16.8100, 16.8300, 24.6000

76992
SOV/56-37-6-32/55

AUTHORS: Bilen'kiy, S. M., Ryndin, R. M., Smorodinskiy, Ya. A., Khe Tso-syu

TITLE: Theory of β-Decay of the Neutron

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 37, Nr 6, pp 1758-1763 (USSR)

ABSTRACT: Calculations were performed for corrections to various effects in β-decay of the neutron. The corrections originated from the account of terms for the electron and nucleon masses $\sim m/M$. These terms are due to the "weak Gell-Mann magnetism" and proton recoil. It was shown that for electron-neutrino correlation and the up-down symmetry of electrons, these corrections may reach several percent. Thus, the correction for the (e-ν)-correlation for the total energy of electron of 0.71, 0.91, 1.11, 1.29 mev,

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Theory of β-Decay of the Neutron

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as compensated for "weak magnetism" and the recoil, was, respectively, as follows: 0.4, 1.4, 2.4, 3.3%, and 1.9, 2.7, 3.5, 4.2%. The correction to the asymmetry of electrons for the total energy of electron 0.71, 0.91, 1.11, 1.29 mev, as compensated for "weak magnetism" and the proton recoil, was found to be, respectively: 1.3, 1.8, 2.4, 3.0%, and 0.3, 0.5, 0.6, 0.8%. Corrections for the polarization were found to be small and at energies of 0.71, 0.91, and 1.11 mev were, respectively: 0.14, 0.08, and 0.07%, V. Telegdi participated in the discussion of this work. There are 2 tables; and 12 references, 1 Soviet, 1 Italian, 10 U.S. The 5 most recent U.S. references are: R. P. Feynman, M. Gell-Mann, Phys. Rev., 109, 193, 1958; M. Gell-Mann, Phys. Rev., 111, 362, 1958; J. Bernstein, R. R. Lewis, Phys. Rev., 112, 232, 1958; M. Morita, Bull. Am. Phys. Soc., 4, 230 D11, 1959; S. Weinberg, Phys. Rev., 112, 1375, 1958.

ASSOCIATION: Joint Inst. Nuclear Research, USSR (Ob'edinennyy institut

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Theory of β-Decay of the Neutron

76992
SOV/56-37-6-32/55

yadernykh issledovaniy, SSSR)

SUBMITTED: July 3, 1959

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21(1)
AUTHORS: Bilen'kiy, S. M., Ryndin, R. M. SOV/20-124-1-17/69

TITLE: On Determining the Parity of Hyperons and K-Mesons (Ob opredelenii chetnosti giperonov i K-mezonov)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 1, pp 63-65 (USSR)

ABSTRACT: The present paper investigates a possibility of determining the parity of hyperons and K-mesons that is not connected with any condition concerning the spins of hypernuclei and K-mesons. Besides, in the case of this procedure, the reactions must not be investigated near the threshold value. The authors suggest investigating the reaction $p + He^4 \longrightarrow He^4 + Y + K$ with a polarized proton beam. The matrix of this polarization has the form $M = a + \vec{\sigma} \cdot \vec{b}$, where the quantities a and $\vec{b}$ depend on the momenta of the initial- and final states. Next, the expressions for the differential cross section of the above-mentioned reaction and the polarization of the hyperons produced by the reaction are given. The product of the internal parities of the proton, hyperon, and K-meson may assume the two values $I_p I_Y I_K = \pm 1$. In the case $I_p I_Y I_K = +1$ the matrix M is a

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scalar and $\vec{b}$ is then a pseudovector. At $I_p I_Y I_K = -1$, M is a pseudoscalar and $\vec{b}$ a vector. The formulae are then also specialized for the special case in which the momenta of the proton, K-meson, and hyperon are in one plane. The polarized proton beams are produced by the scattering of unpolarized beams by nuclei, and their polarization is orthogonal with respect to the momentum of the scattered protons. By measuring azimuthal asymmetry in the above-mentioned reaction with polarized protons, the sign of $I_p I_Y I_K$ can be uniquely determined if the sign of the polarization occurring in the reaction with unpolarized protons is known. When determining asymmetry it is necessary to select such cases in which all particles are in one plane. The authors thank Yu. A. Shcherbakov for an interesting discussion of the problems dealt with by the present paper. There are 8 references, 4 of which are Soviet.

On Determining the Parity of Hyperons and K-Mesons SOV/20-124-1-17/69

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (United Institute for Nuclear Research)

PRESENTED: August 27, 1958, by N. N. Bogolyubov, Academician

SUBMITTED: August 9, 1958

Card 3/3

BILENKIY, S. M., RYNDIN, R. M.,

"Emission of -Ray Quantum in Electron-Proton Scattering"

paper presented at the Intl Conference on High Energy Physics, Rochester, N. Y. and/or Berkly California, 25 Aug - 16 Sep 1960.

BILEN'KIY, S.M.; RYNDIN, R.M.; SMORODINSKIY, Ya.A.; KHE TSZO-SYU [Ho TSo-hsiu]

Comments on the theory of beta-decay of the neutron. Zhur.eksp. i teor.fiz. 37 no.6:1758-1763 D '59. (MIRA 14:10)

1. Ob"yedinennyy institut yadernykh issledovaniy.
(Beta rays--Decay) (Neutrons)

BILEN'KIY, S.M.

Energy dependence of the scattering cross section at small energies. Zhur. eksp. i teor. fiz. 40 no.2:714-715 F '61. (MIRA 14:7)

1. Ob"yedinennyy institut yadernykh issledovaniy.
(Scattering Physics)

2213
S/056/61/040/003/014/031
B112/B214

24.6520

AUTHORS: Bilen'kiy, S. M., Ryndin, R. M.

TITLE: Emission of soft gamma quanta in electron proton scattering

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 40, no. 3, 1961, 819-825

TEXT: The bremsstrahlung of soft gamma quanta in elastic electron proton scattering is considered in this paper. The amplitude of the process is calculated approximately and then the differential scattering cross section. The approximations are in each case limited to the first two terms of a series expansion in powers of the exchange momentum k, that is, the momentum of the gamma quantum. The amplitude of the scattering process is determined by a method proposed by F. E. Low (Ref.3: Phys. Rev., 110, 974, 1958) for the soft gamma radiation. This method requires a special treatment of the part of the amplitude possessing a pole for $k \to 0$ (renormalization). The amplitudes T_μ^I and T_μ^{II} appear in the S matrix: $S(p', q', k, p, q) = -(2\pi)^4 i(M^2 m^2 / 2k_0 p_0' p_0 q_0' q_0)^{1/2} \epsilon_\mu (T_\mu^I + T_\mu^{II}) \delta(p' + q' + k - p - q)$. M is

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the mass of the proton, m the mass of the electron; p,p' and q,q' are the four-momenta of the proton and the electron, respectively, before and after collision; ε_μ is the polarization vector of the emitted gamma quantum ($p_0 = ip_4$, $q_0 = iq_4$). The amplitude T^I_μ is expressed by the anomalous magnetic moment μ_p and the electromagnetic form factors F_1 and F_2 of the proton.

$$T^I_\mu = \bar{u}(q')\left[ie\gamma_\mu \frac{1}{i\gamma(q'+k)+m} ie\gamma_\nu + ie\gamma_\nu \frac{1}{i\gamma(q-k)+m} ie\gamma_\mu\right] u(q) \times$$
$$\times \bar{v}(p') ie\left[F_1((p'-p)^2)\gamma_\nu - \tfrac{1}{2}\mu_p M^{-1} F_2((p'-p)^2)\sigma_{\nu\rho}(p'-p)_\rho\right] v(p)(p'-p)^{-2}. \quad (2)$$

The amplitude T^{II}_μ contains operators which may be expanded in powers of the exchange momentum k.

$$T^{II}_\mu = -\bar{u}(q')\, ie\gamma_\nu u(q)\,[T^A_{\nu\mu} + T^B_{\nu\mu}](q'-q)^{-2}. \quad (3)$$

$$T^A_{\nu\mu} = \bar{v}(p')[ie\Gamma_\mu(p', p'+k)\, S(p'+k)\, ie\Gamma_\nu(p'+k, p) +$$
$$+ ie\Gamma_\nu(p', p-k)\, s(p-k)\, ie\Gamma_\mu(p-k, p)]\, v(p). \quad (4)$$

In each case, the first two terms of the expansions are substituted into

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T_μ^{II} and a formula for T_μ^{II} is thus obtained, which is accurate up to the terms of order 1/k and contains only the electromagnetic form factors of the proton.

