, the reflection and transmission coefficients of the incident wave are derived directly from the expression for the current. The results derived in this case can be obtained phenomenologically in the hydrodynamic approximation by employing an electron collision frequency equal to the ratio of the electron thermal velocity to the thickness of the plasma layer. Orig. art. has: 40 formulas.

SUB CODE: 20 SUBM DATE: 27Jan65 ORIG. REF: 014 OTH REF: 000

Card 2/2

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

L 21721-66 EWT(d)/FSS-2/EWT(1)/ETC(f)/EPF(n)-2/EWG(m) IJP(c) SG/AT

ACC NR: AP6004874 SOURCE CODE: UR/0057/66/036/001/0025/0032

AUTHOR: Kondratenko, A.N.; Miroshnichenko, V.I.

ORG: none

TITLE: Kinetic theory of the passage of electromagnetic waves through a plasma layer. 2

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 1, 1966, 25-32

TOPIC TAGS: plasma electromagnetic wave, electromagnetic wave reflection, electromagnetic wave absorption, plasma surface, electric polarization, electron plasma, kinetic equation, distribution function, electric field, absorption coefficient

ABSTRACT: In the previous paper of this series (ZhTF, 35, 2154, 1965/see Abstract AP6002437/) the authors presented calculations, based on Maxwell's equations and the kinetic equation for the deviation from Maxwellian form of the distribution function for the plasma electrons, of the reflection, transmission, and absorption of plane electromagnetic waves incident at an arbitrary angle on an infinite plane layer of plasma of finite thickness, the incident waves being polarized with the electric vector normal to the plane of incidence. In the present paper they present similar calculations for incident waves polarized with the electric vector in the plane of incidence. There are imposed on the distribution function boundary conditions which correspond to assumption of a fixed probability p for specular reflection of a plasma

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ACC NR: AP6004874

2

electron arriving at the plasma - vacuum boundary, an expression is derived for the current in the plasma, and a set of coupled equations is obtained for the spatial Fourier components of the electric field within the plasma. These equations are solved for the case p = 1 and arbitrary plasma thickness, and for a thick plasma and arbitrary p, and expressions are derived for the reflection transmission and absorption coefficients of the incident electromagnetic waves. For the case of a thick plasma layer the absorption coefficient is proportional to the electron thermal velocity even when p = 1. In the limit of an infinitely thick plasma layer, the expression obtained for the absorption reduces to that given by V.P.Silin and Ye.P.Fetisov (ZhETF, 41, 159, 1961). For the case of a thin layer with p = 1 the absorption can be considerable, although under these conditions the absorption of waves polarized with the electric vector perpendicular to the plane of incidence is always small. For the case when the plasma layer is thin and p is not too close to unity the reflection and transmission coefficients are derived directly from the expression for the current. The results derived in this case can be obtained phenomenologically in the hydrodynamic approximation by employing an electron collision frequency equal to the ratio of the electron thermal velocity to the thickness of the plasma layer. The penetration into the plasma of the longitudinal wave excited at its surface is also briefly discussed. The authors thank V.F.Aleksin and K.N.Stepanov for discussions. Orig. art. has: 57 formulas.

SUB CODE: 20/ SUBM DATE: 18Mar65/ ORIG REF: 009/ OTH REF: 000

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L 23483-66 EWT(1)/ETC(f)/EPF(n)-2/EWG(m) IJP(c) GG/AT

ACC NR: AP6007096 UR/0057/66/036/002/0398/0401

AUTHOR: Kondratenko, A. N.

ORG: None

TITLE: Kinetic theory of the passage of electromagnetic waves through a thin nonuniform layer of plasma

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 2, 1966, 398-401

TOPIC TAGS: nonuniform plasma, plasma electromagnetic wave, electromagnetic wave reflection, kinetic equation, mathematic physics

ABSTRACT: The author and V.I.Moroshnichenko (ZhTF, 35, No. 10, 1965; 35, No. 12, 1965) have previously discussed the passage of polarized electromagnetic waves through a uniform layer of plasma which is thin compared with the distance traveled by an electron owing to its thermal motion, during a period of the incident wave. In the present letter to the editor this calculation is generalized to the case of a plasma layer that is not uniform in the direction normal to its surface. The calculation is based on Maxwell's equations and the kinetic equation for the electron distribution function. Collisions and ion motion are neglected. As boundary condition is it is assumed that a constant fraction of the plasma electrons incident on the surface of the plasma layer undergo mirror reflection. A solution is obtained in the first order of the ratio of

