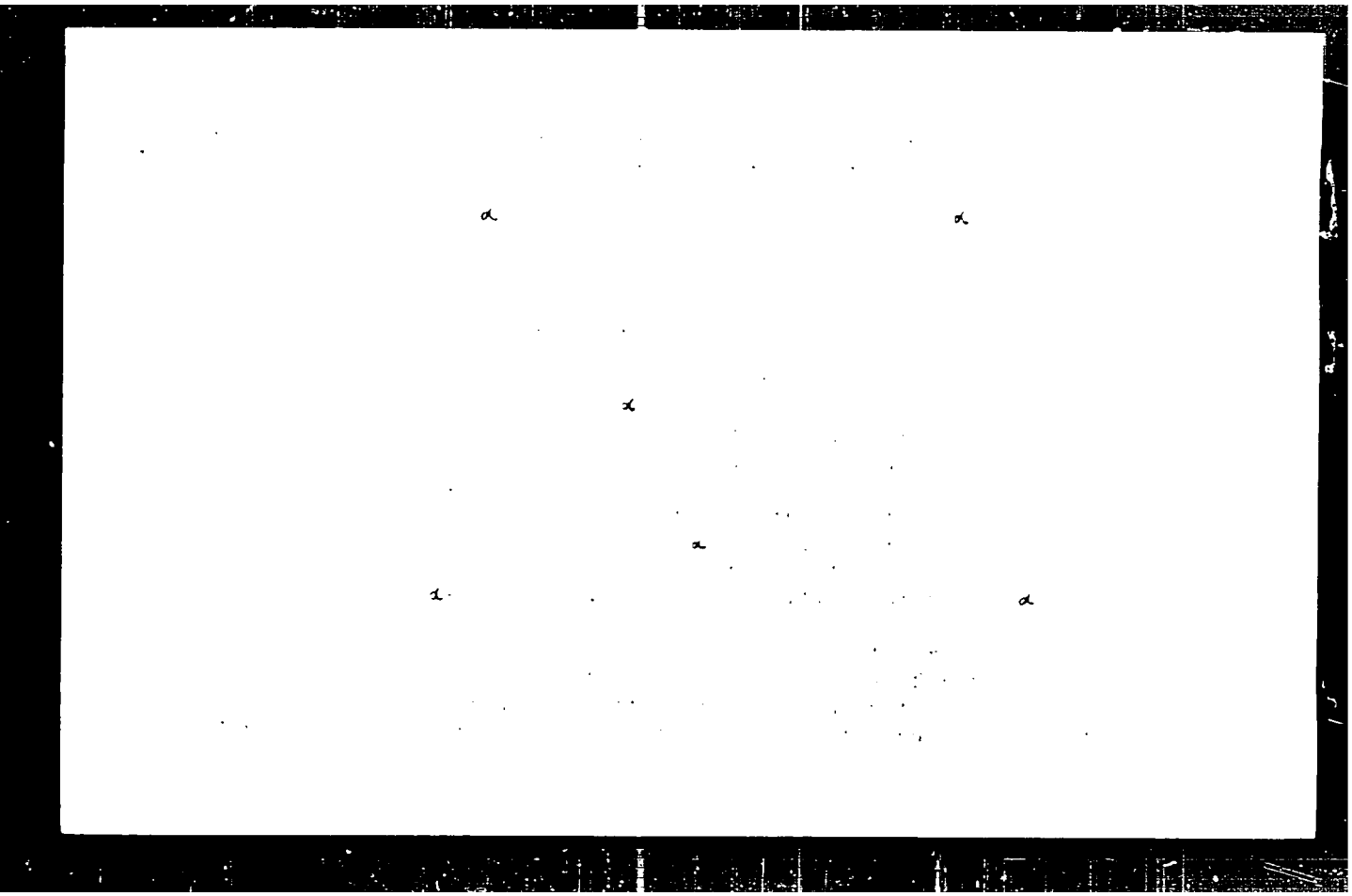
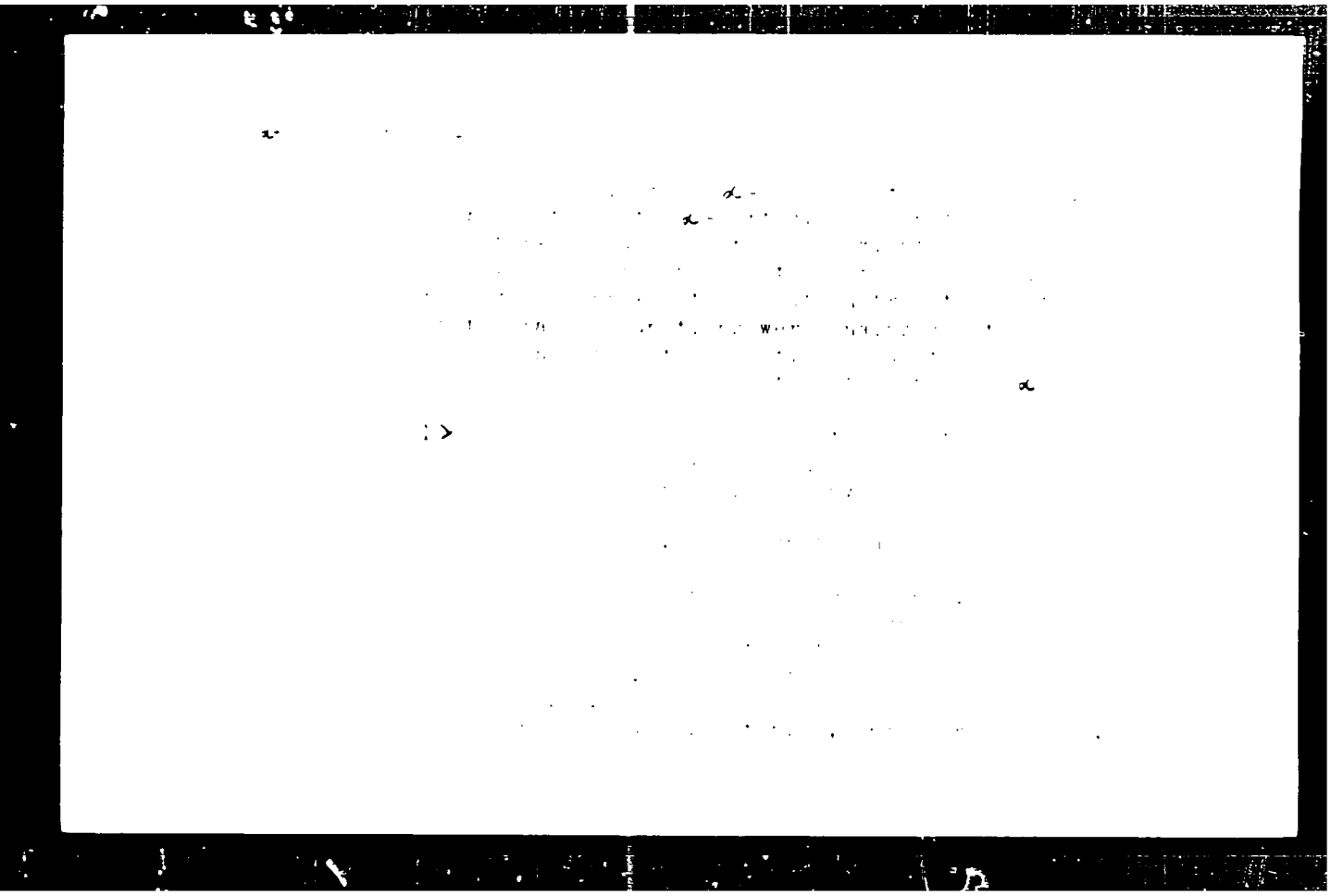
PILIYA, A.D. [translator]; ZEL'TSER, G.I. [translator]; LEMBERG, I.Kh. [translator]; KONSTANTINOV, O.V. [translator]; SHUT'KO,A.V. [translator]; SLIVA,L.A., red.; BURTSEV,A.K., red.; SOKOLOVA,T.S., tekhn.red.

[Deformation of atomic nuclei; generalized nucleus model and the Coulomb excitation method. Articles translated from the English] Deformatsiia atomnykh iader; obobshchennaia model' iadra i metod kulonovskogo vozbuzhdeniia. Sbornik statei. Moskva, Izd-vo inostr.lit-ry, 1958. 383 p. (MIRA 14:5)

(Nuclear shell theory) (Nuclei, Atomic)





The α-Decay of Non-Spherical Nuclei

are Soviet.

SUBMITTED: February 17, 1958

Card 3/3

FILIA, A.D.

Damping of cyclotron [illegible]
tekh. fiz. 39 no.1:73-[illegible] [illegible]

1. Fiziko-tekhnicheskiy [illegible] A.F.Ioffe [illegible]

PILIYA, A. [illegible]

[illegible] (Acad [illegible] Inst [illegible])

[illegible] end of text [illegible]

ACCESSION NR: AT4025300 S/0000/63/000/000/0112/0116

AUTHOR: Pilya, A. D.

TITLE: Method of determining the gradient of plasma concentration, based in the diffraction of electromagnetic waves

SOURCE: Diagnostika plazmy* (Plasma diagnostics); sb. statey. Moscow, Gosatomizdat, 1963, 112-116

TOPIC TAGS: plasma concentration, plasma electromagnetic property, electromagnetic diffraction, electromagnetic scattering, refractive index

ABSTRACT: The scattering of an electromagnetic wave by a plasma cylinder is considered under the condition that the plasma concentration near the cylinder axis is large compared with the critical concentration, and that ka >> 1 (k -- wave number, a -- radius of cylinder). In this case the scattering has a diffraction character and is

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ACCESSION NR: AT4025300

determined by a single parameter, namely the concentration gradient on the plasma boundary, which can be determined by measuring wave scattered from a dielectric cylinder filled with plasma. The method is the same, with slight modification, as used by V. A. Fok for diffraction on a sphere (V. A. Fok, Difraktsiya radiovoln vokrug zemnoy poverkhnosti. M., Izd-vo AN SSSR, 1946). The formula derived for the gradient is

$$\frac{dn}{dr} = 5{,}188\,\frac{n_{кр}}{a}\left[\frac{q-\dfrac{\varphi_0\left(\dfrac{ka}{2}\right)^{1/3}\operatorname{tg}\varphi_0}{k\Delta r}}{1-q\dfrac{k\Delta r\operatorname{tg}\varphi_0}{\varphi_0\left(\dfrac{ka}{2}\right)^{1/3}}}\right]^3, \qquad \varphi_0 = k\Delta r\sqrt{N^2-1},$$

where N -- refractive index of the dielectric material in which the plasma is contained, Δr -- thickness of wall, n_{kp} -- critical plasma

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ACCESSION NR: AT4025300

concentration, r, φ, z -- cylindrical coordinates. q is a real parameter, the values of which are tabulated in the article. The formula presented is derived in an appendix. Orig. art. has: 9 formulas and 1 table.

ASSOCIATION: None

SUBMITTED: 19Oct63 DATE ACQ: 16Apr64 ENCL: 00

SUB CODE: ME, EM NR REF SOV: 002 OTHER: 000

Card 3/3

21(7),24(5)
AUTHOR: Piliya, A. D.

SOV/56-36-4-33/[illegible]

TITLE: Excitation of Rotational Nuclear Levels by Charged Particles (Vozbuzhdeniye rotatsionnykh urovney yader zaryazhennymi chastitsami)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, [illegible]
Vol 36, Nr 4, pp 1185-1191 (USSR)

ABSTRACT: The nuclear excitation of charged particles has already been investigated theoretically as well as experimentally (Ref [illegible]) for the case in which the energy of the impinging particles is considerably lower than the Coulomb barrier. As, however, the excitation cross section increases rapidly with increasing collision energy, it is of interest to investigate nuclear excitation for the case in which particle energies are near the Coulomb barrier. Interpretation of such experiments is rendered difficult by two circumstances: the considerable nuclear interactions and the electromagnetic interaction between the particles and the nucleus, which can no longer be neglected. The latter is connected above all with the excitation of rotational levels; its investigation forms the object of the present paper. The author investigates the

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Excitation of Rotational Nuclear Levels by Charged Particles SOV/[illegible]

scattering of protons or α particles on deformed [illegible] under conditions when the central part of the electric [illegible] cannot be considered to be a minor perturbation; [illegible] confines himself to setting up the wave function of the scattered particle in the external range of effectiveness of nuclear forces. The possibility of an excitation of vibrational [illegible] (not rotational) levels of the target nucleus is neglected. Consideration of nuclear interaction will form the subject of a later paper. The author finally thanks K. A. Ter-Martirosyan for suggesting the topic. There are 1 figure and [illegible] references, 2 of which are Soviet.

ASSOCIATION: Leningradskiy fiziko-tekhnicheskiy institut Akademii nauk SSSR (Leningrad Physico-Technical Institute of the Academy of Sciences, USSR)

SUBMITTED: October 9, 1958

Card 2/2

ACCESSION NR: AP4009925 S/0057/64/034/001/0093/0098

AUTHOR: Piliya, A.D.

TITLE: On the absorption of cyclotron waves in a non-uniform magnetic field

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.1, 1964, 93-98

TOPIC TAGS: plasma, cyclotron waves, cyclotron waves absorption, cyclotron waves reflection, cold plasma, plasma heating

ABSTRACT: By "cyclotron waves" the author understands the nearly transverse electromagnetic waves in a plasma in a magnetic field, with frequencies somewhat less than the ion cyclotron frequency. These waves are strongly absorbed where the cyclotron frequency is close to the wave frequency, and they cannot propagate in a region where the cyclotron frequency is less than the wave frequency. A proposal by T.H. Stix (Phys.Rev.106,1146,1957) for heating plasmas is based on this fact. In the present paper the absorption of cyclotron waves in a region where the cyclotron frequency approximates the wave frequency, and their reflection from such a region are treated theoretically for a cool plasma. It is assumed that the distance traveled by an ion in one cyclotron period due to its thermal motion is small compared with

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ACC. NR: AP4009925

the distance in which the magnetic field changes significantly. With this assumption the principal term in the dielectric tensor for frequencies near the cyclotron frequency is calculated by (approximately) solving the equations of motion of a charged particle in the inhomogeneous field and averaging over a Maxwell velocity distribution. The resulting dielectric tensor indicates that absorption occurs only within a narrow region about the "barrier" where the cyclotron frequency becomes equal to the wave frequency. The absorption process is accordingly appropriately described in terms of a reflection coefficient. (There is no transmitted wave.) The wave equation is solved (approximately) and the reflection coefficient is calculated for cyclotron waves incident on the absorbing region. The reflection coefficient is found to be independent of the temperature and the ion density; its value is 1/3. This result is valid for sufficiently low temperatures when the inhomogeneity of the magnetic field is not too great. "The author is grateful to V.Ye.Golant for a valuable discussion of the work." Orig.art.has: 31 formulas.

ASSOCIATION: Fiziko-tekhnicheskiy institut im.A.F.Ioffe AN SSSR, Leningrad (Physical-Technical Institute, AN SSSR)

SUBMITTED: 18Dec62 DATE ACQ: 10Feb64 ENCL: 00

SUB CODE: PH NR REF SOV: 004 OTHER: 001

Card 2/2

21(7), 24(5)
AUTHOR: Filiya, A. D.