$$T_{\nu\mu}^{A} = \bar{v}(p')\Big[ie\Gamma_\nu^0(p', p-k)\frac{1}{i\gamma(p-k)+M}\Big(ie\gamma_\mu+\frac{ie}{2M}\mu_p\sigma_{\mu\rho}k_\rho\Big)+$$
$$+\Big(ie\gamma_\mu+\frac{ie}{2M}\mu_p\sigma_{\mu\rho}k_\rho\Big)\frac{1}{i\gamma(p'+k)+M}\,ie\Gamma_\nu(p'+k, p)\Big]v(p)+$$
$$+\bar{v}(p')\{[ie\Gamma_\nu(p', p-k)-ie\Gamma_\nu^0(p', p-k)]\,ie\gamma_\mu/2M\}\,v(p)+$$
$$+\bar{v}(p')\{(ie\gamma_\mu/2M)\,[ie\Gamma_\nu(p'+k, p)-ie\Gamma_\nu^0(p'+k, p)]\}\,v(p), \quad (18)$$

$$\Gamma_\nu^0(l', l) = a\gamma_\nu + b\sigma_{\nu\rho}(l'-l)_\rho + c\sigma_{\nu\rho}(l'+l)_\rho. \quad (19)$$

$$T_\mu^{II} = -\varkappa^{-2}\bar{u}(q')\,ie\gamma_\nu u(q)\,\bar{v}(p')\Big\{\Big[ieF_1(\varkappa^2)\gamma_\nu-$$
$$-\frac{ie}{2M}\mu_p F_2(\varkappa^2)\sigma_{\nu\rho}\varkappa_\rho\Big]\frac{1}{i\gamma(p-k)+M}\Big(ie\gamma_\mu+\frac{ie}{2M}\mu_p\sigma_{\mu\rho}k_\rho\Big)+$$
$$+\Big(ie\gamma_\mu+\frac{ie}{2M}\mu_p\sigma_{\mu\rho}k_\rho\Big)\frac{1}{i\gamma(p'+k)+M}\Big[ieF_1(\varkappa^2)\gamma_\nu-\frac{ie}{2M}\mu_p\sigma_{\nu\rho}\varkappa_\rho F_2(\varkappa^2)\Big]\Big\}\,v(p). \quad (25)$$

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Finally, with the help of the expressions for T_μ^I and T_μ^{II} the differential scattering cross section $d\sigma = d\sigma_0/\omega + d\sigma_1$ is calculated where $d\sigma_0$ and $d\sigma_1$ correspond to the first and the second approximation, respectively.

$$d\sigma_0 = \omega_k d\sigma\Big|_{\omega=0} = \alpha\,(2\pi)^{-2}\omega^2\left[\left(\frac{q'}{q'k}-\frac{q}{qk}\right)-\left(\frac{p'}{p'k}-\frac{p}{pk}\right)\right]^2\Big|_{\omega=0} d\Omega_k d\omega d\sigma_p. \quad (27)$$

where $d\sigma_p$ is the elastic ep-scattering cross section for an electron energy q_0, $\alpha = e^2/4\pi = 1/137$. $d\sigma_1$ is given by:

$$d\sigma_1 = \frac{\alpha^3}{(2\pi)^2}\left\{A_q^2 \varkappa k\left[f_1\left(2M^2+\frac{1}{2}\varkappa^2\right)-2f^2\varkappa^2\right]-\frac{1}{2}A_p^2\varkappa k f_1\varkappa^2 -\right.$$
$$-2A_qA_p(\varkappa k)(f_1M^2-f^2\varkappa^2)+f_1(pq+pq')(A_q-A_p)\left[\left(\frac{q'}{q'k}+\frac{q}{qk}\right)(p'k+pk)-\right.$$
$$\left.-\left(\frac{p'}{p'k}+\frac{p}{pk}\right)(qk+q'k)-4(p-q')\right]-2(A_q-A_p)^2 f_1\left[(pq)(kq')+\right.$$
$$+(pq')(kq)+\frac{1}{2}(pk)\varkappa^2\Big]-2(\varkappa k)(A_q-A_p)A_q\left[4\left(2F_1F_1'+2\left(\frac{\mu_p}{2M}\right)^2F_2F_2'\varkappa^2+\right.\right.$$
$$\left.\left.+\left(\frac{\mu_p}{2M}F_2\right)^2\right)(pq)(pq')\cos^2\frac{\theta_1}{2}+ff'\varkappa^4\right]+(A_q-A_p)^2\left[4\left(2F_1F_1'\varkappa^2+\right.\right.$$

$$+2\left(\frac{\mu_p}{2M}\right)^2 F_2 F_2' \varkappa^4 + \left(\frac{\mu_p}{2M} F_2\right)^2 \varkappa^2 + f_1\Big)(pq)(pq')\cos^2\frac{\theta_1}{2} +$$

$$+ f\varkappa^4 (f'\varkappa^2 + f)\Big]\frac{dq_0'}{d\omega}\frac{1}{q_0'}\omega\Big\} q_0'\omega\left[\varkappa^4 q_0 M^2\left(1+\frac{2q_0}{M}\sin^2\frac{\theta_1}{2}\right)\right]^{-1}\Big|_{\omega=0} d\Omega_k d\omega d\Omega_{q'} +$$

$$+\frac{\alpha}{(2\pi)^2}\left[\frac{4\varkappa k}{\varkappa^2}(A_q - A_p)A_q\omega + (A_q - A_p)^2\frac{1}{q_0}\left(1+\frac{2q_0}{M}\sin^2\frac{\theta}{2}\right)\omega^2 + \right.$$

$$\left. + \frac{2}{p'k}\omega\right]\Big|_{\omega=0} d\omega\, d\Omega_k\, d\sigma_p +$$

$$+\frac{2\alpha}{(2\pi)^2}\left[\left(1+\frac{m^2\omega}{q_0' q' k}\cos\theta'\right)\left(\frac{m^2}{(q'k)^2} - \frac{p'q'}{(p'k)^2} + \frac{(p'q)(q'k)}{(p'k)^2 qk}\right) + \right.$$

$$\left. + \frac{m^2\omega\cos\theta'}{(q'k)^2 q_0'}\left(\frac{qq'}{qk} + \frac{p'q'}{p'k} - \frac{pq'}{pk}\right) - \frac{M^2 q'k}{(p'k)^3} + \frac{pq'}{(pk)(p'k)} - \right.$$

$$\left. - \frac{(pp')(q'k)}{(pk)(p'k)^2} + \frac{m^2}{(q'k)(p'k)} - \frac{qq'}{(p'k)(qk)}\right]\frac{dq_0'}{d\omega}\frac{1}{q_0'}\omega^2\Big|_{\omega=0} d\omega d\Omega_k d\sigma_p.$$

Здесь

$$A_q = q'/(q'k) - q/(qk), \quad A_p = p'/(p'k) - p/(pk),$$

$$f = F_1 + \mu_p F_2, \quad f_1 = F_1^2 + (\mu_p F_2/2M)^2\varkappa^2;$$

$$\frac{dq_0'}{d\omega}\frac{1}{q_0'}\Big|_{\omega=0} = 2\left[M\left(1+\frac{2q_0}{M}\sin^2\frac{\theta_1}{2}\right)\right]^{-1}\sin^2\frac{\theta'}{2} - \frac{1}{q_0}\left(1+\frac{2q_0}{M}\sin^2\frac{\theta}{2}\right),$$

Card 5/6 $F_1' = \frac{dF_1}{d\varkappa^2}$, и т. д.

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S/056/61/040/003/014/031
B112/B214

Emission of soft gamma...

S. S. Gershteyn, P. S. Isayev, A. A. Logunov, and Ya. A. Smorodinskiy are thanked for discussions. There are 2 figures and 7 references: 1 Soviet-bloc and 7 non-Soviet-bloc.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: September 1, 1960

Card 6/6

BILENKIY, S.M.

RYNDIN, R. M., and BILENKIY, S. M.

"Production of Slow π Mesons in Pion-Nucleon and Nucleon-Nucleon Collisions"

report presented at the Intl. Conference on High Energy Physics, Geneva, 4-11 July 1962

Joint Inst. for Nuclear Research
Laboratory of Theoretical Physics, Dubna, 1962

BILEN'KIY, S.M.; RYNDIN, R.M.; SARANTSEVA, V.R., tekhn. red.

[Determining the spin of K*]Ob opredelenii spina K*. Dubna, Ob"edinennyi in-t iadernykh issl., 1962. 4 p. (MIRA 15:10)
(Mesons) (Nuclear spin)

BILEN'KIY, S.M.; RYNDIN, R.M.; ZARUBINA, I.S.[translator];
SARANTSEVA, V.R., tekhn. red.

On the production of "Soft" π mesons in pion-nucleon and nucleon-nucleon collisions. Dubna, Ob"edinennyi in-t iadernykh issledovanii, 1962. 5 p.
(No subject heading)

S/056/62/043/006/041/067
B183/B102

AUTHORS: Bilen'kiy, S. M., Ryndin, R. M.