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L 23483-66

ACC NR: AP6007096

the thickness of the plasma layer to the average distance traveled by an electron owing to its thermal velocity during one period of the incident wave; this solution is valid for an arbitrary spherically symmetric electron velocity distribution and an arbitrary distribution of plasma density in the direction normal to the plasma layer. Expressions are derived for the reflection and transmission coefficients which reduce for the case of a uniform plasma layer to those given in the earlier papers. Orig. art. has: 19 formulas.

SUB CODE: 20/ SUBM DATE: 05Jun65/ ORIG REF: 002/ OTH REF: 000

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L 33416-66 EWT(1)/ETC(f) IJP(c) AT

ACC NR: AP6015299 (A, N) SOURCE CODE: UR/0057/66/036/005/0791/0799

55
B

AUTHOR: Kondratenko, A. N.

ORG: none

TITLE: Kinetic theory of electromagnetic waves in a bounded magnetized plasma. 1.

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 5, 1966, 791-799

TOPIC TAGS: plasma electromagnetic wave, plasma magnetic field, plasma wave absorption, plasma wave propagation, dispersion equation, kinetic equation

ABSTRACT: The linearized kinetic equations for the deviations of the ion and electron distribution functions from the Maxwellian form are employed to discuss the propagation parallel to a uniform external magnetic field of high-frequency electromagnetic waves in an infinite plasma layer of finite thickness. The results obtained are also applicable to a plasma cylinder, provided the radius of the cylinder is much larger than the wavelength. It is assumed that plasma particles striking the sharp boundaries of the plasma layer are either all specularly reflected or all diffusely reflected. The fields and distribution functions are expanded in Fourier series in the spatial coordinate perpendicular to the plasma layer, and equations are derived for the expansion coefficients. These equations could be solved completely for the case of

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ACC NR: AP6015299

specular reflection of the plasma particles, but the general solution is not given because of the complexity of the resulting dispersion equation. The equations are simplified for the case of small spatial dispersion (thermal velocities of the plasma particles small compared with the phase velocity of the waves) and the corresponding approximate dispersion equation is derived. The roots of the dispersion equation are not discussed. Orig. art. has: 68 formulas.

SUB CODE: 20/ SUBM DATE: 05Jun65/ ORIG REF: 005/ OTH REF: 000

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

L 04540-67 EWT(1) IJP(c) AT

ACC NR: AP6025265 SOURCE CODE: UR/0057/66/036/007/1317/1319

6
B

AUTHOR: Kondratenko, A.N.

ORG: none

TITLE: On the interaction of a limited beam with a bounded plasma in a strong magnetic field

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 7, 1317-1319

TOPIC TAGS: plasma beam interaction, plasma oscillation, plasma stability, plasma magnetic field, strong magnetic field

ABSTRACT: The author discusses the excitation of axially symmetric waves propagating in the axial direction in a plasma cylinder of radius b in an infinitely strong magnetic field by an electron-ion beam of radius $a < b$ moving along the axis of the plasma cylinder. A dispersion equation was derived from Maxwell's equations and the kinetic equations for the plasma and the beam. The dispersion equation is presented and its solutions representing high frequency oscillations and ionic sound are discussed. An expression is derived for the logarithmic increment of the oscillations. The increment depends strongly on the ratio a/b, and when this ratio is small the system can be stable. The expression obtained for the increment reduces for $a = b$ to that found by A.I.Akhiyezer and Ya.B.Faynberg (ZhETF, 21, 1262, 1951) and D.Bohm and E.Gross (Phys.Rev.,75, 1851, 1949) for an unbounded plasma.Orig. art. has: 10 formulas.

SUB CODE: 20 SUBM DATE: 27Aug65 ORIG.REF: 003 OTH REF: 001

Card 1/1 gd

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L 07202-67 EWT(1) IJP(c) AT/GD

ACC NR: AT6020585 (N) SOURCE CODE: UR/0000/65/000/000/0209/0215

48

B+1

AUTHOR: Kondratenko, A. N.