SOV/56-36-5-13/76

TITLE: Consideration of Nuclear Interaction in the Scattering of Charged Particles on Nonspherical Nuclei (Uchet yadernogo vzaimodeystviya pri rasseyanii zaryazhennykh chastits na nesfericheskikh yadrakh)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 36, Nr 5, pp 1393-1397 (USSR)

ABSTRACT: Already in a previous paper (Ref 1) the author derived an expression for the wave function of a charged particle that is scattered on a nonspherical nucleus (nuclear amplitude $b_{ll'}^{\Omega}$). In the present paper this amplitude is to be calculated for the case of an opaque nucleus. The author bases upon the expressions obtained in reference 1 and uses the expressions defined there. The problem of determining the nuclear amplitude in the general case consists of two tasks, because the potential and also the wave functions outside and within the nucleus have totally different symmetries. For the limiting case of

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Consideration of Nuclear Interaction in the Scattering of Charged Particles on Nonspherical Nuclei

SOV/56-36-5-13/76

a black nucleus, the wave function of the nuclear surface obeys the condition $\frac{\partial}{\partial r}(r\Psi) = -iK(r\Psi)$, where K denotes the complex wave vector of the particle in the nucleus. In the first part of this paper the author investigates the boundary condition for the case of a diffuse boundary. The charged particles are to have energies that are a near approach to the height of the Coulomb barrier. The method developed by Gribov (Ref 3) is used. In the second chapter the equilibrium system is set up for the amplitudes $b^{\Omega}_{11'}$, and in the last chapter the limiting value of the amplitudes is investigated for $E < B$. $b^{\Omega}_{11'} = 0$ is obtained for $\Omega \neq 0$, and for $b^{0}_{11'}$ a complicated expression (formula (31)) is derived. The author thanks K. A. Ter-Martirosyan for valuable advice and discussions. There are 6 references, 5 of which are Soviet.

SUBMITTED: October 9, 1958

Card 2/2

SOV/56-37-2-52/56

21(7)
AUTHOR: Piliya, A. D.

TITLE: On the Formation Cross Section of a Compound Nucleus by Charged Particles

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 37, Nr 2(8), pp 583-585 (USSR)

ABSTRACT: The well-known formula by Blatt-Weisskopf (high energies, resonance) $\sigma_c = \frac{\pi}{k^2} \sum_{l=0}^{\infty} (2l+1) \frac{4s_l KR}{\Delta_l^2 + (KR + s_l)^2}$ was found to be of little practical use for charged particles at high values of the Coulomb parameter $\eta = Z_1 Z_2 e^2/\hbar v$. For these cases the author developed the following formula:

$$\sigma_c = \frac{8\pi\eta}{k^2} \left(\frac{k}{K}\right) \left\{ \operatorname{arc\,tg} \frac{v(z_o)}{u(z_o)} - \frac{k}{(2\eta)^{1/3} K} \frac{v(z_o)}{u(z_o)\left[u^2(z_o)+v^2(z_o)\right]} \right\},$$

which is an approximative expression in so far as during integration an expansion into a series was made and this series was

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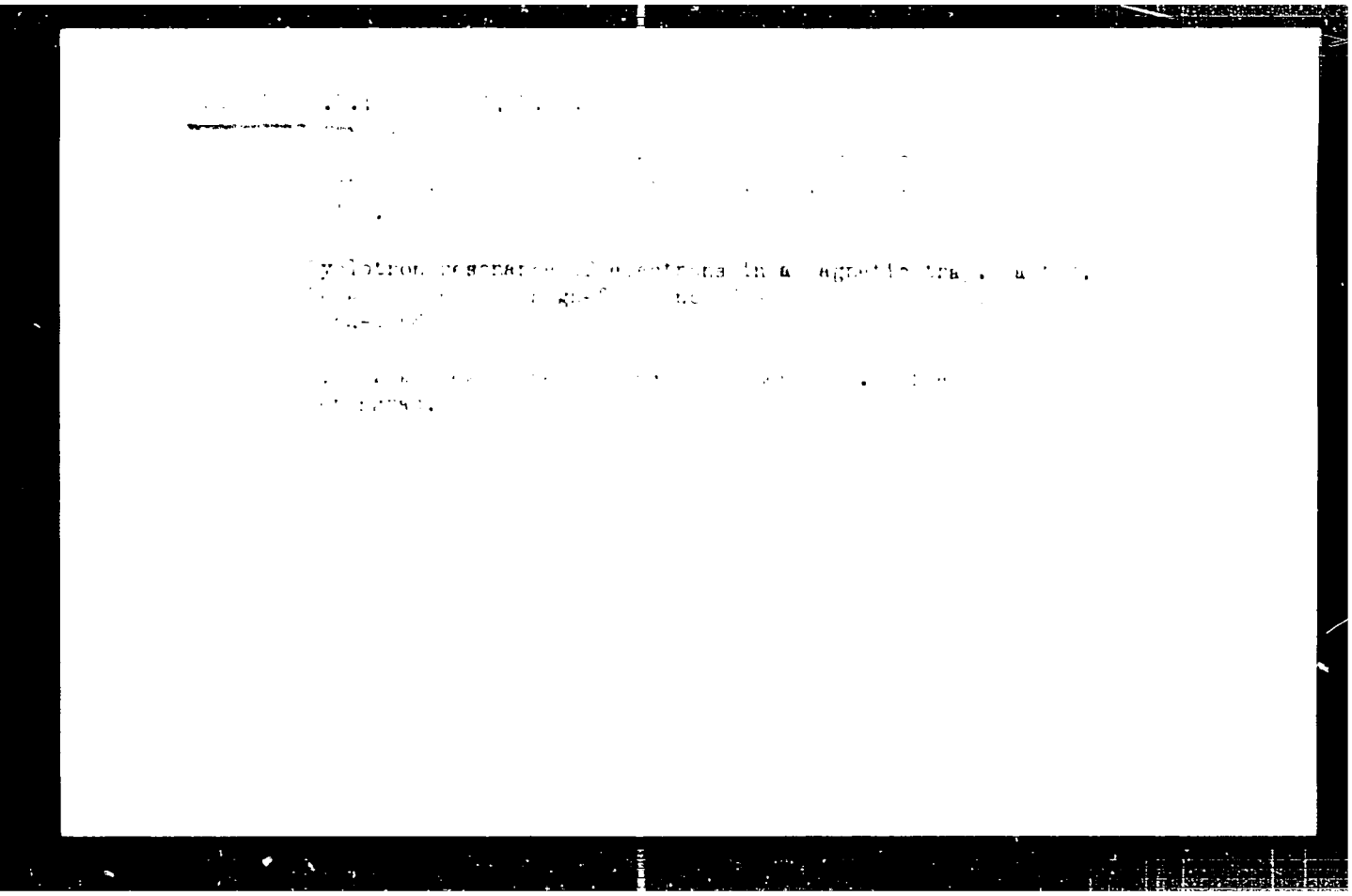
On the Formation Cross Section of a Compound Nucleus by Charged Particles

broken off after the second term. Derivation of the formula is given in large outlines. There are 3 references, 2 of which are Soviet.

ASSOCIATION: Leningradskiy fiziko-tekhnicheskiy institut Akademii nauk SSSR (Leningrad Physico-technical Institute of the Academy of Sciences, USSR)

SUBMITTED: May 21, 1959



L 13450-66 EWT(1)/ETC(F)/EPF(n)-2/EWG(m) IJP(c) AT

ACC NR: AP6002440 SOURCE CODE: UR/0057/65/035/012/2178/2184

AUTHOR: Golant, V. Ye.; Kaganskiy, M.G.; Ovsyannikov, V.A.; Piliya, A.D.

ORG: Physico-technical Institute im. A.F.Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

21,44,55

TITLE: A toroidal machine for adiabatic compression of plasma

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 12, 1965, 2178-2184

TOPIC TAGS: plasma heating, plasma compression, ~~plasma confinement, plasma device~~, nonhomogeneous magnetic field, magnetic field, physics laboratory instrument

ABSTRACT: There is briefly described a new machine, the "Tuman", for ohmic heating and subsequent adiabatic compression of plasma. The chamber is in the form of a racetrack with 60 cm long straightaways and 20 cm radius semicircular ends. In order to meet the conflicting requirements for stable, efficient ohmic heating and high adiabatic compression ratio, the quasistationary longitudinal magnetic field (half-period 3 millisec) was made strong (up to 50 kOe) in the semicircular end regions and weak (1.5-3 kOe) in the straightaways. The radius of the chamber in the semicircular end regions is 2 cm, and the plasma is stabilized by a 5 mm thick copper liner, which is slotted to permit penetration of the magnetic field. The radius of the chamber in the straightaways is 8.5 cm and the walls are of glass, there being no metallic liners that might reduce the rate of rise of the compressing magnetic

Card 1/2 UDC: 533.9

L 13450-66

ACC NR: AP6002440

field. The quasistationary magnetic field is produced by discharge of two 6 μF 5 kV capacitors through suitable windings. Preliminary ionization is effected by a 30 μ sec rf pulse. Ohmic heating is accomplished with the aid of a 0.2 V sec demountable transformer powered by a 25 μ F 10 kV capacitor bank and having a gap in the core of not more than 0.5 mm. Duration of ohmic heating is ordinarily 300 μ sec. The magnetic field in the straightaways can be raised from a few kOe or less to as high as 30 kOe in from 20 to 240 μ sec by discharge of an adjustable capacitor bank (possible values are 600 μ F and 20 kV) through special windings. These windings are similar to those described by Bartels (Naturwissenschaften, 50, 396, 1963); they were made in two layers of four turns each with the turns in the two layers inclined oppositely to the axis of the chamber in order to minimize the transverse component of the field. The machine was designed to compress 15 liters of plasma to a volume of 1 liter. The inhomogeneous quasistationary magnetic field was mapped out by means of probes with the windings excited at 400 Hz; the results are presented graphically and discussed briefly. In an appendix there is a brief theoretical discussion of the stability of the plasma. The authors thank A.I.Anisimov, N.I.Vinogradov, and V.N.Dyn'kov (deceased), who participated in the design of the machine, and S.I.Kosenko, V.A.Pautov, P.S.Sergiyenko, and M.I. Kulyshov, who participated in its construction. Orig. art. has: 9 formulas and 5 figures.

SUB CODE: 20 SUBM DATE: 20May65 ORIG. REF. 005 OTH REF: 005

Card 2/2

ACC NR: AP7001316 SOURCE CODE: UR/0057/66/036/012/2190/2194

AUTHOR: Pilya,A.D.; Frenkel', V.Ya.

ORG: Physicotechnical Institute im. A.F.Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: X-radiation at the electron cyclotron resonance in a magnetic trap

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 12, 1966, 2190-2194

TOPIC TAGS: plasma confinement, plasma heating, cyclotron resonance, magnetic trap, X ray emission

ABSTRACT: The authors calculate the intensity of x-rays due to the electrons of a plasma confined in a magnetic trap striking the wall of the chamber during heating of the plasma by a high frequency field at the electron cyclotron frequency. The calculation is based on a differential equation for the electron velocity distribution function derived elsewhere by the authors (ZhTF, 34, No.10, 1752, 1964). This differential equation is integrated under the appropriate boundary conditions with the aid of some simplifying assumptions, and there is derived an approximate expression for the x-ray intensity as a function of the time since the high frequency field was turned on. For a plasma of finite thickness (or with a finite penetration depth of the high frequency field), the x-ray intensity passes through a maximum as a function of time, owing to depletion of the plasma of electrons. For an infinitely thick plasma

UDC: 533.9

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ACC NR: AP7001316

this maximum is masked as a result of the strong dependence of the x-ray intensity on the electron velocity. The theoretical curve is compared with an experimental curve of x-ray intensity versus time, and qualitative agreement is shown. The authors thank V. Ye.Golant, K.M.Novik, and K.A.Podushnikova for their interest in the work and for discussions. Orig. art. has: 13 formulas and 2 figures.

SUB CODE: 20 SUBM DATE: 09Jul66 ORIG. REF: 003 OTH REF: 002

Card 2/2

ACC NR: AP7001317 SOURCE CODE: UR/0057/66/036/012/2195/2199

AUTHOR: Pliya, A.D.

ORG: Physicotechnical Institute im. A.F.Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: Scattering of waves in a plasma in the presence of conversion

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 12, 1966, 2195-2199

TOPIC TAGS: inhomogeneous plasma, plasma electromagnetic wave, electromagnetic wave scattering, electron temperature, ion temperature

ABSTRACT: The author discusses scattering with change of frequency of electromagnetic waves in an inhomogeneous plasma. The scattering is treated as due to induced currents proportional to the product of the electric field of the incident wave and the electron density fluctuations in the plasma. The intensity of the scattered radiation is given by a formula taken from a paper shortly to be published by the author (Zh.T.F., 37, No.1, 1967); much of the notation is also taken from this forthcoming paper. There is derived an expression for the scattering coefficient as an integral involving the Fourier space component of the correlation function of the Fourier time components of the electron density fluctuations and other quantities, the meanings of which are presumably to be revealed in the paper cited above. The behavior of this expression is discussed under the condition that a certain quantity be small. It is found that con-

UDC: 533.9

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ACC NR: AP7001317

version leads to a large increase in the spectral density and to a considerable broadening of the spectrum. The scattering depends on the ratio of the electron temperature to the ion temperature, and in principle this ratio can be determined by comparing theoretical curves with experimental curves. Orig. art. has: 19 formulas and 1 figure.

SUB CODE: 20 SUBM DATE: 28Jul66 ORIG.REF: 009 OTH REF: 001

Card 2/2

L 33412-66 EWT(1)/ETC(f) LIP(c) GG/AI SOURCE CODE: UR/0057/66/036/005/0818/0826
ACC NR: AP6015303 (A, N)

AUTHOR: Piliya, A.D.

ORG: Physicotechnical Institute im. A.F.Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut)

TITLE: On conversion of waves in a nonuniform plasma

SOURCE: Zhurnal tekhnicheskoy fiziki, vo. 36, no. 5, 1966, 818-826

TOPIC TAGS: plasma electromagnetic wave, dielectric constant, isotropic plasma, nonuniform plasma, plasma wave

ABSTRACT: The author discusses the propagation of electromagnetic waves in an isotropic nonuniform plasma and their reflection, absorption, and conversion at a plane surface where the dielectric constant vanishes. Ion motions are neglected and the plasma density n is assumed to depend only on the single coordinate z of a Cartesian system, to vanish for large negative values of z, and to increase monotonically with increasing z. Collisions are first neglected and the dielectric constant at the wave frequency is assumed to vanish at the plane z = 0. The Debye radius is assumed to be small compared with the inhomogeneity length a = ndz/dm of the plasma. With these assumptions approximate equations are derived for the propagation of electromagnetic waves. These equations are solved (using different approximations in the regions near and far from the singular plane z = 0) for a transverse electromagnetic

UDC: 533.9

Card 1/2

L 33412-66
ACC NR: AP6015303

wave polarized with the electric vector in the plane of incidence (the magnetic vector parallel to the z = 0 plane) and the coefficient describing conversion of the transverse waves to longitudinal waves is calculated. Dissipation of energy by electron collisions is then taken into account and the results are briefly compared with those of I.G.Denisov (ZhETF, 31, 609, 1956), who neglected spatial dispersion. Spatial dispersion is shown to be significant near the singular plane even when the collision frequency is high. Incidence of a longitudinal wave onto the singular plane is also discussed briefly. Orig. art. has: 51 formulas and 1 figure.