TITLE: Production of slow pions in pion-nucleon and nucleon-nucleon collisions

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 6(12), 1962, 2204 - 2207

TEXT: How invariance of the S matrix under time reversal affects the pion production in πN and NN collisions is studied for cases where the energy of the pions produced is negligibly small. Strictly, this study only holds for the limiting case where the four-momentum of the resulting meson vanishes. The conclusions drawn from the T-invariance requirement concerning the amplitudes of the process are investigated for each process involved. The production of slow π^0 mesons in the process $\pi + p \to \pi + p + \pi^0$ is studied first. Information on particle polarization is derived from the amplitude of this process. The polarization of recoil nucleons, for instance, is zero at all angles if the protons are unpolarized. The following holds for π^0 production in pp scattering: If both protons are

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Production of slow pions...

unpolarized, polarization (ξ) occurs after the collision. If the incident proton is polarized (ξ_0), the π^0 production cross section $\sigma = \sigma_0[1 + (\xi_0 \xi)]$. The production of charged pions in processes of the type $\pi^{\pm} + N \to \pi^+ + \pi^- + N$ is studied in a similar manner.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: June 30, 1962

BILEN'KIY, S. M.

S/056/63/044/001/054/067
B187/B102

AUTHORS: Bilen'kiy, S. M., Ryndin, R. M.

TITLE: Spin determination of the K^+-meson

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44, no. 1, 1963, 326-328

TEXT: When the K^+-meson had been detected (M. Alston, et al. Phys. Rev. Lett., 6, 300, 1961), and its mass 885 Mev and its isospin T = 1/2 determined, several methods were suggested for the determination of the spin of these elementary particles (e.g. M. Schwartz, Phys. Rev. Lett., 6, 556, 1961; D.O. Caldwell, Phys. Rev. Lett., 7, 259, 1961). In the present paper, a method is discussed for determining the spin of the K^+-meson (0 or 1). It is based on a study of the $(K,\bar{K}^+)$ or $(\bar{K},K^+)$ pair production on collision of electron-positron beams moving in opposite directions. N. Cabibbo and R. Gatto (Phys. Rev., 124, 1577, 1961) discussed the possibility of conducting such experiments. The matrix element of the process $e^+ + e^- \rightarrow \bar{K} + K^+$ $(K + \bar{K}^+)$ is studied in single-photon approximation. An estimation of the total pair production cross

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Spin determination of the ...

section showed that K^0 has spin 1 if a peak exists in the spectrum of the K-meson (regardless of whether it is neutral or not). Studies by W. Chinowsky, G. Goldhaber et al. (Phys. Rev. Lett., 9, 330, 1962) also indicated that K^0 has spin 1. There is 1 figure.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: August 4, 1962

BILEN'KIY, S.M.; RYNDIN, R.M.

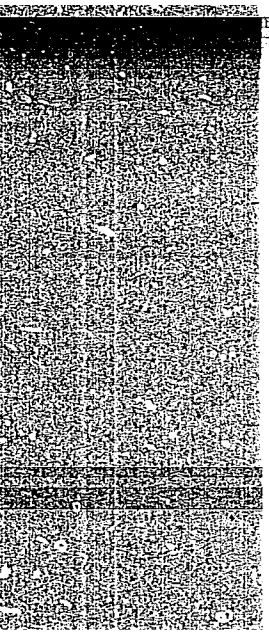
Relation between the total cross sections for the $1/2+1/2 \rightarrow 0+0$ reactions and the internal parities of particles. Zhur. eksp. i teor. fiz. 45 no.4:1192-1195 O '63. (MIRA 16:11)

1. Ob"yedinennyy institut yadernykh issledovaniy.

BILEN'KIY, S. M.; NGUYEN VAN KH'YEU; RYNDIN, R. M.

Asymptotic relations between polarizations in crossed reactions. Zhur.eksp.i teor.fiz. 46 no. 3:1098-1105 Mr '64. (MIRA 17:5)

1. Ob"yedinennyy institut yadernykh issledovaniy.



BILEN'KIY, S.M.; RYNDIN, R.M.

The $\bar{p} + p \rightarrow \bar{l} + l$ reaction with polarized particles. IAd. fiz. 1 no.1: 84-88 Ja '65. (MIRA 18:7)

1. Ob"yedinennyy institut yadernykh issledovaniy.

L 15155-66 EWT(m)/T

ACC NR: AP6000227 SOURCE CODE: UR/0056/65/049/005/1653/1663

AUTHORS: Bilen'kiy, S. M.; Lapidus, L. I.; Ryndin, R. M. 54 50 B

ORG: Joint Institute of Nuclear Research (Ob''yedinennyy institut yadernykh issledovaniy)

TITLE: Double NN scattering with a polarized beam and a polarized target 19,55

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 5, 1965, 1653-1663

TOPIC TAGS: nuclear scattering, scattering matrix, scattering cross section, light polarization, particle beam

ABSTRACT: The article discusses possible experiments involving the measurement of nucleon polarization arising as a result of scattering of a polarized beam by a polarized target. Measurement of such complicated polarization characteristics should help eliminate the ambiguities still remaining in phase-shift analysis and make it possible to determine for the first time the components of the third-rank polarization tensor. The structure of this tensor is analyzed and

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L 15155-66
ACC NR: AP6000227 4

expressions are presented for its components and for the differential cross section for the scattering of an unpolarized beam by an unpolarized target. The polarization correlation is considered for the case of scattering of a polarized beam by an unpolarized target, or an unpolarized beam by a polarized target. The relations between the measured and calculated quantities are derived, and the question of reconstruction of the scattering matrix discussed. Authors are grateful to F. Legar and Z. Yanout for calculating the plots in the figure, and to Yu. M. Kazarinov and Ya. A. Smorodinskiy for useful discussions of the questions considered in the article. Orig. art. has: 1 figure and 55 formulas.

SUB CODE: 20/ SUBM DATE: 28Jun65/ ORIG REF: 006/ OTH REF: 011

Card 2/2 vmb

L 22702-66 EWT(m)/T
ACC NR: AP6008736 SOURCE CODE: UR/0386/66/003/003/0118/0121

AUTHOR: Bilen'kiy, S. M.

ORG: Joint Institute of Nuclear Research (Ob"yedinennyy institut yadernykh issledovaniy)

TITLE: On a possible method of verifying CPT invariance in pp scattering

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 3, no. 3, 1966, 118-121

TOPIC TAGS: parity principle, strong nucleon interaction, proton scattering, antiproton, proton polarization

ABSTRACT: The invariance of an interaction with respect to the CPT transformation is the consequence of the basic postulates of modern field theory (the Luders-Pauli theorem). An experimental check of CPT invariance is therefore also a verification of these postulates. With an aim at directly verifying CPT invariance of strong interaction by a study of polarization effects in elastic scattering of antiprotons by protons

$$\bar{p} + p \to \bar{p} + p \qquad (1)$$

the authors show here that CPT invariance implies the following relations:

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$$\vec{P}^{(1)}\cdot\vec{n} = \vec{A}^{(2)}\cdot\vec{n},$$
$$\vec{P}^{(2)}\cdot\vec{n} = \vec{A}^{(1)}\cdot\vec{n}, \qquad (2)$$

where $\vec{n}$ is the normal to the scattering plane ($\vec{p}$ and $\vec{p}'$ are the momenta of the initial and final antiprotons in the s.m.s.), $\vec{P}^{(1)}$ ($\vec{P}^{(2)}$ is the antiproton (proton) polarization produced upon scattering of unpolarized particles, and $\vec{A}^{(1)}$ $\vec{A}^{(2)}$ is the asymmetry occurring when a polarized antiproton beam is scattered by an unpolarized target (unpolarized beam scattered by a polarized proton target). Violation of relations (2) would signify that the S-matrix is not invariant against CPT transformation. If it were to turn out that within the limits of experimental error the polarization $\vec{P}^{(1)}\cdot\vec{n}$ and the asymmetry $\vec{A}^{(2)}\cdot\vec{n}$ (or $\vec{P}^{(2)}\cdot\vec{n}$ and $\vec{A}^{(1)}\cdot\vec{n}$) coincide, then it is possible to determine the upper limit of the amplitude which is invariant to CPT transformation. Experiments aimed at verifying C(T) invariance of strong interactions show that the upper limit of the ratio of the amplitude invariant to charge conjugation C, to the C-invariant amplitude is of the order of 1% (for T of the order of 2--3%). The recently observed parity nonconservation effects in nuclear reactions are compatible with the assumption that parity nonconservation is connected only with weak interactions. Thus, a check on relations (2) calls for the

L 22762-66
ACC NR: AP6008736

setting up of difficult experiments in which the polarization and asymmetry would have to be measured with high accuracy. It is noted in conclusion that it is also easy to obtain relations between other observed quantities. The author is most grateful to R. M. Rynding for useful discussions of the questions considered in this article. Orig. art. has: 10 formulas.

SUB CODE: 20/ SUBM DATE: 13Dec65/ ORIG REF: 001/ OTH REF: 004

Card 3/3 ULR

BILENKO, A.

Converting the population's deposits. Fin. SSSR 21 no.10:74-76 O '60. (MIRA 13:10)

1. Nachal'nik operativnogo otdela Upravleniya sberegatel'nykh kass Kiyeva.

(Kiev--Savings banks)

BILENKO, A.