ORG: none

TITLE: Excitation of waves in bounded plasma by modulated beams

SOURCE: AN UkrSSR. Vysokochastotnyye svoystva plazmy (High frequency properties of plasma). Kiev, Naukovo dumka, 1965, 209-215

TOPIC TAGS: plasma wave propagation, plasma oscillation, plasma beam interaction

ABSTRACT: The effect of a modulated beam injected into a bounded plasma is considered. A slab of plasma bounded by two parallel conducting plates and in a constant magnetic field is assumed to carry sufficiently strong current (in the direction of the magnetic field) so that transverse motion of particles across field lines can be neglected. The excitation of waves by the current flow is considered in the linear approximation and in the weakly nonlinear, but hydrodynamic approximation. The electric field intensity of the wave is derived from the equations which describe the excitation of the wave. The dispersion relation for the nonlinear case is also derived, containing both collisions and Cerenkov absorption of the waves by particles in the plasma. The derivation of phase velocity for high and low frequency oscillations indicates that in some regimes the wave electric field has the same form for both types of oscillations. Orig. art. has: 23 formulas.

SUB CODE: 20/ SUBM DATE: 19Nov65/ ORIG REF: 004/ OTH REF: 001

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

L 06308-67 EWT(1) GD

ACC NR: AT6020455 (N) SOURCE CODE: UR/0000/65/000/000/0235/0240

43
B+1

AUTHOR: Kondratenko, A. N.

ORG: none

TITLE: Kinetic theory of a plasma waveguide in a strong magnetic field

SOURCE: AN UkrSSR. Vzaimodeystviye puchkov zaryazhennykh chastits s plazmoy (Interaction of charged particle beams with plasma). Kiev, Naukova dumka, 1965, 235-240

TOPIC TAGS: kinetic theory, plasma waveguide, strong magnetic field, Maxwell distribution, dispersion equation, anisotropic medium

ABSTRACT: The present work deals with the problem of the propagation of axially symmetric electromagnetic waves in a cylindrical plasma waveguide which is placed in a sufficiently strong magnetic field (parallel to the waveguide) so that the transverse motion of ions and electrons can be neglected. The propagation is described by the dispersion equation for linear perturbations, Maxwell distribution of undisturbed electrons and singly-ionized atoms, and small phase velocity. The equation of dispersion is solved subject to the boundary conditions which are given by the appropriate continuity of field components. First, cold plasmas are considered. This case has two special conditions which make it possible to write the dispersion relations in analytic form. The simplest relation is where the propagating wave is near the electron

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ACC NR: AT6020455

plasma frequency. These results approach hydrodynamic solutions when the waveguide diameter becomes small or the thermal velocity vanishes. The damping coefficient is also found for these cases. Further, the propagation in an anisothermic plasma (ion-acoustic waves) is considered and the dispersion relations and damping coefficients are derived. The phase velocity decreases as the waveguide radius decreases, thus effectively decreasing the damping coefficients. Orig. art. has: 19 formulas.

SUB CODE: 20/ SUBM DATE: 11Nov65/ ORIG REF: 006/ OTH REF: 004

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L 11424-67 EWT(1) IJP(c) SOURCE CODE: UR/0057/66/036/009/1724/1726

ACC NR: AP6031277

AUTHOR: Kondratenko, A.N.

ORG: none

TITLE: On the penetration of a longitudinal electric field into a bounded magnetized plasma

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 9, 1966, 1724-1726

TOPIC TAGS: magnetoactive plasma, electric field, kinetic equation, Larmor frequency

ABSTRACT: The author discusses the penetration of an alternating electric field into an infinite slab of plasma of finite thickness in the presence of a uniform magnetic field parallel to the boundaries of the plasma. The calculations are based on Maxwell's equations and the linearized kinetic equations for small deviations of the distribution functions from their Maxwellian equilibrium forms. Specular reflection of the plasma particles at the boundaries of the plasma is assumed as boundary conditions for the distribution functions. The component of the electric field parallel to the plasma boundary is assumed to vanish on both boundaries, and the component perpendicular to the plasma boundary of the oscillating electric field is assumed to have a specified amplitude on both boundaries. A general expression is derived for the component perpendicular to the plasma boundaries of the electric field within the plasma. This expression is simplified for the special cases of low and high frequency

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ACC NR: AP6031277

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of the electric field and low and high space dispersion, and expressions are obtained for the frequencies at which spatial resonance occurs. Equation (10) in a paper by G.A.Bogiashvili and Yu.S.Monin (Radiotekhnika i elektronika, 8, 1487, 1963) for the resonance frequency associated with the second harmonic of the Larmor frequency does not agree with the present results and is said to be erroneous. The author thanks Ya.B.Faynberg and K.H.Stepanov for valuable remarks and discussions.