SUB CODE: 20/ SUBM DATE: 26Jul65/ ORIG REF: 003/ OTH REF: 000

Card 2/2

L 30138-65 EWT(l)/EWG(k)/EPA(sp)-2/EPA(w)-2/EEC(t)/T/EEC(b)-2/EWA(m)-2 Po-l/
Pi-4/ Ps-3/Pab-24 IJP(c)/AEDC(b)/ESD(t)/ASD(d)/AFMD(t)/AS(mp)-2/ASD(a)-5/ASD(f)-2/
ASD(p)-3/ESD(ga)/AFETR/AFWL/RAEM(a)/SSD AT

ACCESSION NR: AP4046333 S/0057/64/034/010/1752/1763

AUTHOR: Piliya, A.D.; Frenkel', V.Ya.

AUTHOR: Cyclotron resonance of electrons in a magnetic mirror system. 1. The distribution function

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.10, 1964, 1752-1763

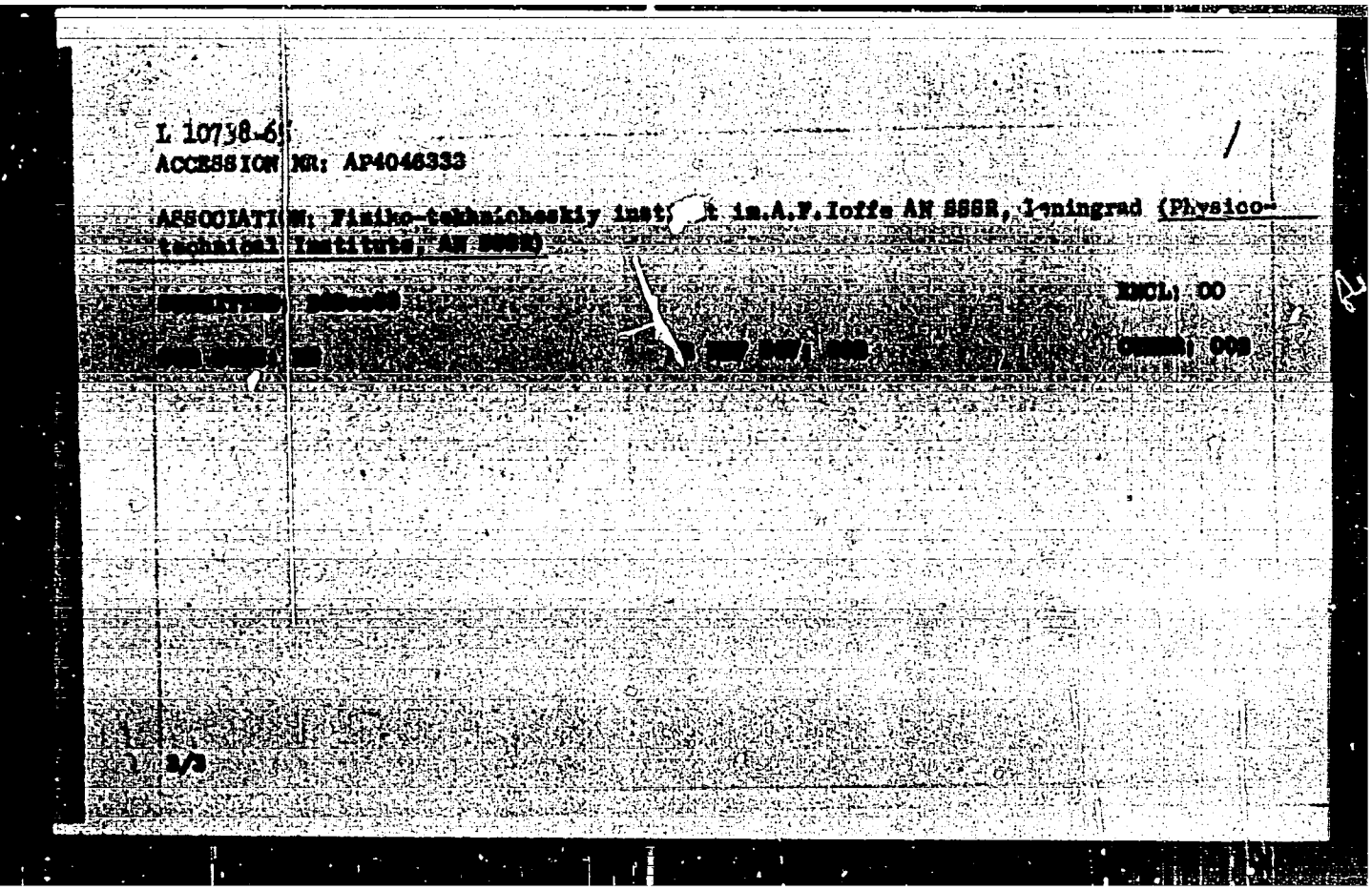
TOPIC TAGS: plasma, magnetic mirror, cyclotron resonance, electromagnetic wave, plasma heating, distribution function

ABSTRACT: The distribution function is calculated for the electrons in a plasma confined in an axially symmetric system between two magnetic mirrors while it is heated by electromagnetic waves at the electron Larmor frequency, incident axially from beyond the mirror. Resonance between the incident electromagnetic waves and the electron Larmor frequency is assumed to occur only in the region of the mirrors. Collisions are neglected, and the drift approximation is employed except in the immediate vicinity of the mirrors. The total kinetic energy and the ratio of the transverse kinetic energy to the magnetic field strength are accordingly adiabatic invariants and change only during reflection when resonance obtains. The changes in

1/3

0

these quantities during reflection are calculated by solving the equations of motion in the lowest order of the ratio of the electron Larmor radius to L, the length characterizing the inhomogeneity of the field, and the result of this calculation is employed in the kinetic equation as a collision term. The kinetic equation is solved for the time dependent distribution function under two different conditions: first, under the assumption that the electrons are initially cold and their number remains constant, and second, under the assumption that the supply of cold electrons is continually replenished by ionization of the neutral component of the plasma. In the second case, although the problem remains essentially a non-stationary one, a pseudostationary condition arises in which the distribution function becomes time independent for velocities less than a certain ever increasing value. No suitable experimental data are available with which to compare the present theory. The following numerical values are presented as an example: if the electric field strength of the incident waves is 500 V/cm, the density of neutral hydrogen atoms is 10^{10} cm^{-3}, the Larmor frequency is 10^{10} cycle/sec, and L = 10 cm, then the average electron energy (in the pseudostationary condition) is 300 eV, and the time characteristic of the process (the mean time required for an electron to produce another by ionizing a hydrogen atom) is 7.9×10^{-3} sec. Orig.art.has: 87 formulas and 1 figure



L 10738-65
ACCESSION NR: AP4046333

ASSOCIATION: Fiziko-tekhnicheskiy inst[illegible]t im.A.F.Ioffe AN SSSR, Leningrad (Physico-technical Institute, AN SSSR)

[illegible] [illegible] ENCL: 00

[illegible] [illegible] SUBM: 00

L 10739-65 EWT(l)/EWG(k)/EPA(sp)-2/EPA(w)-2/EEC(t)/T/EEC(b)-2/EWA(m)-2 Po-4/
Pi-4/Ps-6/Pab-24 IJP(c)/ASD(a)-5/AFWL/ASD(p)-3/ASD(f)-2/ESD(t)/AS(mp)-2/AFETR/
RAEM(a)/BSD/AEDC(b)/AFMD(t)/SSD/ESD(gs)/ASD(d) AT
ACCESSION NR: AP4046334 S/0057/64/034/010/1764/1768

AUTHOR: Piliya, A.D.; Frenkel', V.Ya.

TITLE: Cyclotron resonance of electrons in a magnetic mirror system. 2. Penetration of the high frequency field into the plasma

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.10, 1964, 1764-1768

TOPIC TAGS: plasma, cyclotron resonance, magnetic mirror, electromagnetic wave reflections

ABSTRACT: The reflection coefficient is calculated for circularly polarized electromagnetic waves incident axially on one magnetic mirror of an axially symmetric two-mirror trap confining a plasma. The frequency of the waves is assumed to be equal to the electron Larmor frequency in the region of the mirror, and the electric vector is assumed to rotate in the same direction as the electrons. The calculation was undertaken because of its relevance to the problem of heating confined plasmas. The authors employ the electron distribution function which they derived in the preceding paper (ZhTF,34,1752,1964; see Abstract AP4046335), and they also adopt without redefinition some of the notation of that paper. The calculation is

relatively straightforward, and it is found that the intensity of the rf field within the plasma decreases with time as the mean electron energy increases, and particularly, in case there is a neutral component of the plasma to provide a continuous supply of cold electrons, as the electron density increases. In case the mean electron energy is 300 eV, the length characterizing the inhomogeneity of the magnetic field is 10 cm, and the electron Larmor frequency is 10^{10} cycle/sec, the ratio of the rf field strength within the plasma to that without it will decrease by a factor 2 at an electron density of 2.3×10^{9} cm^{-3}. Orig.art.has: 25 formulas.

ASSOCIATION: Fiziko-tekhnicheskiy institut im.A.F.Ioffe AN SSSR, Leningrad (Physico-technical Institute, AN SSSR)

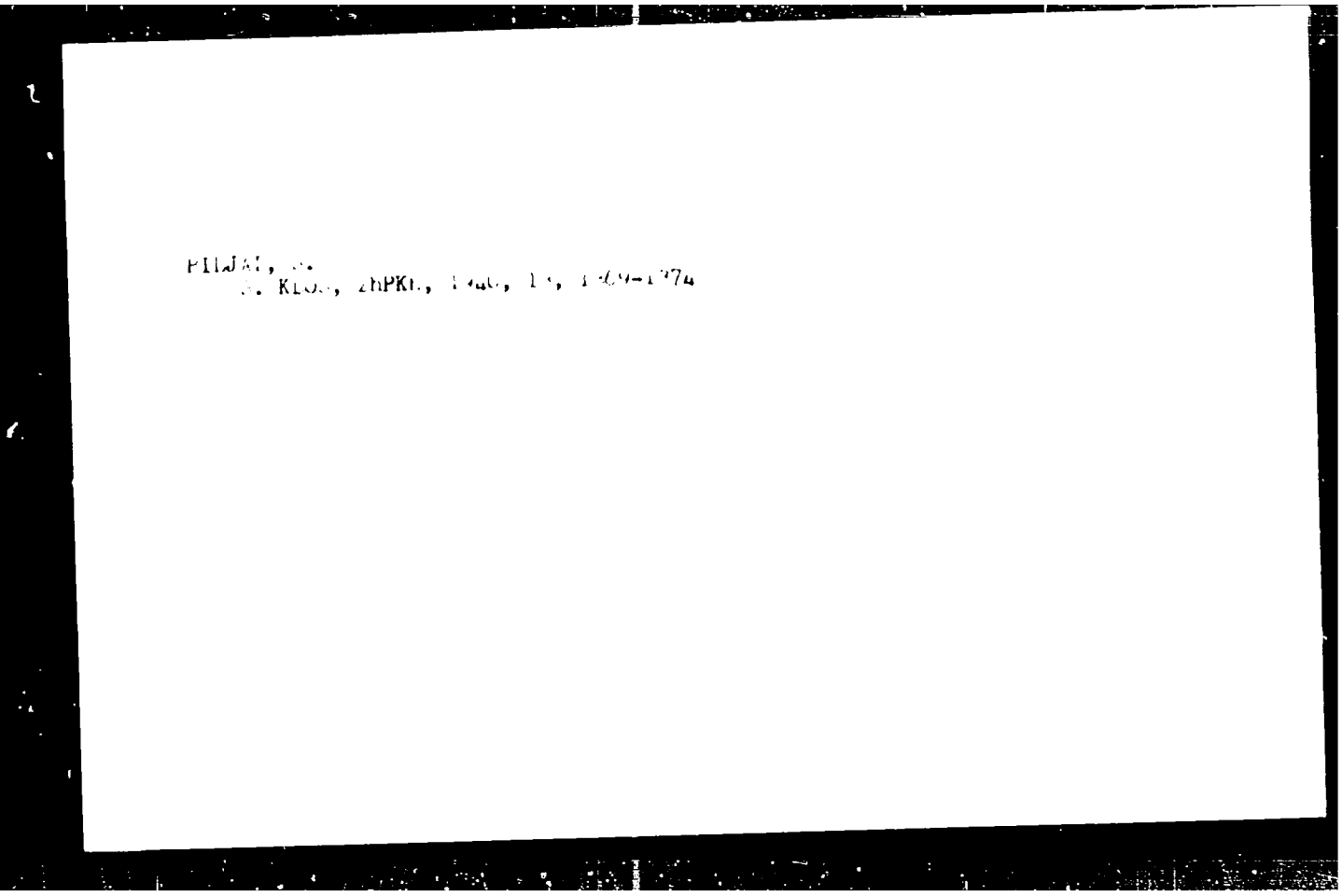
SUBMITTED: 03Jan64 ENCL: 00

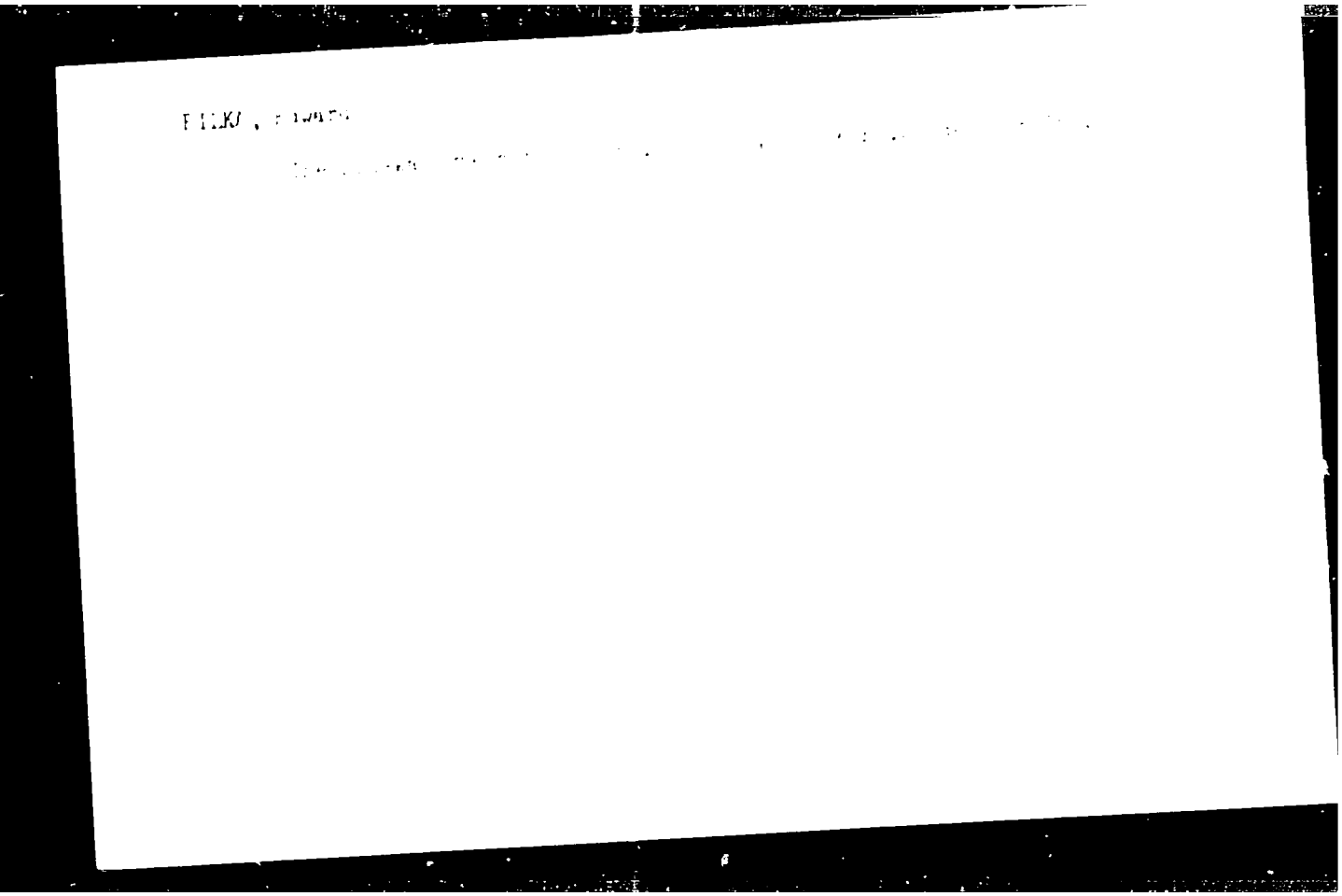
SUB CODE: ME NR REF SOV: 001 OTHER: 000

FILIPOVIC, I.; PILJAC, I.; CRNIC, Z.; RADULOVIĆ, M.; VALENTEKOVIC, Dj.