Following the example of Rostov bank employees. Fin. SSSR 22 no.8:56-58 Ag '61. (MIRA 14:8)

1. Nachal'nik operativnogo otdela upravleniya gostrudsberkass i goskredita Kiyeva.

(Ukraine—Savings banks)
(Socialist competition)

BILENKO, A.

Sixth volume of the Proceedings of the Institute of Electric Locomotive Manufacture. Trav. vys. ucheb. zav. elektromekh. 7 no.4:520 '64 (MIRA 17:7)

BELOV, V.Ye.; BILENKO, A.I.; SHVACHKO, M.S.; BRAILOVSKII, N.G., inzhener, redaktor; [redacted]A., tekhnicheskiy redaktor

[Unit method of repairing freight cars] Uzlovoi metod remonta gruzovykh vagonov; opyt vagonnogo depo stantsii Likhobory-Moskovsko-Okruzhnoi dorogi. Moskva, Gos. transp. zhel-dor. izd-vo, 1954. 54 p. (Railroads--Freight-cars) (MLRA 8:6)

BILENKO, A.P.

"Electric locomotive manufacture" published by the Electric Locomotive Scientific Research Institute. Elek. i tepl. tiaga 7 no.6:46 Je '63. (MIRA 16:9)

1. Starshiy inzh. Novocherkasskogo nauchno-issledovatel'skogo instituta elektrovozostroyeniya.
(Electric locomotives)

Žurn.techn.fiz.27,fasc.1, 85-89 (1957) CARD 2 / 2 PA - 1994

dielectricity constant and the density of the sample respectively. The values of the specific dielectricity constant which are given in a table indicate that for WO_3, PbO, Ni_2O_3 and CuO this specific dielectricity constant ε_{sp} is constant and that in the case of samples pressed out of semiconductor powders the value of the specific dielectricity constant is a more exact characteristic of the semiconductor than the dielectricity constant.
For measuring the dielectricity constant of semiconductors with a specific resistance of less than 10^3 ohm.cm the method of free waves is unsuited. It is, however, possible by another method to determine the dielectricity constant of well-conducting semiconductors on samples produced from a mixture of the powder of the semiconductor under investigation and of a dielectricum (e.g. paraffin). By means of this method D.I.BILENKO determined the dielectricity constant of ZnS, CdS, ZnTe, HgS, HgSe and also of SnSb at frequencies of from 10^4 - 10^6 c with the resonance method; results are shown in a table. In the cases investigated on this occasion the dielectricity constant increases on the occasion of transition from an ion-homoeopolar binding to a homoeopolar-metallic binding.

INSTITUTION: University SARATOV

BILENKO, D.I.; DEMIDOV, V.K.; KOTELKOV, V.N.; NAZVANOV, V.F.; NOSOVA, V.A.; ORNATSKAYA, Z.I.; ROKAKH, A.G.; SVERDLOVA, A.M.; KAPSHTAL', G.G.; KIR'YASHKINA, Z.I., dots., red.; VINNIKOVA, I.A., red.

[Textbook for practical studies on the physics of semiconductors] Rukovodstvo k prakticheskim zaniatiiam po fizike poluprovodnikov; uchebnoe posobie. [Saratov], Saratovskii univ., 1964. 115 p. (MIRA 18:11)

Dataon the geological history of the upper and central Dnieper Valley. Kyiv, Vyd-vo Akademii nauk URSR, 1939. 142 p. (44-28240)

QE276.B5

BILENKO, D. K.

14-57-7-14542

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 7, p 44 (USSR)

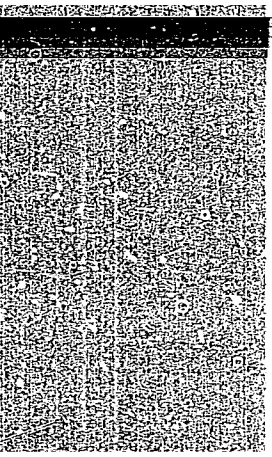
AUTHOR: Bilenko, D. K.

TITLE: A Structural-Geomorphological Map of the Kiyevskaya Oblast (Strukturno-geomorfologichna karta Kyyivs'koi oblasti -- in Ukrainian)

PERIODICAL: Nauk. pratsi ..Kyivs'k. Sil's'kohospodar. in-tu, 1954, Nr 7, pp 99-101

ABSTRACT: The author discusses the influence of geological structure on the modern relief of the Kiyevskaya Oblast, and also the relationship of the soil cover to the geological age of the relief. He comes to the conclusion that the soil cover reflects the structure and age of the relief and also the tectonic features of the earth's crust.

Card 1/1 L. D.



APPROVED FOR RELEASE: 06/08/2000 CIA-RDP86-00513R000205310016-3"

BILENKO, D.K., doktor geol.-mineral. nauk

Geomorphology of the Kremenets-Dubno Lowland. Nauk. pratsi UASHN 17 no.12:134-140 '60. (MIRA 16:7)

(Kremenets region--Geomorphology)
(Dubno region--Geomorphology)

BILENKO, K.P.

Effect of light on the migration of labeled assimilates in the soybean (Glycine hispida(moench.)maxim. Ukr. bot. zhur. 20 no.6:45-51 '63. (MIRA 17:2)

1. Institut fiziologii rasteniy AN UkrSSR, otdel fotosinteza.

BILENKO, L.; MARTSEVICH, Yu.

Heor of Borodino. Starsh.-serzh. no.9:20 S '62. (MIRA 15:11)
(Bistrom, K.I. d. 1839)

LAVROV, N.P., prof., red.; BILENKO, L.S., red.; TROFIMOV, A., tekhn.red.

[Manual on resettling fur-bearing animals] Rukovodstvo po rasseleniiu pushnykh zverei. Moskva, Izd-vo Tsentrosoiuza, 1958. 141 p. (MIRA 11:12)

(Fur-bearing animals)

BILENKO, M.I.; BONDAR, N.F.; LEBEDEV, V.F. [Lebediev, V.F.]; KHAYMS, S.M.

Type GIP5-L1 and GIP5-L2 infrared absorption gas analyzers.
Khim. prom. [Ukr.] no.1:51-53 Ja-Mr'63 (MIRA 17:7)

1. Lisichanskiy filial DKBA.

KOVANOV, V.V., prof.; BILENKO, M.V., kand. med. nauk

Study on mechanical angiorrhaphy in auto-homo-and heterotransplantation. Khirurgiia 40 no.4:70-77 Ap '64
(MIRA 18:1)

1. Kafedra operativnoy khirurgii i topograficheskoy anatomii (zav. - deystvitel'nyy chlen AMN SSSR prof. V.V. Kovanov) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova.

BILENKO, M. V., Cand Med Sci -- (diss) "Plastic operations of the peripheral arteries in experimentation." Moscow, 1960. 18 pp; (First Moscow Order of Lenin Medical Inst im I. M. Sechenov); 200 copies; price not given; (KL, 17-60, 167)

BILENKO, M.V.

On "implantation" of various arterial transplants in plastic surgery of the blood vessels in experiment. Khirurgiia 36 no.3:61-69 Mr '60. (MIRA 13:12)
(CAROTID ARTERIES—TRANSPLANTATION)
(FEMORAL ARTERY—TRANSPLANTATION)

BILENKO, M.V.; KAPICHNIKOV, M.M.; SKRIABINA, E.G.

Immunological study of the antigenic properties of vascular tissue preserved by lyophilization. Folia biol. 7 no.4:258-267 '61.

1. Surgical Department of the First Moscow Medical Institute (Order of Lenin) and Institute of Experimental Biology, Academy of Medical Sciences of the U.S.S.R., Moscow.
(BLOOD VESSELS immunol.) (TRANSPLANTATION immunol.)

BILENKO, M.V.; KAPICHNIKOV, M.M.; SKRYABINA, E.G.

Comparative immunological study of the antigenic properties of fresh and lyophilized vascular tissue. Trudy 1-go MMI 16: 92-105'62. (MIRA 16:6)

1. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii (zav. - chlen-korrespondent AMN SSSR prof. V.V.Kovanov) Pervogo Moskovskogo ordena [illegible] instituta.
(LYOPHILIZATION) (ANTIGENS AND ANTIBODIES)
(BLOOD VESSELS)

BILENKO, M.V.; BYSTROVA, M.F.

Histological changes in prostheses from polyvinyl alcohol in plastic surgery on peripheral vessels in an experiment. Trudy 1-go MMI 16:106-116'62. (MIRA 16:6)

1. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii (zav. - chlen-korrespondent AMN SSSR prof. V.V.Kovanov) Pervogo Moskovskogo ordena Lenina meditsinskogo instituta.
(PROSTHESIS) (BLOOD VESSELS--SURGERY)
(VINYL ALCOHOL POLYMERS)

BILENKO, M.V. (Moskva, Sadovo-Spasskaya, ul., d.19, kv.8)

Research on the viability of blood vessels preserved by freeze-drying. Grud.khir. 4 no.6:45-51 N-D'62. (MIRA 16:10)

1. Iz kafedry topograficheskoy anatomii i operativnoy khirurgii (zav. - chlen-korrespondent AMN SSSR prof. V.V.Kovanov) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova.