SUB CODE: 20 SUBM DATE: 21Mar66 ORIG. REF: 005 OTH REF: 001

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3

ACC NR: AP7001208 SOURCE CODE: UR/0141/66/009/006/1065/1072

AUTHOR: Kondratenko, A. N.

ORG: none

TITLE: Kinetic theory of the laminated-plasma waveguide in a strong magnetic field

SOURCE: IVUZ. Radiofizika, v. 9, no. 6, 1966, 1065-1072

TOPIC TAGS: plasma waveguide, laminar waveguide, electromagnetic wave propagation

ABSTRACT: The propagation is considered of electromagnetic waves in a laminated-plasma waveguide placed in an infinitely strong magnetic field $(\omega_{He} \gg \Omega_e, \omega, k_\perp v_e)$; the rf-field period is comparable with the average flight time through one layer of a plasma particle $(\omega a \lesssim v_e)$. Starting with Maxwell's equations

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ACC NR: AP7001208

for E-mode and with a linearized kinetic equation for a small deviate from the equivalent distribution function $f_{0\alpha}$, a dispersion equation is derived. Rf-wave propagation under weak spatial-dispersion conditions is examined; kinetic effects are strong for a small waveguide radius; they disappear when the radius is large; a formula for waveguide attenuation is derived. Lf-wave propagation $v_e \gg \omega a \gg v_i$ is examined for both specular- and nonspecular-reflection cases. Orig. art. has: 72 formulas.

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APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824210010-3"

ACC NR: AP6033522 SOURCE CODE: UR/0185/66/011/010/1045/1055

AUTHOR: Kondratenko, A. M. -- Kondratenko, A. N.

ORG: Physicotechnical Institute, AN URSR, Kharkiv (Fizyko-tekhnichnyy instytut AN URSR)

TITLE: Kinetic theory of the passage of waves through a plasma layer in a waveguide

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 11, no. 10, 1966, 1045-1055

TOPIC TAGS: plasma magnetic field, waveguide, absorption coefficient, plasma electromagnetic wave

ABSTRACT: The problem of passage of electromagnetic waves through a plasma layer in a waveguide with metal walls is considered. The plasma is in an intense electromagnetic field, so that motion of plasma particles across the field is ignored. The coefficients of wave energy absorption by the layer are established for the following cases: a) weak spatial dispersion, when $\omega a \gg v_e$ in a homogeneous layer with the motion of ions ignored and an arbitrary law of plasma electron reflection from the layer boundaries; b) a layer inhomogeneous at the edges, ignoring the thermal motion of particles; c) a thin $(v_e \gg \omega a \gg v_i)$ homo-

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KONDRATCHENKO, A.P., dots., kand.tekhn.nauk

Comparing variants with consideration of adequate time required for the application of measures involving additional capital investiments. Trudy MIIT no.129:30-49 '60. (MIRA 13:11)
(Railroads--Economics of construction)

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

CA

V

Viscosity of the system nitrobenzene-arsenic trichloride. B. P. Kondratenko. *J. Gen. Chem.* (U. S. S. R.) [illegible] 244-5(1934).—Viscosity isotherms were detd. for the system $C_6H_5NO_2$-$AsCl_3$, in all concns. at 0°, 10°, 20°, 30°, [illegible]0° and 50°. Results show the existence of a compd. $2C_6H_5NO_2 \cdot AsCl_3$.

S. L. Madorsky

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PROCESSES AND PROPERTIES INDEX

ca

γ

Viscosity of the system pyridine-arsenic trichloride. B. P. Kondratenko. *J. Gen. Chem.* (U. S. S. R.) 4, 2[illegible]-7(1934).—Viscosity isotherms for the system C_6H_5N-$AsCl_3$ in all concns. were detd. at 50°, 60°, 70°, 80°, 90° and 100°. Pronounced maxima in all cases at 50 mols. % concn. indicate the compd. $C_6H_5N.AsCl_3$. S. L. M.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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