Polarographic investigations of some metal monocarboxylate complexes. II. Monocarboxylato complexes of zinc. Croat chem acta 33 no.1:45-50 '61.

1. Institute of Inorganic Chemistry, Faculty of Technology, University of Zagreb, Zagreb, Croatia, Yugoslavia 2. Member of the Editorial Board, "Croatica chemica acta, Arhiv za kemiju" (for Filipovic).





PILKA, Edward

New model of a slotted sieve for centrifugal drainers. Biuletyn
gorn 11 no. 9:318-319 S '60.

PILKAUSKAS, K. A., Cand Tech Sci -- (diss) "Investigation of the drainers function of mole-drainage instruments in mineral soils." Minsk, 1958. 15 pp. (Acad Sci BelorusSSR, Div Phys-Math and Tech Sci), 120 copies. (KL, 3-58, 119)

8/123/62/000/024/004/005
A006/A101

AUTHOR: Plikauskene, V. A.

TITLE: Chemical nickel-plating of ceramic parts

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 24, 1962, 43, abstract 24B232 (In collection: "Vopr. usoversh. gal'vanopokrytiy", Vil'nyus, 1961, 61 - 65)

TEXT: The author analyzes the process of chemical nickel-plating radio- and electric-engineering ceramic parts, replacing the long-lasting and expensive method of hot-dip silver plating. To produce catalytic properties on the surfaces of ceramic parts, it is recommended to activate same with a palladium chloride solution (0.5 g/l at pH 3), applied with a soft brush; the solution is subsequently transformed into non-soluble state by means of hypophosphite of potassium, sodium or calcium (in a 30 g/l concentration). Good results are obtained by chemical nickel-plating in acid solutions of the following three compositions (in g/l): 1) nickel chloride 22, potassium or calcium hypophosphite 10, sodium acetate 10, pH 4.0 - 5.5; 2) nickel sulfate 20, sodium hypophosphite 10,

Card 1/2

3/123/62/000/[illegible]

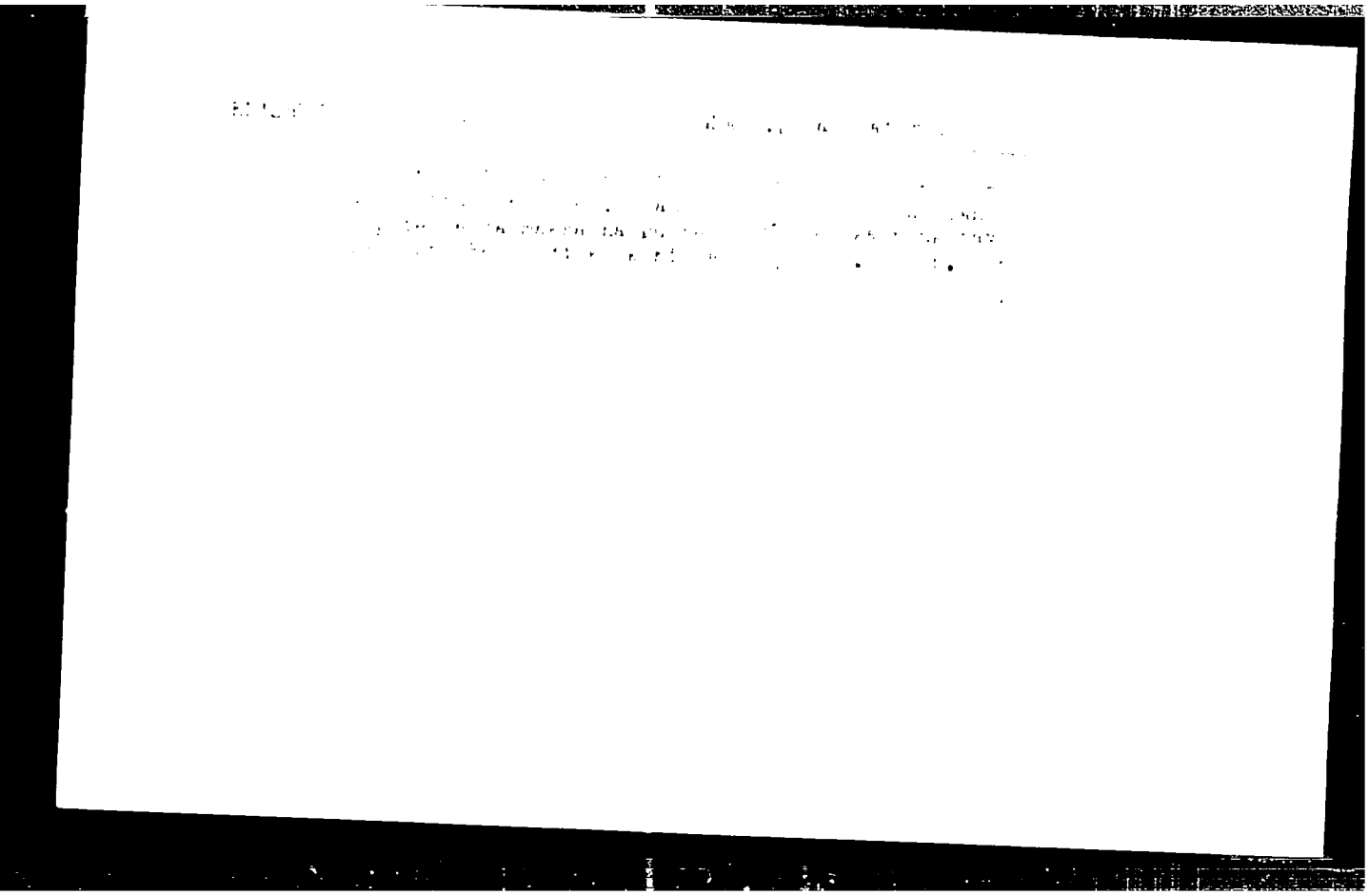
Chemical nickel-plating of ceramic parts A006/A101

sodium acetate 10, pH 4.0 - 5.5; 3) nickel chloride 45, potassium or sodium hypophosphite 20, sodium citrate 45, 25% ammonia up to pH 6 - 8.5. The parts activated with palladium chloride are dipped into the first nickel-plating bath for 3 - 6 minutes, washed with cold and not water, and are transferred into a second nickel-plating bath for 50 - 60 min; they are then washed and dried in a thermostat at 80 - 90°C. A stabilizing effect upon the chemical nickel-plating process and an accelerated growth of the nickel layer are achieved by adding a buffer admixture, namely sodium acetate (10 g/l).

L. Kamionskiy

[Abstracter's note: Complete translation]

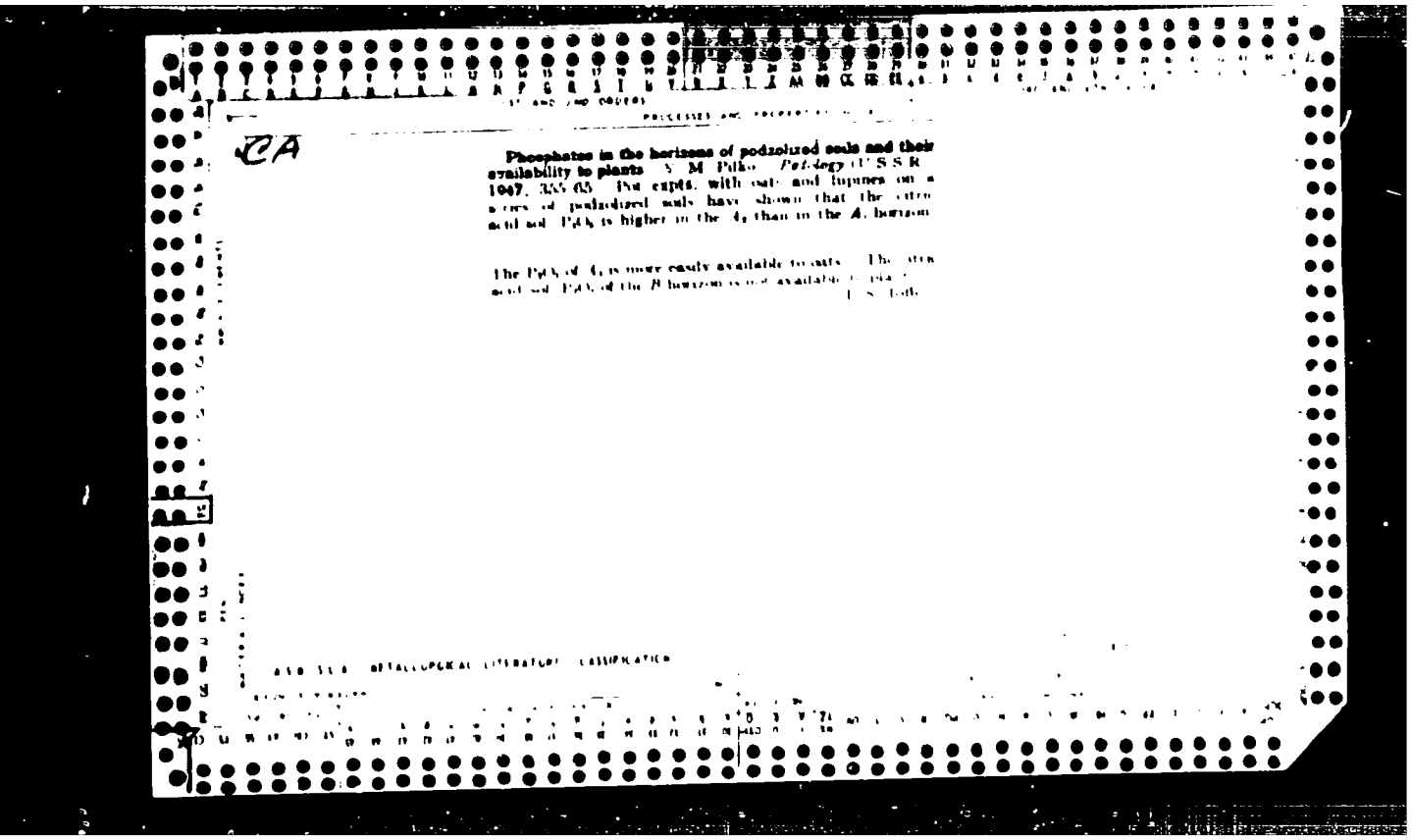
Card 2/2



PILLER, B.

Extending the use of low-grade silon in the knitting industry; silon crepe. p. 199. (Textil, Praha, Vol. 9, no. 4, Apr 1954)

SO: Monthly list of East European Accessions (EEAL), LC Vol 4, No. 6, June 1955, Uncl

