29389
S/177/61/000/005/003/003
D264/D305

A case of marked barotrauma ...

symptoms of pneumo- and hemo-thorax and also subcutaneous emphysema of the neck and upper part of the thorax and spine, which developed under therapeutic decompression, were obviously due to lesions of individual sections of the visceral pleura. The author concludes that, in treating barotrauma of the lungs with marked symptoms of illness, the pressure in the decompression chamber should be raised to 8-10 atm., despite the fact that the symptoms may have disappeared at a lower pressure.

SUBMITTED: April 1960

Card 3/3

MASHKOV, I.P.

Calculation of depth doses in associated radiotherapy of cervical cancer; preliminary communication. Vop.onk. 1 no.2:81-87 '55 (MLRA 8:10)

1. Iz Kirgizskogo respublikanskogo onkologicheskogo dispansera (zav. I.P. Mashkov)

(CERVIX, UTERINE, neoplasms,
ther.,x-ray, calculation of deep dos.)
(RADIOTHERAPY, in various diseases,
cancer of cervix, calculation of deep dos.)

1483. **Cases of skin cancer treated at the Oncological Dispensary of the Kirghiz Republic (Russian text)** MASHKOV I. P. *Vopr. Onkol.* 1956, 2/5 (582–586)

A report is presented on the results of X-ray therapy of 156 patients with cancer of the skin grade I (non-ulcerated) or II (ulcerated). The most effective was contact radiation with a total dosage of 5,000 to 6,000 r. Cure was achieved in 84% of cases of grade I cancers and in 70.5% of grade II. The histological structure of the neoplasm had no bearing on the therapeutic effect. Electrosurgery was used on 100 patients, of whom only one had a recurrence. Electrosurgery gives the best results and is recommended in all cases of a recurrence following X-ray therapy.

MASHKOV, I.P. (Frunze)

Increasing body resistance to malignant tumors and antireticular cytotoxic serum. Vrach. delo no.5:19-22 My '61. (MIRA 14:9)

1. Kirgizskoy respublikanskiy onkologicheskiy dispanser (Nauchnyy rukovoditel' - prof. A.N.Kruglov).
(CANCER) (ANTIRETICULAR CYTOTOXIC SERUM)

MASHKOV, I.P.; MERZLYAKOVA, M.V.; PETROPAVLOVSKAYA, N.P.

First All-Russian Congress of Roentgenologists and the first All-Russian Conference on Fluorography. Sov. zdrav. Kir. no.3:59-62 My-Je '62. (MIRA 15:5)

(RADIOLOGY, MEDICAL—CONGRESSES)
(DIAGNOSIS, FLUOROSCOPIC—CONGRESSES)

MASHKOV, I.P.

Symposium on problems in the radiotherapy of nontumorous disease.
Sov.zdrav.Kir. no.4:61-63 Jl-Ag '62. (MIRA 15:8)
(RADIOTHERAPY--CONGRESSES)

MASHKOV, I.P. (Frunze)

Medicinal treatment of malignant tumors. Fel'd. i akush. 28 no.4:28-31 Ap'63. (MIRA 16:8)

1. Iz Ministerstva zdravookhraneniya Kirgizskoy SSR.
(CYTOTOXIC DRUGS)

ZAKHAROV, Ye.V.; MASHKOV, I.V.

Accurate calculation of the holding capacity of gas traps and pools. Geol. nefti i gaza 5 no.4:34-38 Ap '61. (MIRA 14:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologo-razvedochnyy neftyanoy institut.
(Gas, Natural—Geology)

BURSHTAR, M.S.; MASHKOV, I.V.; CHERNOBROV, B.S.

Formation of oil fields in Prikumsk District of eastern Ciscaucasia. Trudy VNIGNI no.34:136-163 '61. (MIRA 15:7)
(Prikumsk District—Petroleum geology)

BURSHTAR, M.S.; MASHKOV, I.V.; CHERNOBROV, B.S.

Conditions governing the formation of gas-condensate fields in the Yeisk-Berezan' region. Trudy VNIGNI no.34:179-192 '61. (MIRA 15:7)

(Krasnodar Territory--Condensate oil wells)

BURSHTAR, M.S.; MASHKOV, I.V.; KAMENETSKIY, A.Ye.

Conditions determining the formation of oil and gas pools in the Tarkhankut Peninsula. Geol. nefti i gaza 6 no.6:33-37 Je '62. (MIRA 15:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut.
(Tarkhankut Peninsula--Petroleum geology)
(Tarkhankut Peninsula--Gas, Natural--Geology)

BURSHTAR, Mikhail Samuilovich; MASHKOV, Igor' Vasil'yevich; TKHOSTOV, B.A., kand. geol.-miner. nauk, red.; YUNGANS, S.M., ved. red.; VORONOVA, V.V., tekhn. red.

[Conditions governing the formation and characteristics of the distribution of oil and gas pools as revealed by the study in Ciscaucasia and the Crimean steppes] Usloviia formirovaniia i zakonomernosti razmeshcheniia zalezhei nefti i gaza (na primere Predkavkaz'ia i stepnogo Kryma). Moskva, Gostoptekhizdat, 1963. 264 p. (MIRA 16:7)
(Caucasus, Northern--Petroleum geology)
(Caucasus, Northern--Gas, Natural--Geology)
(Crimea--Petroleum geology)
(Crimea--Gas, Natural--Geology)

MASHKOV, I.V.