(FREEZE DRYING) (BLOOD VESSELS—TRANSPLANTATION)

BILENKO, M.V.

Plastic surgery on peripheral arteries with seamless porous prostheses from native capron. Trudy 1-go MMI 16:117-127'62. (MIRA 16:6)

1. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii (zav. - chlen-korrespondent AMN SSSR prof. V.V.Kovanov) Pervogo Moskovskogo ordena Lenina meditsinskogo instituta.
(ARTERIES--SURGERY) (PROSTHESIS) (NYLON)

BILENKO, M.V.

Morphological changes in the walls of lyophilized vessels following homoplasty of peripheral arteries. Trudy 1-go MMI 42:251-262 '65. (MIRA 19:2)

1. Laboratoriya po peresadke organov i tkaney AMN SSSR.

BILENKO, P. YA.

"Plowing Depth, and the Deepening of the Arable Layer of Chestnut Brown Soils in the South of the Ukrainian SSR under Irrigation Conditions of 1951-1954." Min. Higher Education USSR, Belaya Tserkov' Agricultural Inst., Kherson, 1955. (Dissertation for the Degree of Candidate in Agricultural Sciences)

SO: Knizhnaya Letopis', No. 22, 1955, pp 93-105

BILENKO, P.Ya., kandidat sel'skokhozyaystvennykh nauk.

Deepening of the plow layer of Chestnut soils. Zemledelie 4 no.10:43-45 O '56. (MLRA 9:11)
(Tillage)

USSR/Soil Science - Organic Fertilizers J-4

Abs Jour : Ref Zhur - Biol., No 9, 1958, 39027

Author : Lysogorov, S.D., Bilenko, T.Ya.
Inst : -
Title : The Effectiveness of Manure as a Fertilizer in the Irrigated Farming of the Southern UkrSSR.

Orig Pub : V sb. Mestn. organ. udobreniya Ukr SSR, Kiev, AN UkrSSR, 1957, 53-65.

Abstract : Experiments consisting of moisture laden sprayings of 1000 m^3/ha in one-two vegetative sprayings of 350-500 m^3/ha each were conducted by the Kherson agricultural institute and by the Bekhterskiy hydromeliorative technical school in chestnut eakly - saliferous soil.
The manure in quantity of 10 t/ha and Pc -1.5 c/ha was introduced by plowing at a depth of 30 cm.
The fertilizers increased the amount of nitrates, of phosphoric acid and of humus in the upper layers of soil-up

Card 1/2

USSR / Cultivated Plants. Cereal Crops. M-3

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 58523

Author : Bilenko, P. Ya.
Inst : Kherson' State Pedagogical Institute
Title : Deep Plowing and Processes, Which Take Place in the Soil and in Winter Wheat Plants During Irrigation

Orig Pub : Nauk. Zap. Khersons'k. derzh., ped. in-t, 1956, vyp 7, 59-78

Abstract : No abstract given

Card 1/1

COUNTRY :
CATEGORY : CULTIVATED PLANTS.
Abs. JOUR. : RZBiol., No. 1, 1959, No. 1586

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : of the full dose of NPK during the spring-time .

CARD: 2/2

APPROVED FOR RELEASE: 06/08/2000 CIA-RDP86-00513R000205310016-3"

BILENKO, P. Ya.

Soil cultivation and nitrogen and phosphorus requirement of winter wheat. Pochvovedenie no.5:93-97 My '60. (MIRA 14:4)

1. Khersonskiy pedagogicheskiy institut imeni N. K. Krupskoy.
(Tillage) (Wheat)

BILENKO, P.Ya.; LOGVINENKO, O.A.

Fertility of lower layers of Chestnut soil and their influence on vegetation. Pochvovedenie no.4:94-102 Ap '62. (MIRA 15:4)

1. Khersonskiy gosudarstvennyy pedagogicheskiy institut.
(Soil fertility)

BILENKO, S.A.; IZRAILEVICH, L.A.; MEDNIKOV, G.V.

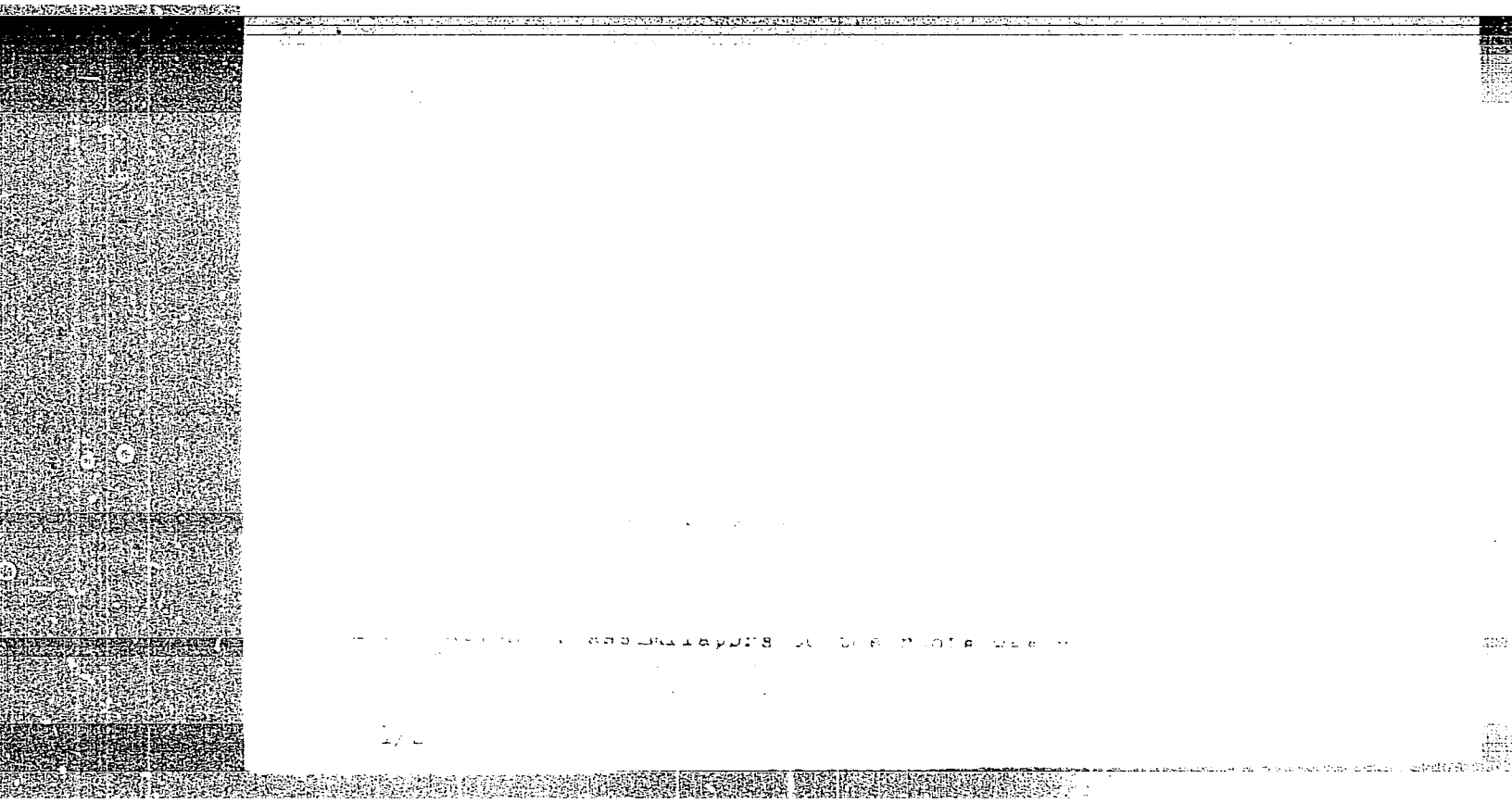
Indexes of the degree of mechanization in breweries. Spirt. prom. 28 no.7:29-32 '62. (MIRA 17:2)