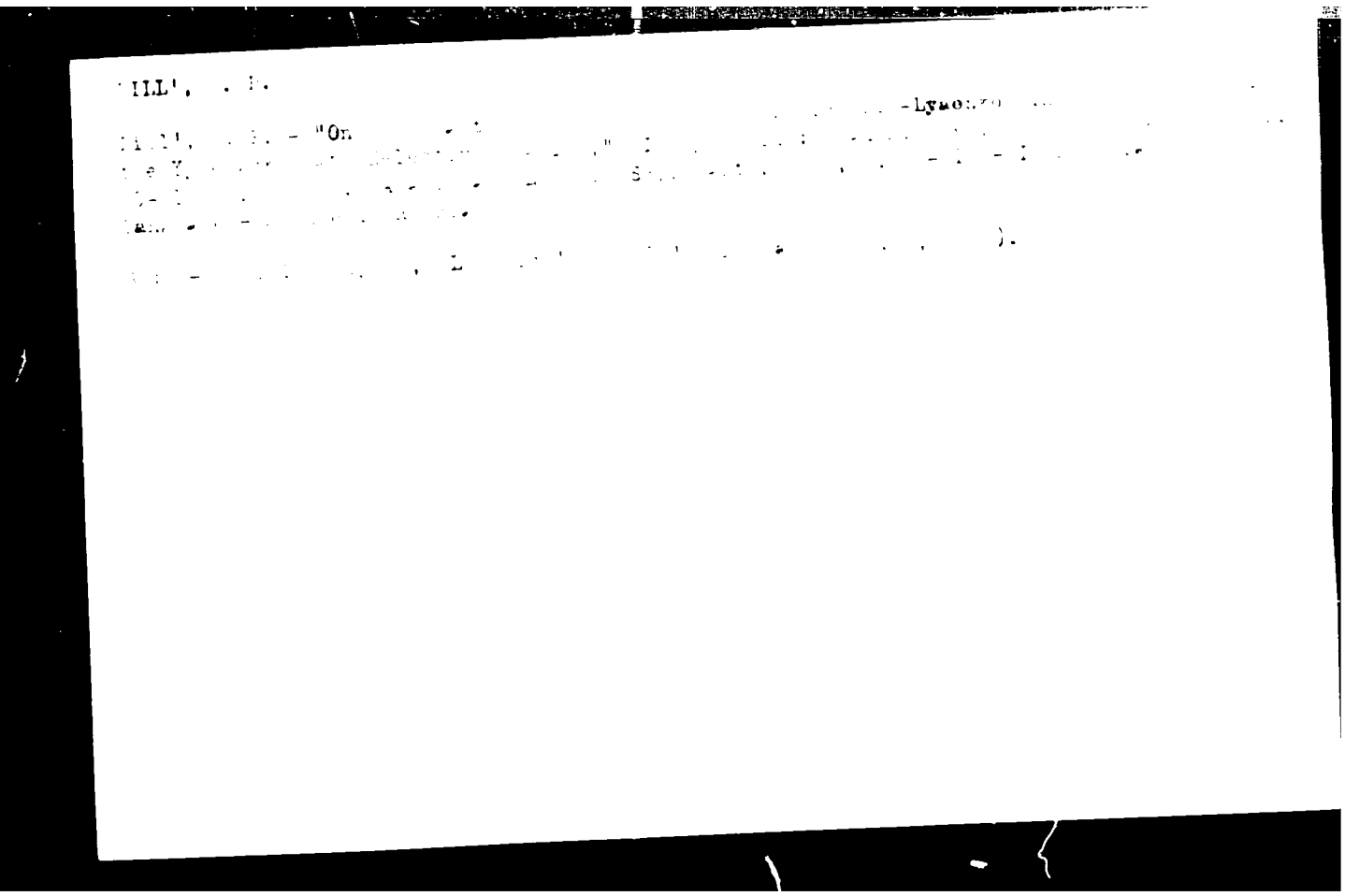


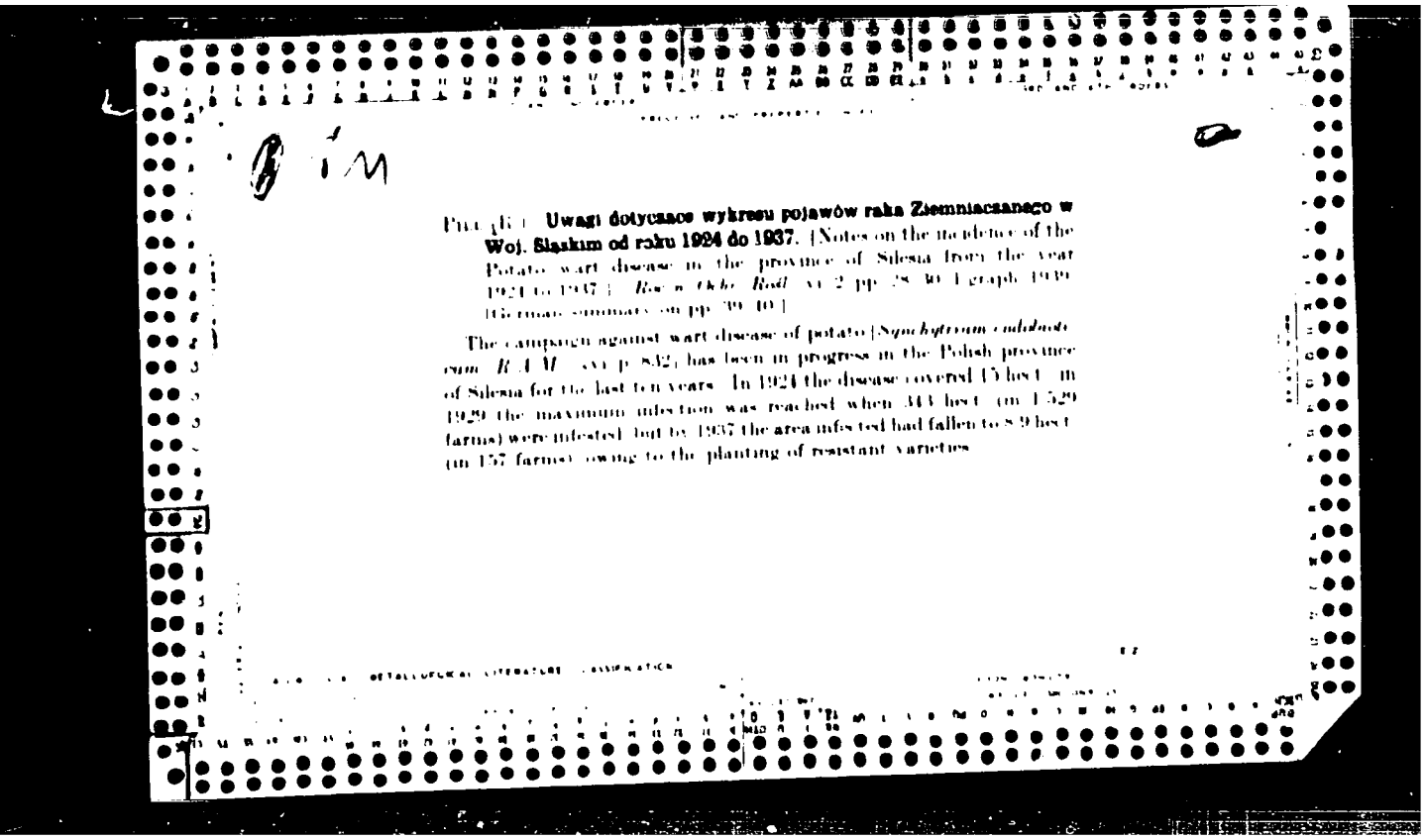
CA

Phosphates in the horizons of podzolized soils and their availability to plants S. M. Pilko. *Pochvovedenie* (U.S.S.R.) 1949, 355-65. Pot expts. with oats and lupines on a series of podsolized soils have shown that the citric acid sol. P_2O_5 is higher in the A_2 than in the A_1 horizon.

The P_2O_5 of A_2 is more easily available to oats. The citric acid sol. P_2O_5 of the B horizon is not available [illegible]

U.S.S.R. METALLURGICAL LITERATURE CLASSIFICATION





Prus, B. **Uwagi dotyczące wykresu pojawów raka Ziemniaczanego w Woj. Śląskim od roku 1924 do 1937.** [Notes on the incidence of the Potato wart disease in the province of Silesia from the year 1924 to 1937.] *Rocz. Ochr. Rośl.* vi. 2 pp. 28–30 1 graph 1939 [German summary on pp. 39–40.]

The campaign against wart disease of potato [*Synchytrium endobioticum*, *R.A.M.* xvi. p. 832] has been in progress in the Polish province of Silesia for the last ten years. In 1924 the disease covered 15 hect. in 1929 the maximum infection was reached when 343 hect. (in 1,529 farms) were infested but by 1937 the area infested had fallen to 8·9 hect. (in 157 farms) owing to the planting of resistant varieties.

VENKATESVARLU, K.; PILLAI, Krishna

Molecular vibrations of sulfur compounds. SF_4. Opt.i spektr. 11 no.1:51-54 Jl '61. (MIRA 14:10)

1. Fizicheskiy fakul'tet Annamalayskogo universiteta, Annamalainagar Yuzhnaya Indiya.
(Sulfur compounds) (Molecules)

PILLAROVA, A.; PILLAR, T.

Hereditary fragility of the femur. Cesk. pediat. 18 no.4: 337-342 Ap '63.

1. Detske oddelenie OUNZ v Michalovciach, veduci MUDr. J. Rusnak. Interne oddelenie OUNZ v Michalovciach, veduci MUDr. J. Resetar.

(OSTEOGENESIS IMPERFECTA) (FEMUR)

PILLAR, Tomas

Mechanical respiration in the treatment of acute respiratory insufficiency. Cas. Lek. Cesk. 101 no.13:389-391 30 Mr '62.

1. Interne odd. OUNZ v Michalovciach, prednosta MUDr. Jan Resetar.

(RESPIRATION ARTIFICIAL)

PILLAROVA, A.; PILLAR, T.

Hereditary fragility of the femur. Cesk. pediat. 18 no.4: 337-342 Ap '63.

1. Detske oddelenie OUNZ v Michalovciach, veduci MUDr. J. Rusnak. Interne oddelenie OUNZ v Michalovciach, veduci MUDr. J. Resetar.

(OSTEOGENESIS IMPERFECTA) (FEMUR)

VAGANI, Elnar, farmatsevt; [illegible], V., red.

[Wholesome nutrition. Tervislikus toitumisest. Ta[illegible],
Eesti Riiklik Kirjastus, 19[illegible]. 56 p.

REIMAN, Arnold, kand.med. nauk, zasl. vrach Estonskoy SSR;
PILLAU, V., red.; VAHTRE, I., tekhn. red.

[Mother and child; handbook for child care and hygiene]
Ema ja laps; käsiraamat lapse kasvatamise ja tervishoiu
alal. 4., parandatud ja täiendatud trükk. Tallinn, K. t
Riiklik Kirjastus, 1963. 402 p. (MLA 17:1)

P-LLF !

ZEITLYONOK, N.A.; PILIE, E.R.; KONOSH, O.V.

A study of the physiology of reproduction of vaccinia and influenza viruses using metabolic inhibitors. Acta virol. Engl. Ed., Praha 1 no.2:65-77 Apr-June 57.

1. Institute of Virology, Academy of Medical Sciences, Moscow, USSR.
(VACCINIA, virus.
reprod. physiol., eff. of metab. inhibitors, application to chemother.)
(INFLUENZA, VIRUSES, eff. of drugs on
metab. inhibitors on reprod. physiol., application to chemother.

PILLE, E.P.

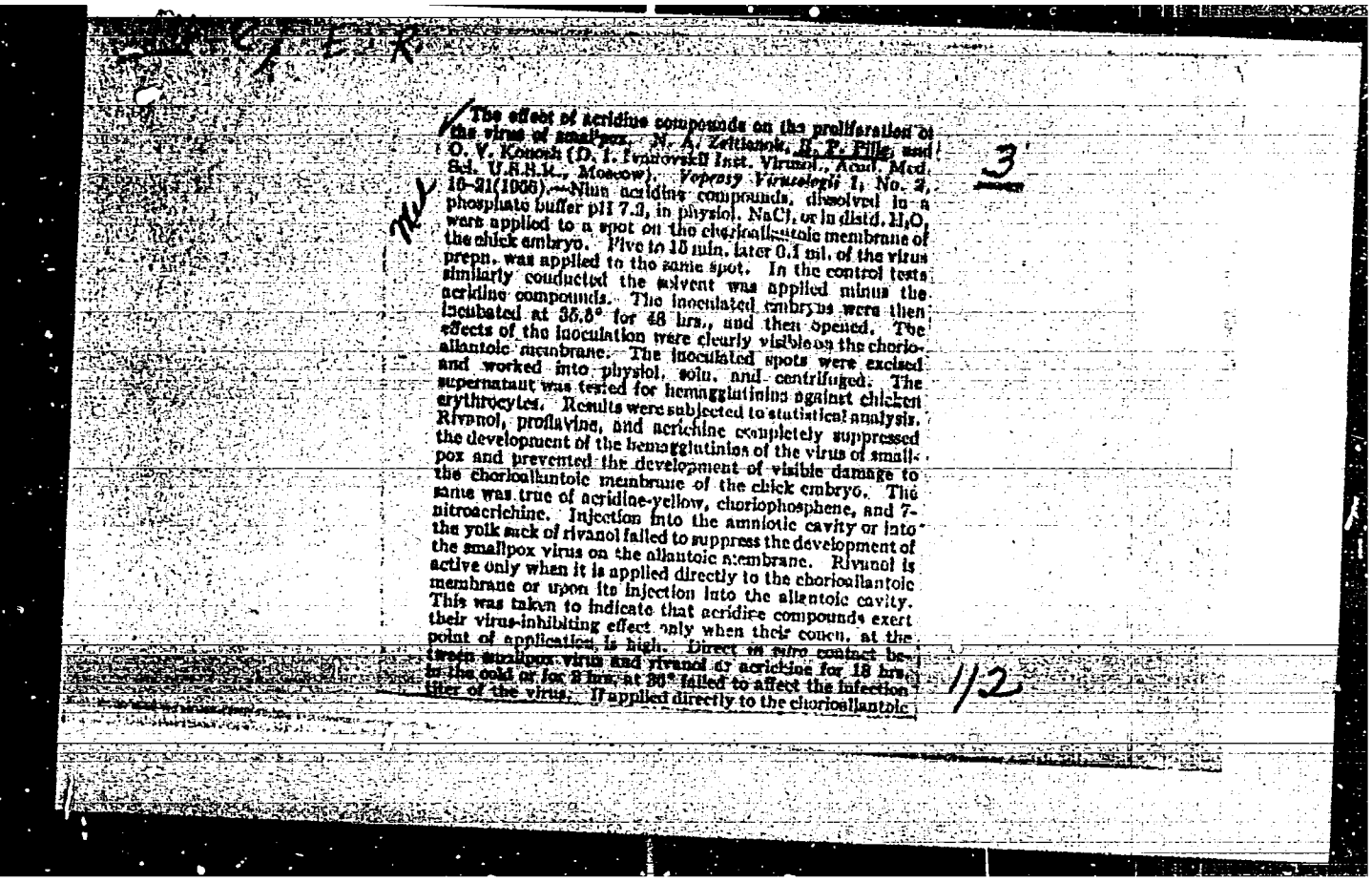
Intratype antigenic distinctions among poliomyelitis virus strains.
Vop. virus. 6 no.6:697-700 N-D '61. (MIRA 15:2)

1. Moskovskiy nauchno-issledovatel'skiy institut virusnykh preparatov.
(POLIOMYELITIS)

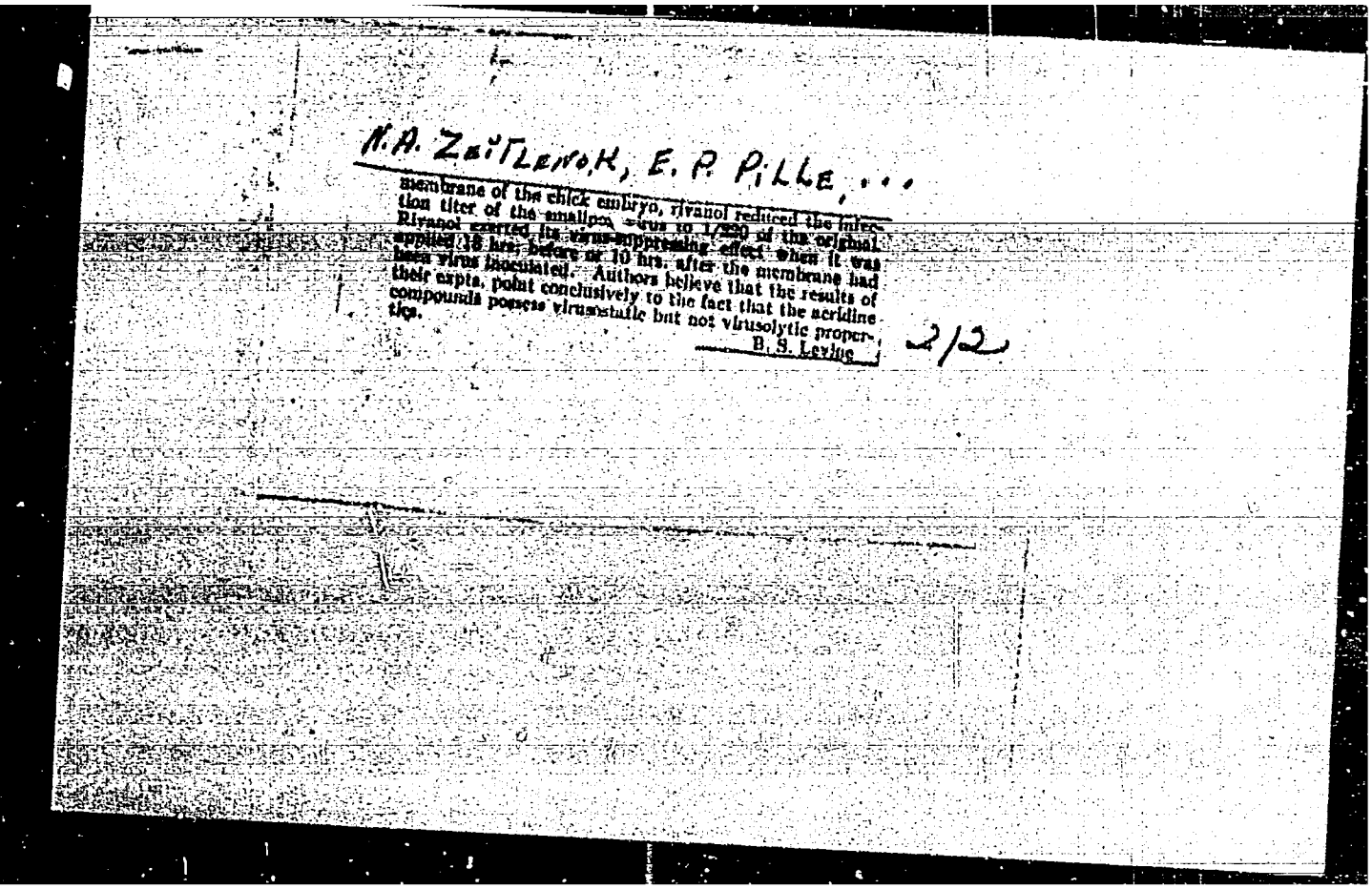
FILLE, E. R., and ZEYTLENOK, N. A.