1. Tsentral'nyy nauchno-issledovatel'skiy institut pivobezalkogol'noy i vinnoy promyshlennosti.

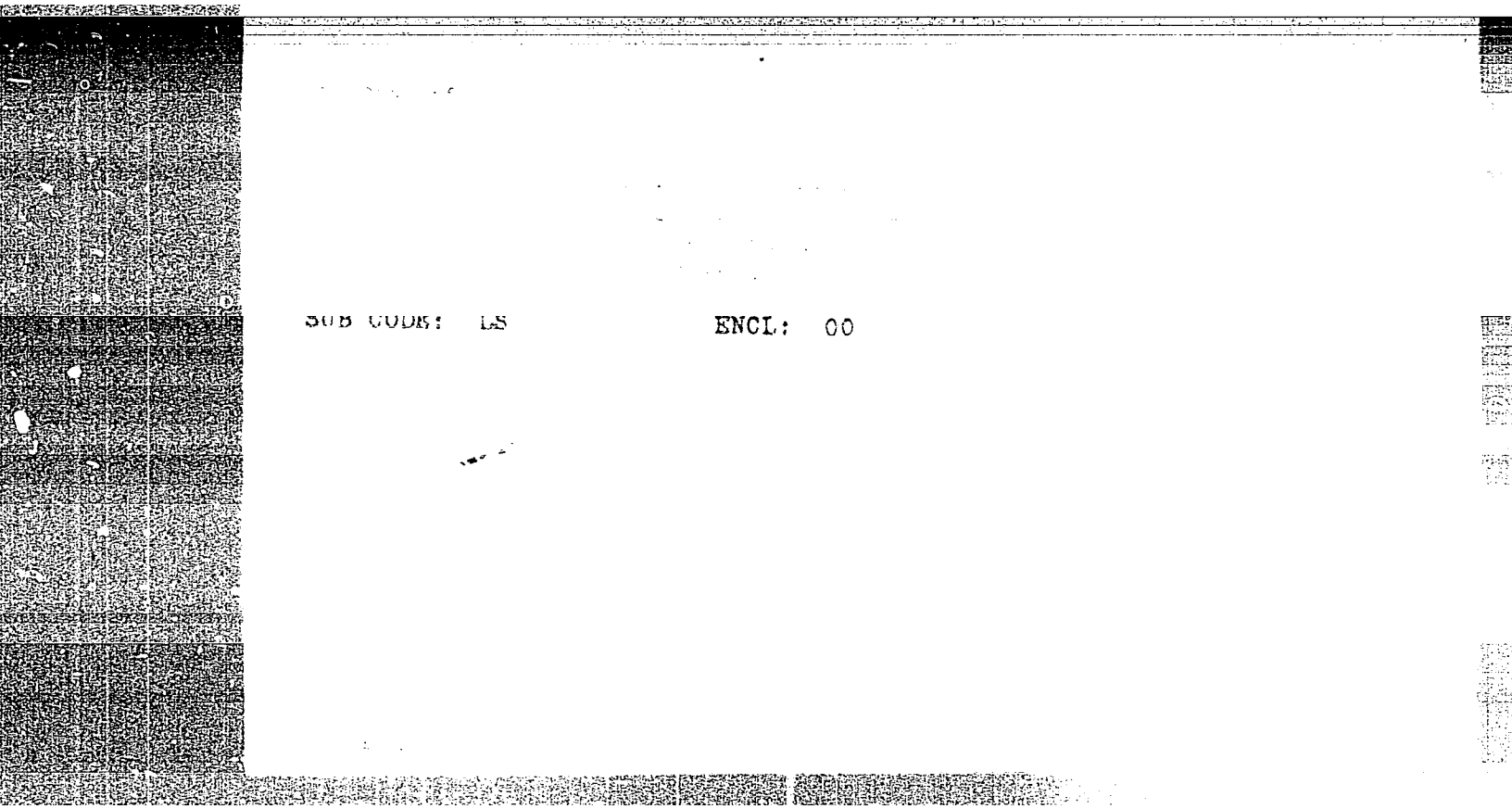
BILENKO, K.P. [Bilenko, K.P.]; GRODZINSKIY, A.M. [Hrodzins'kyi, A.M.]; PARSHIKOV, V.N. [Parshykov, V.M.]

Effect of light conditions on the motion of assimilates in corn. Ukr. bot. zhur. 21 no. 2:47-54 '64. (MIRA 17:5)

1. Institut fiziologii rasteniy AN UkrSSR i Institut botaniki AN UkrSSR.



APPROVED FOR RELEASE: 06/08/2000 CIA-RDP86-00513R000205310016-3"



BILENKO, Zinoviy, pisatel'; DIBENKO, Georgiy [Dybenko, Heorhii], kand.tekhn.nauk, master sporta SSSR.; RESHETNIKOV, Igor' [Reshetnykov, Ihor]

Saluting the Pioneer tie! Znan. ta pratsiia no.5:12-13 My '62. (MIRA 15:6)

1. Srednyaya shkola No.119 g. Odessy (for Reshetnikov).
(Pioneers (Communist youth))

ACC NR: AP7011379 SOURCE CODE: UR/0367/66/004/005/1063/1066

AUTHOR: Bilen'kiy, S. M. -- Bilenky, S. M.; Lapidus, L. I.; Ryndin, R. M.; Shekhter, L. Sh.

ORG: Joint Institute for Nuclear Research (Ob"yedinennyy institut yadernykh issledovaniy)

TITLE: Isospin conservation and polarization effects

SOURCE: Yadernaya fizika, v. 4, no. 5, 1966, 1063-1066

TOPIC TAGS: electron spin, strong nuclear interaction, particle interaction

SUB CODE: 20

ABSTRACT: The reactions $a + a' \rightarrow b + b'$ are treated, where the particles a and a' (or b and b') belong to the same isotopic multiplet, and the total isotopic spin of the final (or initial) particles may take only one value. Relationships have been obtained between polarization characteristics of such reactions at the angles θ and $\pi - \theta$ (θ is the c.m.s. angle). These relationships are based only on isotopic invariance and invariance under rotations and reflections. Their experimental verification would be a detailed test of the isotopic invariance of strong interactions.