"Observation of Cases of the Disease and Reservoirs of Q-Fever Virus in Altay Kray," a report discussed at one of six meetings of the Virological Section, Moscow Dept. All-Union Society of Microbiologists, Epidemiologists, and Infectionists imeni I. I. Mechnikov in 1955. Voprosy Virusologii, 1, No 2, 1956

Sum. 1003, 20 Jul 56



The effect of acridine compounds on the proliferation of the virus of smallpox. N. A. Zeltinsh, K. P. Pille, and O. V. Konoh (D. I. Ivanovskii Inst. Virusol., Acad. Med. Sci. U.S.S.R., Moscow). *Voprosy Virusologii* 1, No. 2, 19–21(1956).—Nine acridine compounds, dissolved in a phosphate buffer pH 7.3, in physiol. NaCl, or in distd. H_2O, were applied to a spot on the chorioallantoic membrane of the chick embryo. Five to 15 min. later 0.1 ml. of the virus prepn. was applied to the same spot. In the control tests similarly conducted the solvent was applied minus the acridine compounds. The inoculated embryos were then incubated at 35.5° for 48 hrs., and then opened. The effects of the inoculation were clearly visible on the chorioallantoic membrane. The inoculated spots were excised and worked into physiol. soln. and centrifuged. The supernatant was tested for hemagglutinins against chicken erythrocytes. Results were subjected to statistical analysis. Rivanol, proflavine, and acrichine completely suppressed the development of the hemagglutinins of the virus of smallpox and prevented the development of visible damage to the chorioallantoic membrane of the chick embryo. The same was true of acridine-yellow, choriophosphene, and 7-nitroacrichine. Injection into the amniotic cavity or into the yolk sack of rivanol failed to suppress the development of the smallpox virus on the allantoic membrane. Rivanol is active only when it is applied directly to the chorioallantoic membrane or upon its injection into the allantoic cavity. This was taken to indicate that acridine compounds exert their virus-inhibiting effect only when their concn. at the point of application is high. Direct *in vitro* contact between smallpox virus and rivanol or acrichine for 18 hrs. in the cold or for 2 hrs. at 36° failed to affect the infection titer of the virus. If applied directly to the chorioallantoic



N.A. ZaĭTSEVA, E. P. PILLE, ...

membrane of the chick embryo, rivanol reduced the infection titer of the smallpox virus to 1/320 of the original. Rivanol exerted its virus-suppressing effect when it was applied 18 hrs. before or 10 hrs. after the membrane had been virus inoculated. Authors believe that the results of their expts. point conclusively to the fact that the acridine compounds possess virustatic but not virusolytic properties.

B. S. Levine

2/2

ZEYTLENOK, N.A.; PILLE, E.R.

Detection of Q fever cases and viral reservoirs in Altai Territory. Zhur.mikrobiol.epid. i immun. 27 no.7:17-22 Jy '56. (MLRA 9:9)

1. Iz Instituta virusologii imeni D.I.Ivanovskogo AMN SSSR.
(Q FEVER, epidemiol.
in Russia, propagation by cattle in Altai region)

PILLE, E.R.

Study of the chemical structure of ECMO viruses. Vop. virus 8 no.2:210-213 Mr-Ap'63 (MIRA 16:12)

1. Moskovskiy nauchno-issledovatel'skiy institut virusnykh preparatov.

"A Disease of the Crimean Hemorrhagic Fever Type in Astrakhanskaya Oblast," by N. A. Zeytlenok, K. A. Vanag, and E. R. Pille, Institute of Virology imeni D. I. Ivanovskiy, Voprosy Virusologii, Vol 2, No 2, Mar Apr 57, pp 92-97

This work reports study of 11 cases of hemorrhagic fever which occured in 1953 and 1954 in a geographic location which had not been previously known as a focus of the disease. Charts are included showing general data concerning the patients, symptoms, hematological changes, temperature curves, and results of the complement fixation reaction with convalescent serum and serum from domestic animals in Astrakhanskaya Oblast. The clinical picture of the disease is discussed in detail. All clinical manifestations of the cases observed were typical for hemorrhagic fever, as were the epidemiolog al particulars. A tick vector was established; according to A. L. Dumin and data from the Rostov-na-Donu Institute of medical parasitology, Hyalomma plumbeum plumbeum was the parasite most commonly encountered in pastures in the affected area.

The work states that tick-borne encephalitis virus obtained from Ye. N. Levkovich and hemorrhagic fever virus obtained from A.A. Avakyan were used in complement fixation tests. Points are listed on the basis of which the conclusive diagnosis was made. An extensive summary in English is provided. (U)

Pille, E. R.

AUTHORS: Zeytlenok, N. A., Konosh, O. V., Pille, E. R. 20-3-51/59

TITLE: The Influence of Metabolites and Antimetabolites Belonging to the Tricarbonic Acid Cycle Upon the Multiplication of Vaccine Virus in Chicken Embryos (Vliyaniye metabolitov i antimetabolitov tsikla trikarbonovykh kislot na razmnozheniye virusa ospovaktsiny v kurinykh embrionakh).

PERIODICAL: Doklady AN SSSR, 1958, Vol. 118, Nr 3, pp. 595-597 (USSR)

ABSTRACT: The problem of the importance of the oxidation process for the propagation of the viri has been raised already since the first years of the study of the physiology of viri (references 3-10, 15, 18). As is known that the respiratory cycle of the tricarbonic acids is in the centre of the tissue reaction process of animals and plants. This problem of the importance of this cycle for the propagation of viri, of course, attracted attention. The authors give a literature survey of the papers dealing with the same subject (references 2,4,5,7, 11-13, 17). There are only few data concerning the vaccine virus in this connection (except reference 18). Therefore the present paper was carried out. Adenosin-triphosphoric acid, succinic acid, pyroracemic-, mal-

Card 1/4

leinic-, and malonic acid were neutralized with Na_2CO_3 or with NaOH and sterilized by boiling up to 100° or with antibiotics. A quantity of 0,1 ml was applied to the chorion-allantois sheath of 10-12 days old chicken embryos through the air sac. 5-10 minutes later the virus in question was injected as suspension of the same sheaths of infected chicken embryos. After an incubation of 42 hours at 35° the development of the viri was determined by the existence of the virus hemaglutinines in ratio to the erythrocytes of chicks which were susceptible for the vaccine virus. Table 1 shows the results. They show that the salts of the malonic-, succinic-, citric-, and pyroacemic acid have not influenced considerably the development of the vaccine virus. The salts of fumaric acid and of its isomer - the malleinic acid - turned out to be toxical for the embryos, had, however, also no influence on the virus. From all tested substances it was only succinic acid-methyl-ether which yielded a statistically reliable suppression of this virus. An experiment with the neutralization of a possible suppressing effect of the

The Influence of Metabolites and Antimetabolites Belonging to the Tricarbonic Acid Cycle Upon the Multiplication of Vaccine Virus in Chicken Embryos

20-3-51/59

reaction of the two species of viri to the introduction of adenosin-triphosphate can give informations as to the differences of these viri with respect to their energy sources.
There are 2 tables, and 18 references, 7 of which are Slavic.

ASSOCIATION: Institute for Virusology imeni D. I. Ivanovskiy Academy of Medical Sciences (Institut virusologii im. D. I. Ivanovskogo Akademii meditsinskikh nauk SSSR)

PRESENTED: May 10, 1957, by V. A. Engel'gardt, Academician

SUBMITTED: May 10, 1957

AVAILABLE: Library of Congress

Card 4/4

ZEYTLENOK, M.A.; PILLE, E.R.; KONOSH, O.V.

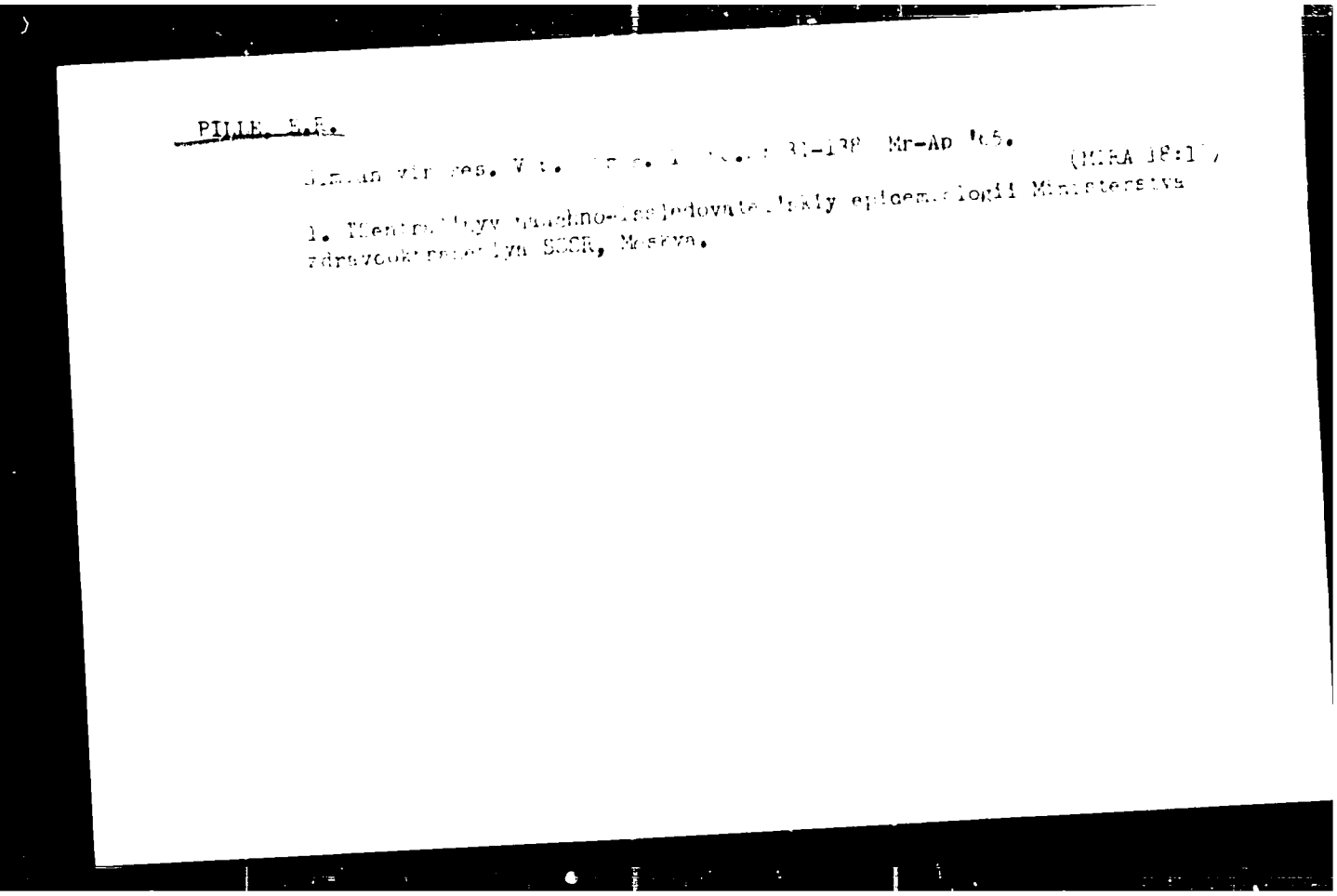
Effect of dyes on viral hemagglutination [with summary in English]. Vop.virus. 2 no.5:273-278 S-O '57. (MIRA 10:12)

1. Laboratoriya fiziologii virusov Instituta virusologii imeni D.I. Ivanovskogo AMN SSSR, Moskva.
(QUINACRINE, effects,
on hemagglut. by vaccinia virus (Rus))
(HEMAGGLUTINATION,
by vaccinia virus, eff. of quinacrine (Rus))
(VACCINIA, virus,
hemagglut., eff. of quinacrine (Rus))

ZAYTSENOK, E.A.; VANAG, K.A.; PILIS, B.R.

Cases of the type of crimean hemorrhagic fever observed in Astrakhan Province [with summary in English]. Vop.virus. 2 no.2:92-98 Mr-Ap '57. (MLRA 10:6)

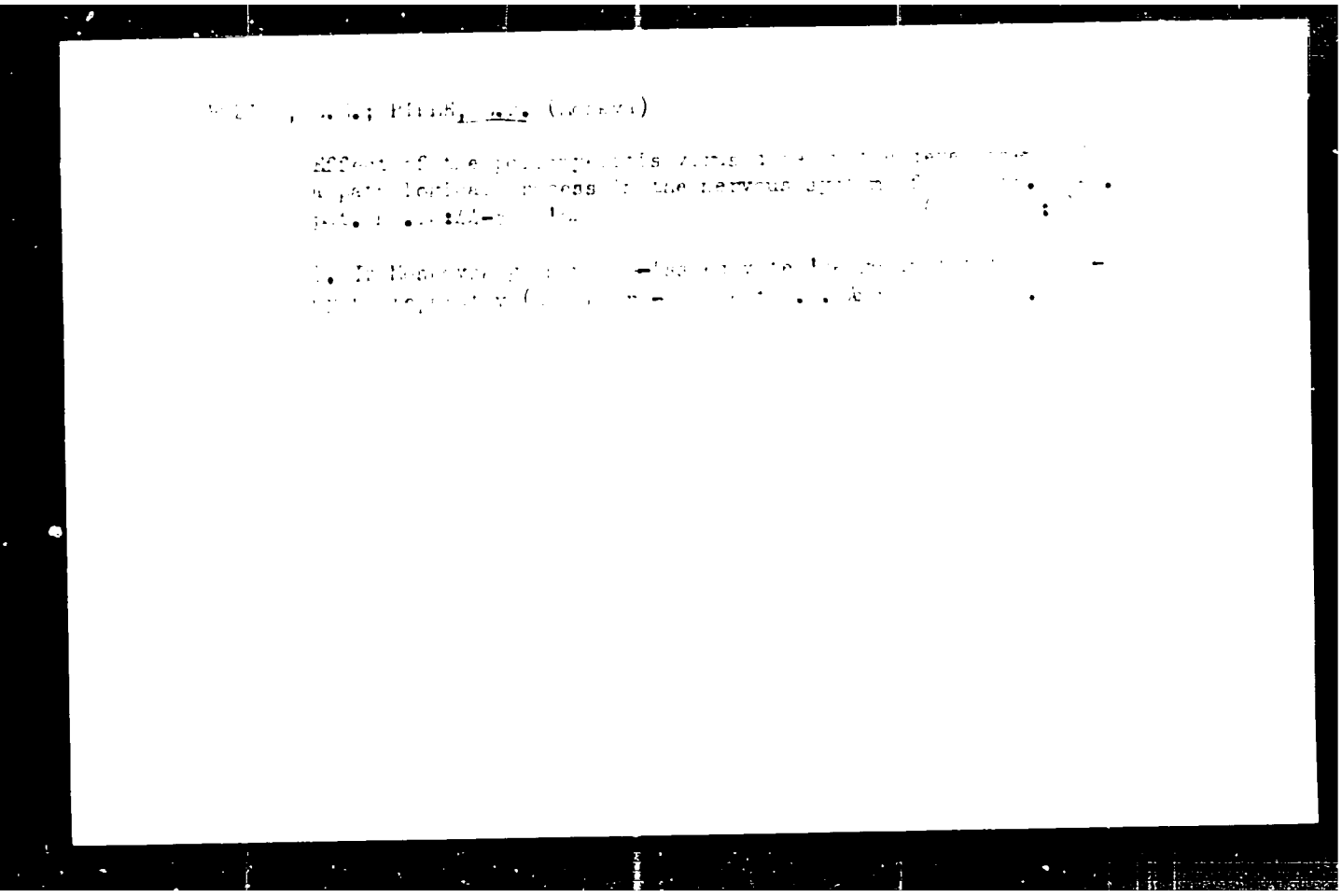
1. Institut virusologii imeni D.I.Ivanovskogo Akademii meditsinskikh nauk SSSR, Moskva.
(EPIDEMIC HEMORRHAGIC FEVER, epidemiol.
in Russia (Rus))



PILLE, E.E.

[illegible] vir. ves. Vyp. [illegible] 31-138 Mr-Ap '65. (MIRA 18:1)

1. Tsentral'nyy nauchno-issledovatel'skiy ekspertsionnyy Ministerstva zdravookhraneniya SSSR, Moskva.



PILLE, E.R.; KOLYANOVA, I.S.

Pathogenesis of experimental poliomyelitis. Trudy Mosk. nauch.-issl. inst. virus. prep. 2:65-69 '61. (MIRA 17:1)

VORONINA, F.V.; PILLE E.R.

Study of the multiplication of some simian viruses in tissue culture by the flyorescent antibody method. Vop. virus. 8 (MIRA 17:1)
[illegible].5:574-600 S-O '63

1. Institut epidem[illegible] imeni N.F. Gamalei AMN SSSR i Moskovskiy nauchno-issledovatel'skiy institut virusnykh preparatov.

KHESIN, Ya.Ye.; VORONINA, F.V.; PILLE, E.R.

Sizes of the cell nuclei in normal monostratal cultures of monkey kidney tissue and in those spontaneously infected with viruses. Vop.virus 7 no.5:602-606 S-O '62. (MIRA 15:11)

1. Moskovskiy nauchno-issledovatel'skiy institut virusnykh preparatov.
(TISSUE CULTURE) (CELL NUCLEI) (VIRUSES)

PILLE, E.M.; YERMAKOVA, Ye.Ya.; ZUYEVA, Yu.N.; MADAYCHIK, L.V.

Study of viruses isolated from monkeys. Vop. virus. 6 no.6:704-710 N-D '61. (MIRA 15:2)

1. Moskovskiy nauchno-issledovatel'skiy institut virusnykh preparatov.
(VIRUSES) (MONKEYS)

VORONINA, F.V.; PILLE, E.M.; KHESIN, Ya.Ye.

Cytological and cytochemical study of kidney cell cultures from monkeys infected with simian viruses. Vop. virus. 6 no.6:710-716 N-D '61. (MIRA 15:2)

1. Moskovskiy nauchno-issledovatel'skiy institut virusnykh preparatov.
(VIRUSES) (MONKEYS)

PILLE, E.R.

Virus "B" infection in monkeys. Vop.virus. 6 no.5:542-547 S-O '60. (MIRA 14:7)

1. Moskovskiy institut virusnykh preparatov.
(HERPES)

LOZOVSKAYA, L.S.; PILLE, E.R.

Determination of the antigenic properties of an inactivated poliomyelitis vaccine. Vop.virus. 6 no.2:166-;70 Mr-Ap '61. (MIRA 14:6)

1. Moskovskiy nauchno-issledovatel'skiy institut preparatov protiv poliomielita.

(POLIOMYELITIS)

ZHYTLENOK, N.A.; KONOSH, O.V.; PILLE, E.R.

Relationship between various acridine compounds in their effect on vaccinia virus multiplication and on its erythrocyte-agglutinating capacity. Vop. virus. 4 no.1:108-111 Ja-F '59. (MIRA 12:4)

1. Laboratoriya fiziologii virusov Instituta virusologii imeni D.I. Ivanovskogo AMN SSSR, Moskva.
(VACCINES, virus,
eff. of acridines on develop. & hemagllut. capacity (Rus))
(ACRIDINES, effects,
on vaccinia virus develop. & hemagllut. capacity (Rus))
(AGGLUTINATION,
by vaccinia virus, eff. of acridines (Rus))

USSR / Virology. Human and Animal Viruses. Viruses of the Pox Group. E-3

Abs Jour : Ref Zhur - Biol., No 20, 1958, No 90648

Authors : Zeytlenok, N. A.; Fille, E. R.; Konosh, O. V.
Inst : Not given
Title : The Effect of Dyes on Viral Hemagglutination.

Orig Pub : Vopr. virusologii, 1957, No. 5, 273-278

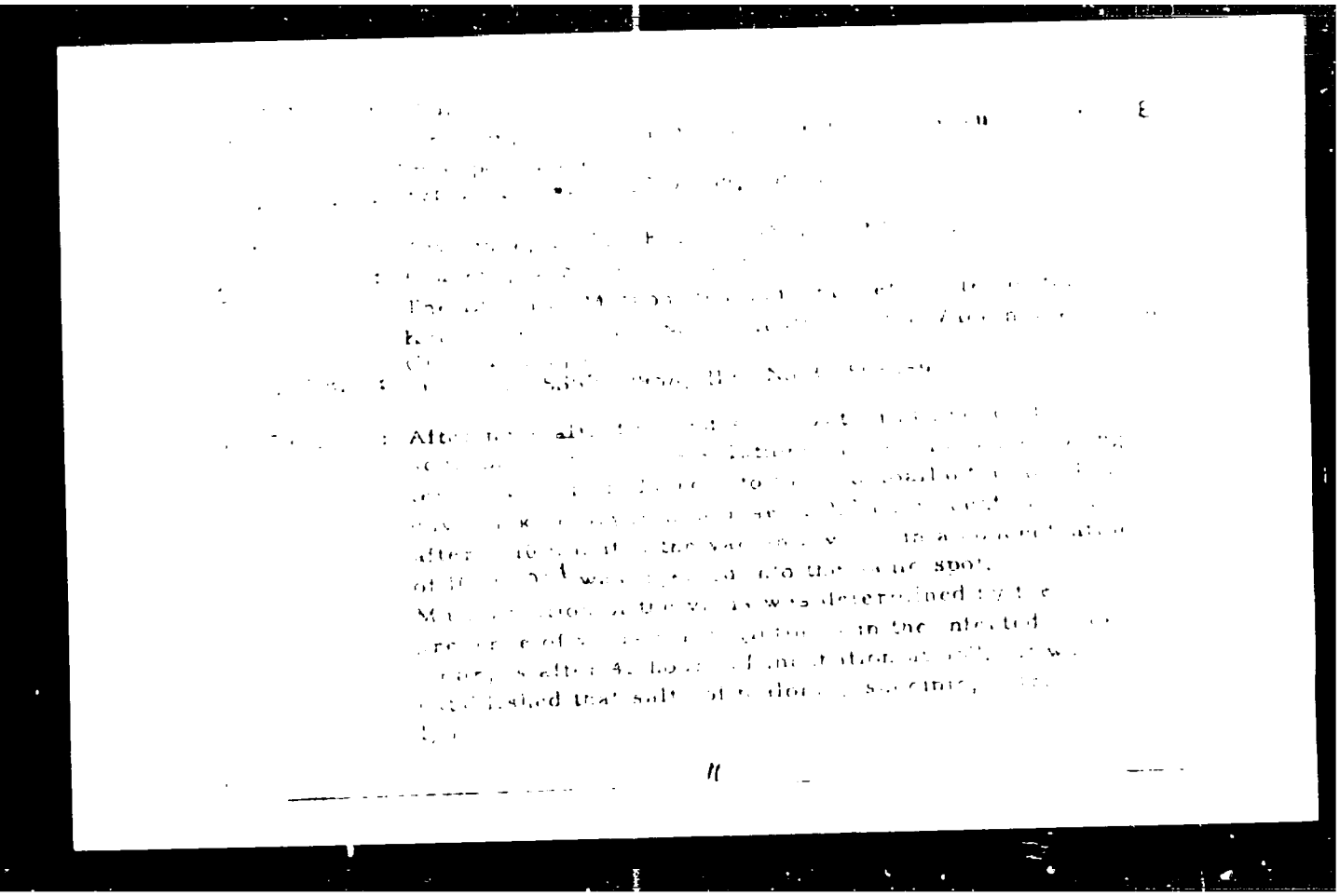
Abstract : Hemagglutination (HA) produced by the virus of the smallpox vaccine was inhibited by most of the 14 tested acridine, rhodamine, fluoran, thiazole and other dyestuffs of various chemical structures irrespective of their acidity or basic characteristics. Atabrine (quinacrine) had the greatest effect. It not only prevented hemagglutination but removed that which had already set in. Erythrocytes treated with atabrine (quinacrine) and washed out of it lost their ability to adsorb hemagglutinins of the vaccine virus or be

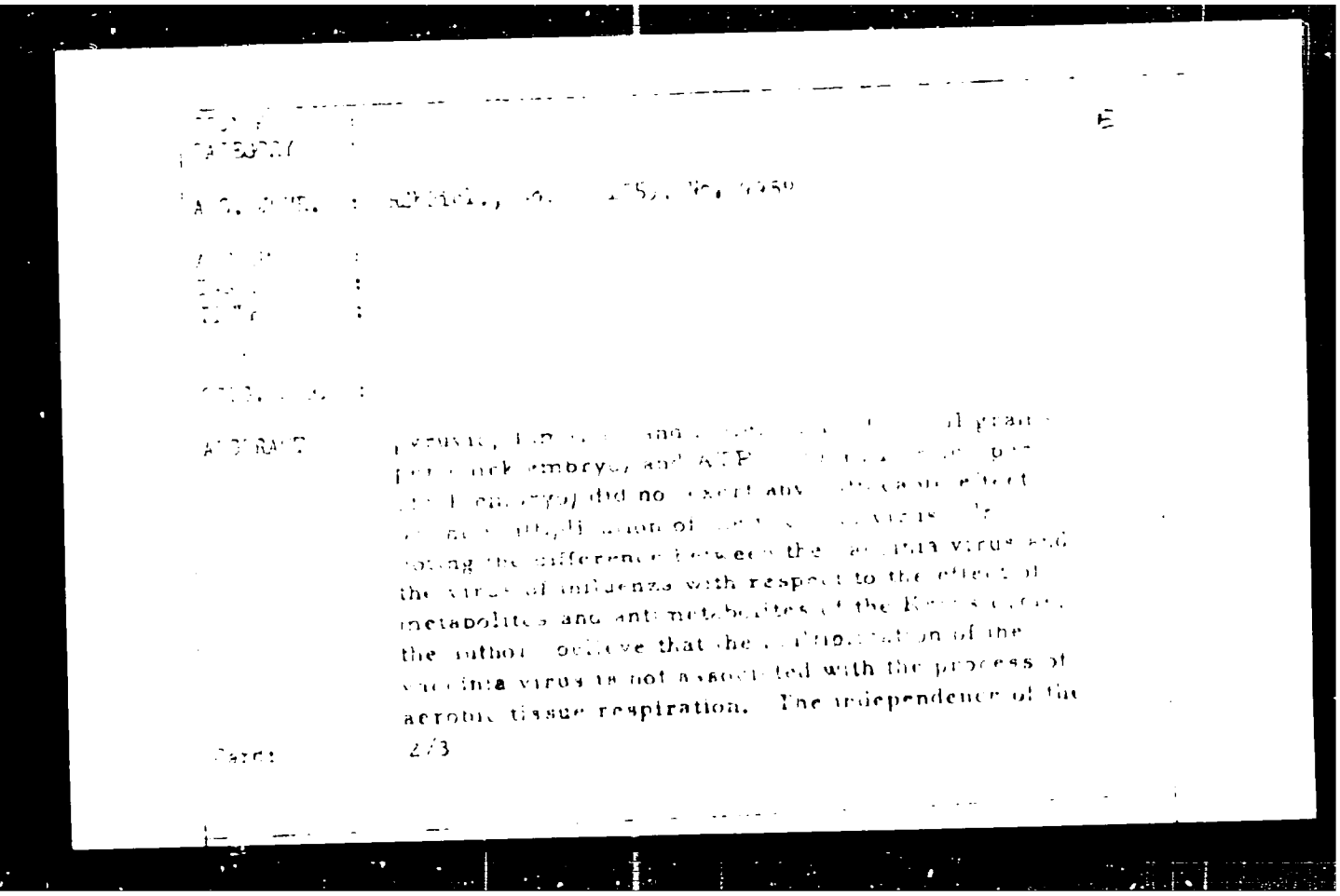
Ca. 1/2

ZBYTLENOK, N.A.; KONOSH, O.V.; PILLE, E.R.

Influence of metabolites and antimetabolites belonging to the tricarbonic acid cycle on the multiplication of vaccine virus in chick embryos. Dokl. AN SSSR 118 no.3:595-597 Ja '58. (MIRA 11:4)

1.Institut virusologii im. D.I. Ivanovskogo Akademii meditsinskikh nauk SSSR. Predstavleno akademikom V.A. Engel'gardtom.
(ANTIMETABOLITES)





ABSTRACT [illegible] the author believe that the [illegible] vaccinia virus is not associated with the process of aerobic tissue respiration. The independence of the

Card: 2/3

E

[illegible] :

[illegible] : [illegible] [illegible], No. 9[illegible]

[illegible] :

[illegible] :

ABSTRACT : multiplication of the vaccinia virus of the [illegible] ATP into the chick embryo, which also distinguishes it from the influenza virus, apparently is evidence of the existence of differences between these two viruses with respect to sources of energy which they use in the biosynthesis of virus substances. -- Yu. N. Mastyukova

Card 3/3

12

L 31140-66 EWT(m)/EWP(t)/ETI IJP(c) JD/JW
ACC NR: AT6012163 SOURCE CODE: UR/0413/66/000/007/0095/0095

INVENTOR: Pille, [illegible] A.