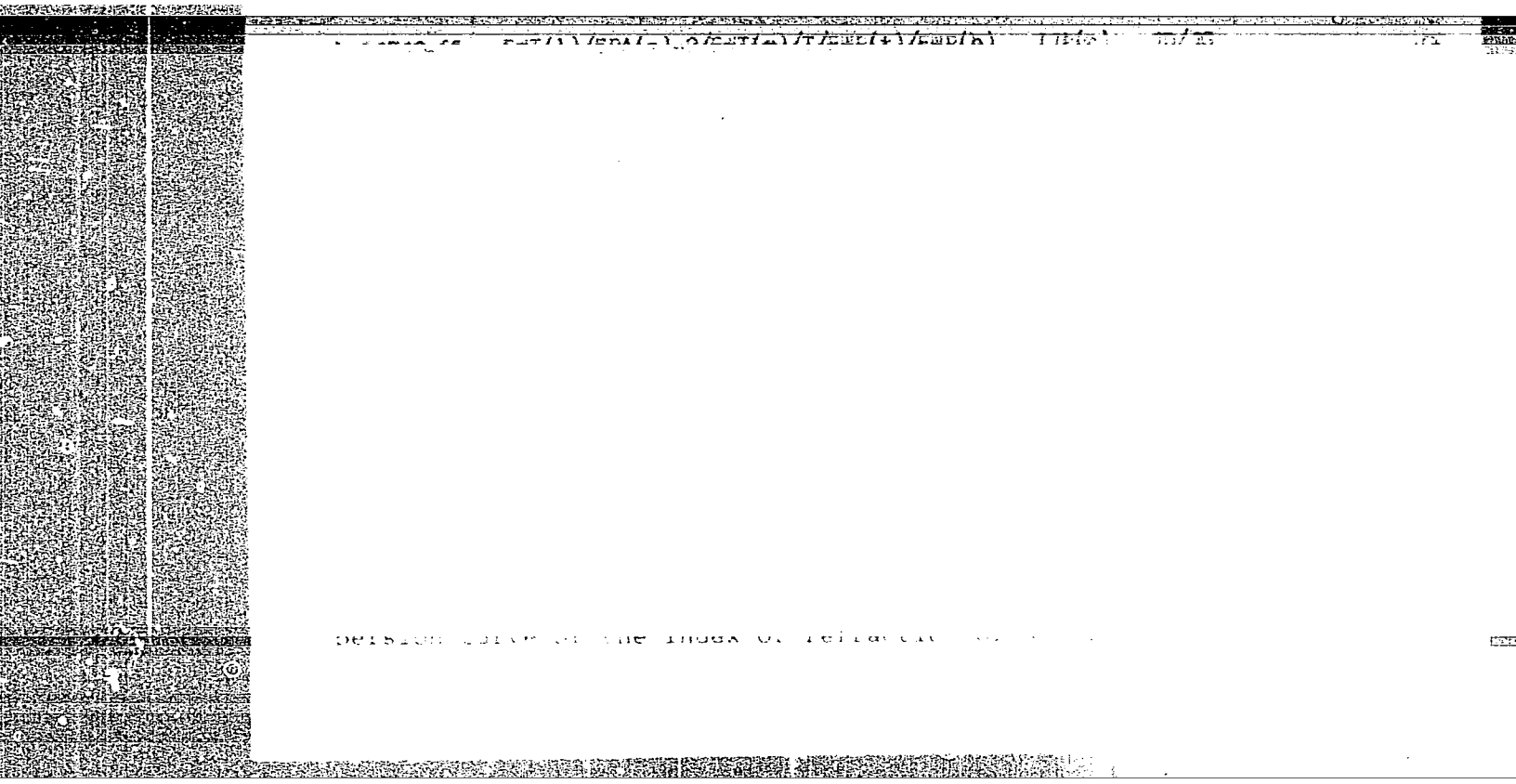
Card 1/2

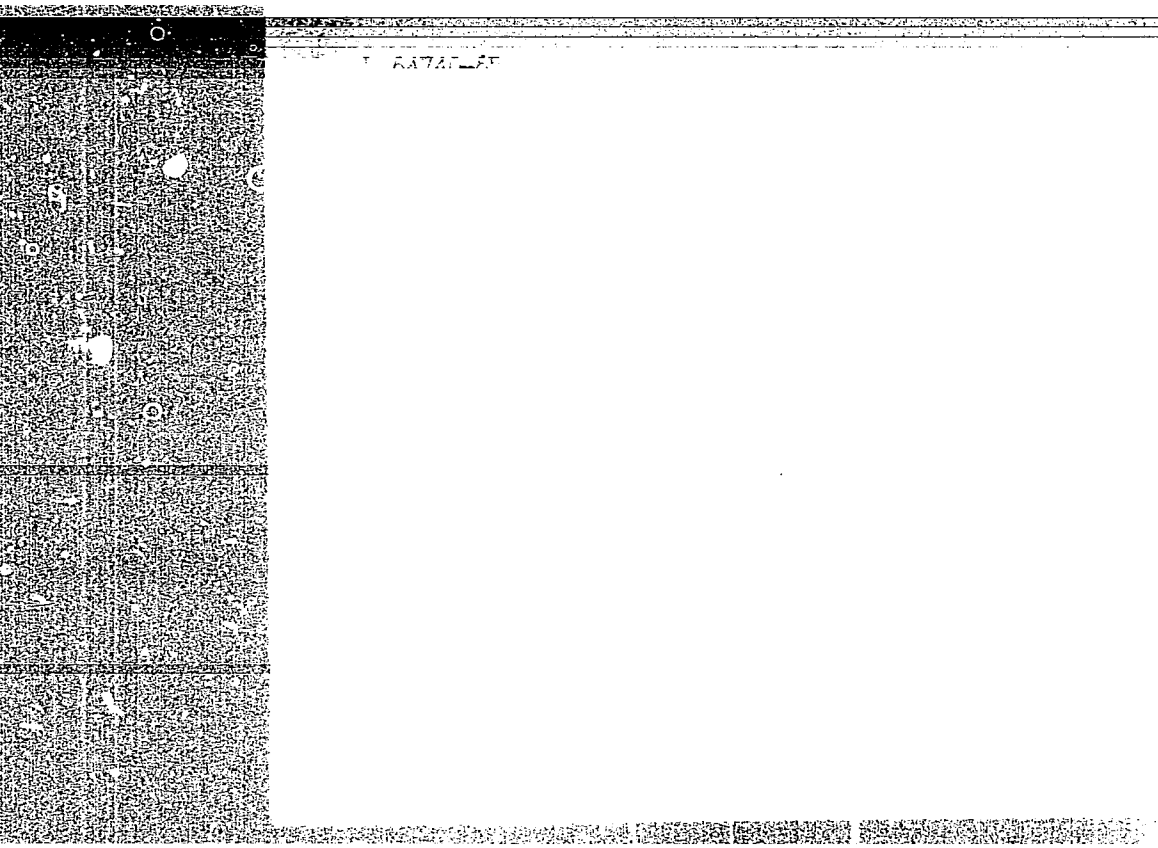
0532 1223

ACC NR: AP7011379

Two of the authors (Bilen'kiy and Lapidus) thank G. M. Osetinskiy for useful discussion of the questions considered here. Orig. art. has: 24 formulas. [Based on authors' Eng. Abst.] [JPRS: 40,393]

Card 2/2





L 05809-67 EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) JD/GG

ACC NR: AR6031882 SOURCE CODE: UR/0058/66/000/006/E085/E086

AUTHOR: Mykolaychuk, O. H.; Bilen'kyy, B. F.; Kohut, O. M.

TITLE: Electrical and optical properties of thin GaSb films

SOURCE: Ref. zh. Fizika, Abs. 6E665

REF SOURCE: Visnyk L'vivs'k. un-tu. Ser. fiz., no. 2, 1965, 77-79

TOPIC TAGS: semiconductor, gallium antimonide, semiconductor film, thin film

ABSTRACT: GaSb films were prepared by vapor deposition in a $\simeq 10^{-4}$ mm-Hg vacuum on glass substrates. Amorphous films were obtained on cold substrates. Structure ordering of the coatings and their crystallization occurred at temperatures of 340—348K. For films obtained at the substrate temperatures > 348K, the dependence of conductivity (σ) on temperature (T) is analogous to the σ—T dependence observed for massive specimens. The forbidden bandwidth (ΔE) found for the slope of the curve σ—$1/T$ is 0.60 ev. The activation energy for the impurity conductivity is 0.05 ev. The absorption spectrum of the film was investigated in both the optical and near IR regions. The optical width ΔE_0 = 0.69 ev was

Card 1/2

L 05809-67

ACC NR: AR6031882 O

determined from the basic absorption edge. Cooling of the specimen resulted in a displacement of the optical absorption edge toward the direction of longwave sector. For ΔE , the temperature coefficient (β) was found to be close to the value observed for massive GaSb specimens ($\beta = -4 \times 10^{-4}$ ev/degree). A. Zhdan. [Translation of abstract]

SUB CODE: 20/

Card 2/2 bth

L 33595-66 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AR6016203 SOURCE CODE: UR/0058/65/000/011/D035/D035

51
B

AUTHORS: Bilen'kyy, B. F.; Mosenko, A. Ye.

TITLE: Temperature dependence of optical activation energy of mercury sulfide

27 21

SOURCE: Ref. zh. Fizika, Abs. 11D272

REF SOURCE: Sb. Probl. rozvytku pryrodn. i tochn. nauk. L'viv, L'vivs'k. un-t, 1964, 46-48

TOPIC TAGS: mercury compound, sulfide, temperature dependence, activation energy, absorption edge, activated crystal

ABSTRACT: The authors investigated the temperature dependence of the main absorption edge of synthetic α-HgS crystals. At room temperature the main absorption edge is located near 590 nm, and shifts with increasing temperature to the long-wave region, i.e., the optic activation energy decreases. The average change of the optical activation energy with temperature in the interval 273 - 394K is found to be -8.1×10^{-4} ev/deg. [Translation of abstract]

SUB CODE: 20

Card 1/1 JT

L 44181-66 EWP(e)/EWT(m)/T/EWP(t)/ETI IJP(c) JD/WH

ACC NR: AP6023001 SOURCE CODE: UR/0185/66/011/004/0430/0434

AUTHOR: Bashuk, R. P.; Bilen'kyy, B. F. — Bilen'kiy, B. F.; Pashkovs'kyy, M. V. — Pashkovskiy, M. V.

ORG: L'vov State University im. I. Franko (L'vivs'kyy derzhuniversytet)

TITLE: Effect of paramagnetic Cr^{3+} and Fe^{3+} ions on the optical and mechanical properties of rutile single crystals

SOURCE: Ukrayins'kyy fizichnyy zhurnal, v. 11, no. 4, 1966, 430-434

TOPIC TAGS: paramagnetic ion, optic spectrum, absorption spectrum, Verneuil method, absorption edge, activated crystal, rutile single crystal, dichroism

ABSTRACT: The effect of Fe and Cr admixtures on the optical absorption spectrum and microhardness of rutile single crystals (TiO_2), grown by the Verneuil method, have been investigated. It was found that the fundamental absorption edge of the activated single crystal shifted to the long wavelength with concentration. The

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ACC NR: AP6023001

intensity of the absorption band in the region of 3μ , due to the OH group, increases with the concentration of the crystal admixture. The transparency of samples strongly decreases beyond a wavelength of 5μ . It is noted that dichroism appears in the region of the self-absorption edge. The dependence of microhardness on the content of Fe and Cr admixtures in rutile crystals was experimentally determined. It is shown that it is possible, in principle, to use this fact for evaluating the Fe and Cr admixture concentration in TiO_2 crystals. Orig. art. has: 6 figures. [Based on authors' abstract] [NT]

SUB CODE: 20/ SUBM DATE: 08Apr65/ ORIG REF: 001/ OTH REF: 022/

Card 2/2

BILENSKIY, V.

Observation of ferromagnetic domains with the help of dry magnetic powder [with summary in English]. Vestis Latv ak no.11:63-64 '61.

1. Akademiya nauk Latviyskoy SSR, Institut fiziki

S/197/62/000/003/002/002
B104/B102

24,7200

AUTHORS: Bilenskiy, V., Kashcheyev, V.