ORG: none

TITLE: Method for electroplating with cobalt. Class 48, No. 180453

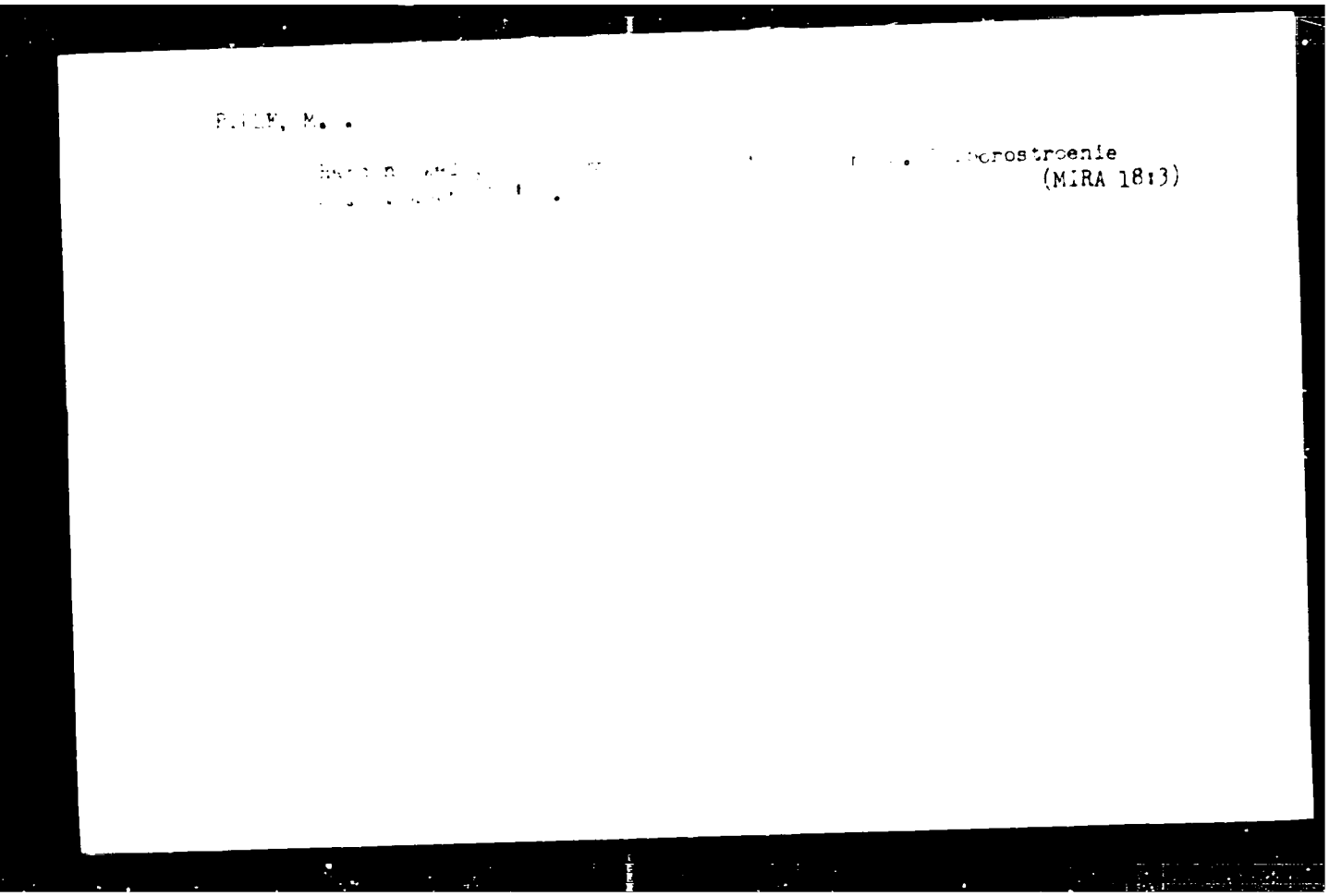
SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 7, 1966, [illegible]

TOPIC TAGS: electroplating, cobalt electroplating

ABSTRACT: This Author Certificate introduces a method for electroplating with cobalt from a sulfate solution. To obtain dense, hard, and tightly adhering cobalt deposits, the electroplating process is carried out in a solution containing (g/l): 280—320 cobalt sulfate, 64—66 formic acid, 39—42 sodium formate, 70—75 sodium sulfate, and 3—4 ammonium sulfate, at a temperature of 98—100C, a current density of 100—250 a/dm^2, and an electrolyte pH of 2.0—2.5. [AZ]

SUB CODE: 11/ SUBM DATE: 30Mar63/ ATD PRESS: 4239

Card 1/1 IC



[illegible], M. •

[illegible] [illegible]erostroenie
(MIRA 18:3)

PILLE, E. R., KONOSH, O. V., ZEYTLENOK, N. A.

"Effect of x-rays on the resistance of the organism of experimental animals to viral infections, on the course of infection, and on the development of specific antivirus immunity."

report submitted at the 12th All-Union Congress of Hygienists, Epidemologists and Infectionists, 1959.

PILEK, A.

The way I got good production results in collective pond fisheries.
p. 18. GOSPODARKA RYBNA (Polskie Wydawnictwa Gospodarcze) Warszawa.
Vol. 7, no. 10, 1955.

So. East European Accessions List. Vol. 5, no. 1, Jan. 1956.

PILLER, B.

Technical and economical aspects of the development of synthetic high-bulked yarn production in Czechoslovakia. Ind text Rum 13 no.9:357-361 S '62.

1. Director al Institutul de cercetari tricotaje din Brno, R.S.C.

PILLER, B.A., inzh.

Hydraulic system of loaders. Trakt. i sel'khozmash. 31 [i.e.32] no.11:31-33 N '62. (MIRA 15:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennogo mashinostroyeniya.

(Tractors—Hydraulic equipment)

PILLER, B.A., inzh.

Agricultural hydraulic loaders. Trakt. i sel'khozmash. 32 no.7:41-44 (MIRA 15:7)
Jl '62.
(Agricultural machinery)

PILLER, B.A., insh.

PG-0,5 grab-type loader. Trakt. i sel'khozmash. no.11:36-38 N '59. (MIRA 13:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennogo mashinostroyeniya.
(Hoisting machinery)

PILLER, Bohumil J. of Am. Ce. Soc. I Feb. 1954 glass

PATENTS

Device for drawing off artificial fibers from the spinneret, especially fibers spun from the molten mass. JOSEF ZMATLÍK, MIROSLAV STARÝ, BOHUMIL PILLER, AND JAN PINKAVA (Elite, Sdruzene tovarny pomocch, narodni podnik, and Zavody pre chemicku vyrobu, narodny podnik). U. S. 2,595,044, April 29, 1952. Glass fibers are drawn by means of rollers located below the spinneret.

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[Synthetic fibers and characteristics of their processing in the textile industry] Sinteticheskie volokna i osobennosti ikh pererabotki v tekstil'noi promyshlennosti. Pod red. I.I.Shalova. Moskva, Izd-vo nauchno-tekhn.lit-ry RSFSR, 1960. 177 p. Translated from the Czech. (MIRA 14:4)
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1. Direktor Nauchno-issledovatel'skogo instituta trikotazhnoy promyshlennosti v gorode Brno (Chekhoslovakiya).
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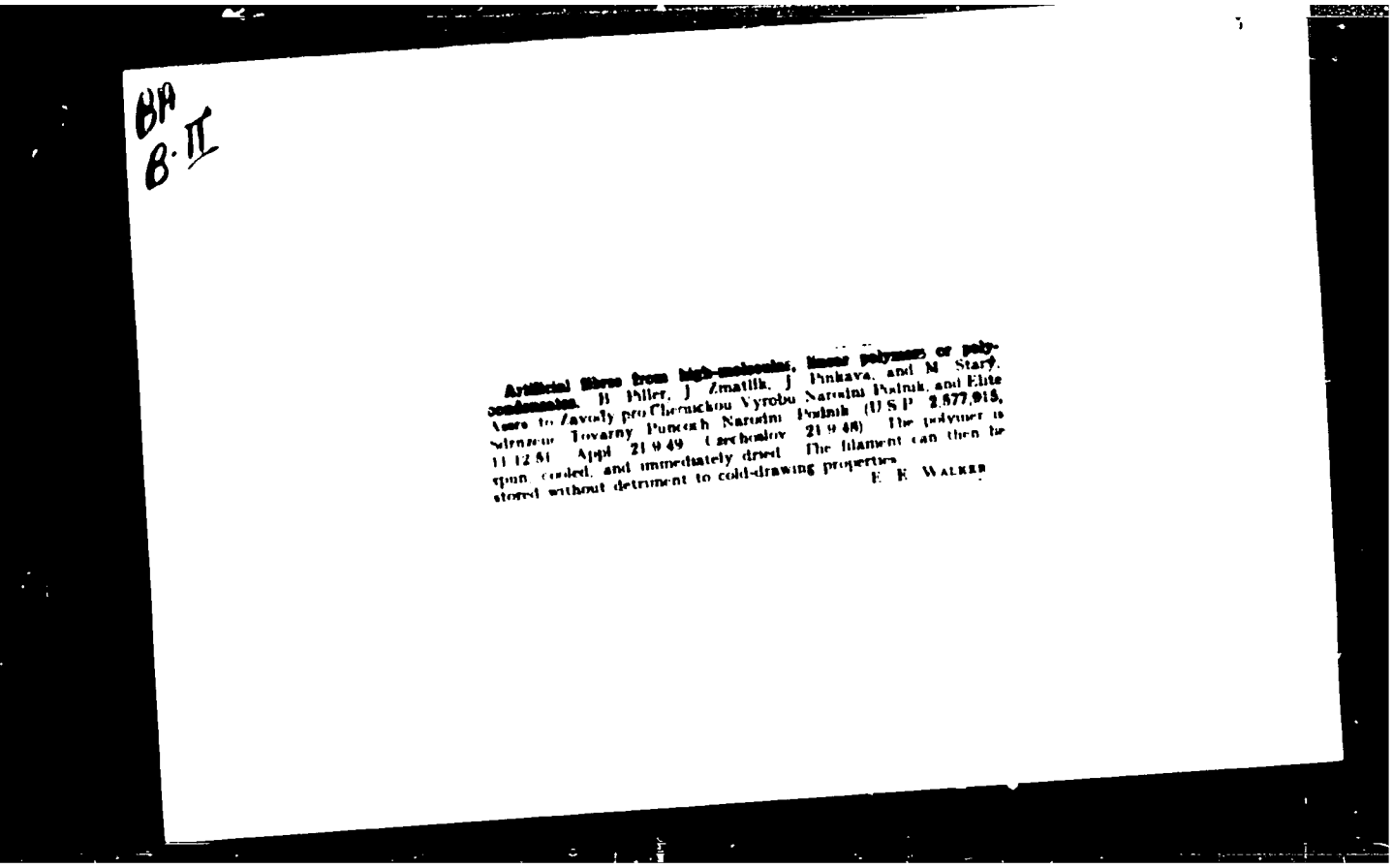
SOURCE: East European List (EEL) Library of Congress, [illegible], No. 1, January 1[illegible]



BA
B-II

Artificial fibres from high-molecular, linear polymers or polycondensates. H Piller, J Zmatlik, J Pinkava, and M Stary. Assre to Zavody pro Chemickou Vyrobu Narezini Pulnik, and Elite Silnicni Tovarny Puncoch Narezini Pulnik (U S P 2,577,915, 11 12 51 Appl 21 9 49 Czechoslov 21 9 48) The polymer is spun, cooled, and immediately dried The filament can then be stored without detriment to cold-drawing properties

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1. Moskovskiy nauchno-issledovatel'skiy institut virusnykh preparatov.

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1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennogo mashinostroyeniya.
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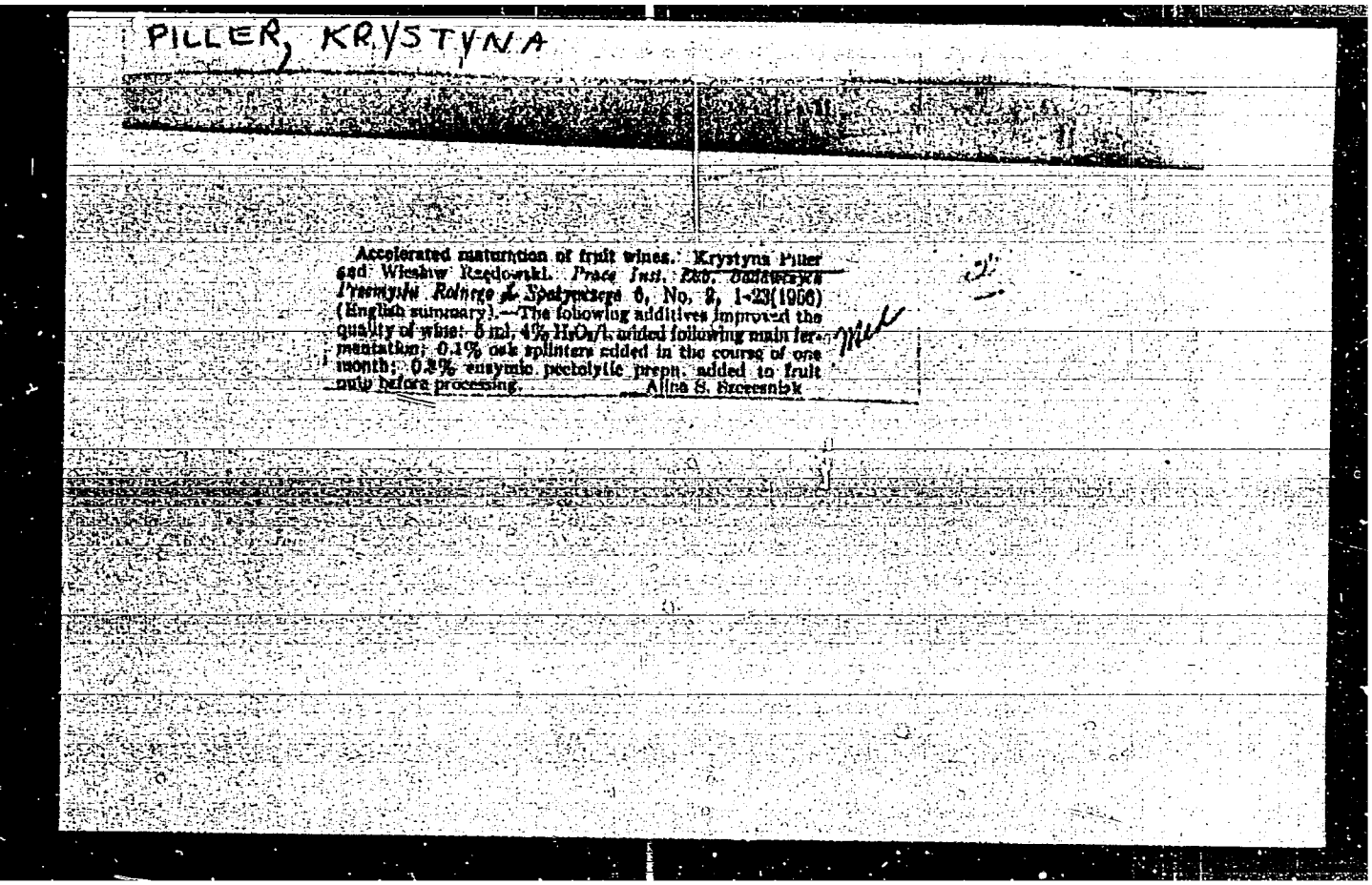

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