TITLE: The effect of domain boundaries on slow-neutron scattering in a uniaxial ferromagnetic

PERIODICAL: Akademiya nauk Latviyskoy SSR. Izvestiya, no. 3(176), 1962, 39-43

TEXT: In a uniaxial Co single crystal the thickness δ of the boundary layers between the domains increases faster with increasing temperature than the domain thickness d ($\delta \ll d$). The effect of domain boundaries on neutron scattering is considered. A thermal-neutron beam incident on a face of the single crystal which is parallel to the OYZ plane is considered. The Co single crystal is magnetized in the direction of the OZ axis. A formula of the intensity I_d of the nonpolarized neutron beam passing through a multi-domain sample is derived from the well-known formula of the intensity I of a neutron beam passing through a magnetized sample. Within the limits of applicability of the thermodynamic domain theory $\Delta = 1 - I_\delta/I$ is approximated. $\Delta > 0$. Δ characterizes the difference in

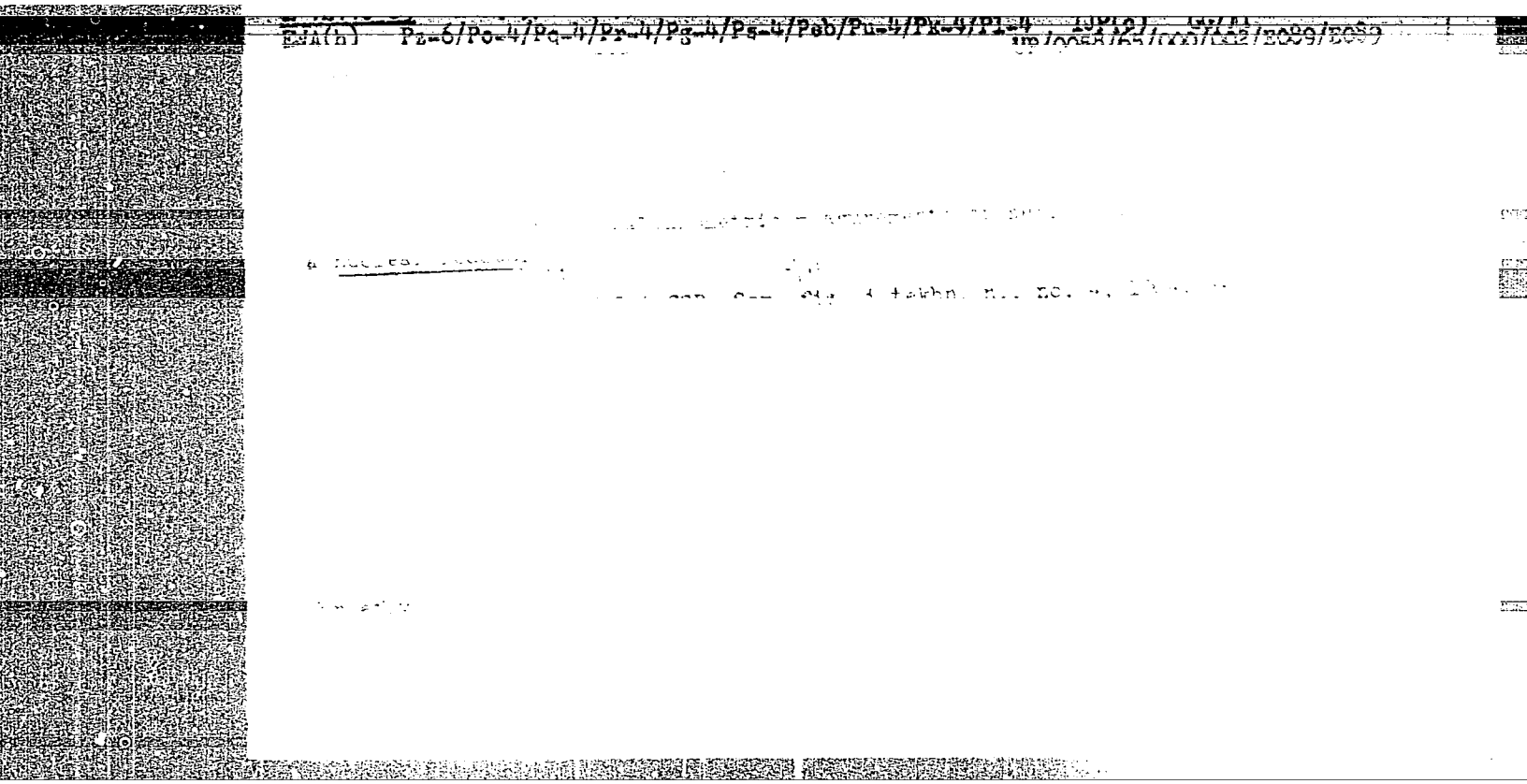
Card 1/2

Effect of domain boundaries ...

intensity between a beam having once passed through a single-domain crystal and one having passed through a multi-domain crystal. Δ increases with increasing angle of incidence. Bloch boundaries cause an additional weakening of the neutron beam. Magnetization raises the intensity. With $\delta \ll d$ the formulas of magnetic scattering of single-domain monocrystals may be used for a multi-domain monocrystal. Ye. M. Iolin is thanked for comments.

ASSOCIATION: Institut fiziki AN Latv, SSR (Institute of Physics AS Latviyskaya SSR)

SUBMITTED: June 6, 1961



L 1048-66 EWT(1) IJP(c)

ACCESSION NR: AR5014416 UR/0058/65/000/004/E122/E122

SOURCE: Ref. zh. Fizika, Abs. 4E899

AUTHOR: Bilenskiy, V. P. 44,55

TITLE: Interaction of the scattering fields of two uniaxial ferromagnets 21,44,55

CITED SOURCE: Izv. AN LatvSSR. Ser. fiz. i tekhn. n., no. 5, 1964, 13-18

TOPIC TAGS: ferromagnetic material, electromagnetic wave scattering, magnetic domain structure

TRANSLATION: The components of the magnetic scattering field above the transition layers of the domains are found by solving the magnetostatic problem. The author examines the interaction of two ferromagnetic samples using surfaces with the simplest domain structure. The results agree with experimental data (Germar, L. H., *Phys. Rev.*, 1942, 62, 295).

SUB CODE: EM ENCL: 00

Card 1/1

widths. The field in the film is shown to depend also on the nature of the film itself and on its permeability. The stray field produces in the film an additional electric resistivity, which depends on the orientation of the film relative to the ferromagnet. The stray field decreases with increasing ferromagnet temperature. The author thanks V. N. Kashcheyev for valuable remarks and I. M. Kirko and U. A. Uimanis for participating in a discussion of the work. Orig. art. has: 2 figures and 23 formulas and 1 table.

SUB CODE: 20/ SUBM DATE: 03Mar65/ ORIG REF: 006/ OTH REF: 011

SUKOVATYKH, L.S.; BILETOV, B.V.

Use of radioactive colloidal gold (Au^{198}) in the treatment of pseudomyxomas of the abdominal cavity. Sov.med. 28 no.4:33-36 Ap '65. (MIRA 18:6)

1. Endokhirurgicheskiy otdel (zav. - kand.med.nauk L.S. Sukovatykh) Nauchno-issledovatel'skogo instituta onkologii i meditsinskoy radiologii (dir. - prof. N.N.Aleksandrov) Ministerstva zdravookhraneniya BSSR, Minsk.

KOLESOV, I.M.; BILETKIN, N.F.

Conditions for automatic tightening of nuts and screws. Stan. i instr. 32 no.4:33-34 Ap '61. (MIRA 14:3)
(Screwsdrivers)

BILETOVA, N.V.

Using the precipitation reaction for the differentiation of Streptococcus lactis and Escherichia coli. Izv. vys. ucheb. zav.; pishch. tekh. no.2:42-46 '63. (MIRA 16:5)

1. Moskovskiy tekhnologicheskiy institut myasnoy i molochnoy promyshlennosti, kafedra mikrobiologii.
(ANTIGENS AND ANTIBODIES--ANALYSIS)
(STREPTOCOCCUS) (ESCHERICHIA COLI)

BELETSKAYA, Ye.K. [Bilets'ka, O.K.], kand.biol.nauk

Increasing the crops and improving the quality of potatoes by the use of mineral fertilizers in floodlands. Khim.prom.[Ukr] no.1:45-46 Ja-Mr '65. (MIRA 18:4)

GRIBANOV, S.A.; BILETSKAYA, L.D.

Effect of the temperature variation rate on crack formation in zinc during cyclic heat treatment. Izv. vys. ucheb. zav.; fiz. no. 3:167-168 '64.

Role of the grain size and the scale factor in the cracking of zinc during cyclic heat treatment. Ibid.:172-174

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete imeni Kuybysheva.

BILETSKAYA, M.V. [Bilets'ka, M.V.], kand. med. nauk

Congenital leukemia in children. Ped. Akush. i gin. 24 no.6: 18-21 '62. (MIRA 17:4)

1. Kafedra detskikh bolezney vrachebnogo fakul'teta (zaveduyushchiy - prof. V.P. Chernyuk) Odesskogo meditsinskogo instituta (rektor zasluzhennyy deyatel' nauki, prof. I.Ya. Deyneka [Deineka, I.IA.]).

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