Relation of the basic physiochemical properties of oils to the time of the formation of oil accumulations in Kuma Valley. Trudy VNIGNI no.38:84-88 '63. (MIRA 17:6)

MASHKOV, K.M.

Preventive inoculation for influenza. Zdravookhranenie 3 no.3: 54-55 My-Je '60. (MIRA 13:7)

1. Iz zheleznodorozhnoy bol'nitsy g. Kishineva (nachal'nik vrachebno-sanitarnoy sluzhby Moldavskoy zheleznoy dorogi A.P. Vishnevskiy).

(INFLUENZA)

MASHKOV, M.

Fitting a branch into an operating gas line. Zhil.-kom.khoz. 11 no.6:16, 18-19 Je '61. (MIRA 14:7)

1. Glavnyy inzhener Spetskontory po prisoyedineniyu tresta "Mosgas." (Moscow—Gas distribution)

NOVIKOV, N.V.; MASHKOV, M.P.

Compressed-air pusher for mine cars. Shakht.stroi. 4 no.2:23-24 F '60. (MIRA 13:5)

1. Trest Kadiyevshakhtostroy.
(Mine railroads--Cars)
(Pneumatic machinery)

MASHKOV P.

MASHKOV, P., tekhnik-normirovshchik (Lubny).

Using caproic fibres. Prom. koop. 12 no.2:21 F '58. (MIRA 11:1)
(Sieves) (Textile fibers, Synthetic)

MASHKOV, S.T.

Remote measurement of ocean wave periods. Trudy MGI 4:28-30 '54. (MLRA 8:6)

(Telemetering) (Waves)

KORNEVA, L.A.; MASHKOV, S.T.

Automatic device for recording the periods of sea waves and its testing. Trudy MOI 15:56-64 '59. (MIRA 12:6)
(Oceanographic instruments) (Waves)

BRYUZGINA, G.; GAYEVOY, Ye., kand.sel'skokhoz.nauk; DINARIYEVA, G.; RADKEVICH, D.; TRUDOLYUBOVA, Ye.; MASHKOV, V., kand.sel'skokhoz.nauk; PANYUKIN, I., kand.tekhn.nauk. [deceased]

New methods of preservation of fur and garment sheep pelts and mechanization of their processing. Mias.ind.SSSR 33 no.5:15-21 '62. (MIRA 15:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut myasnoy promyshlennosti (for Bryuzgina, Gayevoy, Dinariyeva, Radkevich, Trudolyubova). 2. Nauchno-issledovatel'skiy institut mekhovoy promyshlennosti (for Mashkov, Panyukin).
(Hides and skins) (Assembly-line methods)

ZHABIN, V.I., gornyy inzh.; MASHKOV, V.K., gornyy inzh.

Attending of two boring machines by a single worker. Gor.zhur. no.10:74-75 O '64. (MIRA 18:1)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut gorno-khimicheskogo syr'ya (for Zhabin). 2. Kombinat "Apatit" (for Mashkov).

SOV/124-58-8-8826

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 8, p 70 (USSR)

AUTHORS: Pereverzev, S.K., Mashkov, V.N.

TITLE: Water-lifting Equipment for Use in Pastures (Vodopod"yemniki dlya pastbishch)

PERIODICAL: Tr. Sredneaz. n.-i. in-ta irrigatsii, 1957, Nr 81, pp 57-65

ABSTRACT: Results are given of comparative tests made of four types of water-lifting equipment (horse-driven and operated by electric motor) installed on wells of different depths.

M.A. Peshkin

Card 1/1

MASHKOV, V. N.: Master Tech Sci (diss) -- "Investigation of belt water-hoists and some problems of their exploitation in the shaft wells in the deserts of Central Asia". Tashkent, 1958. 26 pp (Min Agric USSR, Tashkent Inst of Engineers of Irrigation and Mechanization of Agriculture TIIIMSKh), 150 copies (KL, No 3, 1959, 137)

MASHKOV, V.N.

Concerning certain features of the new models of conveyer water lifts. Vop. gidrotekh. no.15:32-38 '63. (MIRA 18:2)

CHUMAKOV, M.P.; L'VOV, D.K.; GOL'DFARB, L.G.; ZAKLINSKAYA, V.A.; GAGARINA, A.V.; MASHKOV, V.T.; YASIN, A.Ye.; RODIN, V.I.; VIL'NER, L.M.

Effect of the length of intervals between inoculations on the efficacy of vaccination and revaccination against tick-borne encephalitis. Vop. virus. 10 no.3:266-270 My-Je '65.
(MIRA 18:7)

1. Institut poliomiyelita i virusnykh entsefalitov AMN SSSR, Moskva, i Kemerovskaya oblastnaya sanitarno-epidemiologicheskaya stantsiya.

MASHKOV, V.V.

Increasing the productivity of automatic winding machines by separate speed changes on the machine. Tekst.prom. 14 no.9: 54 S '54. (MLRA 7:11)

1. Nachal'nik BMO Glukhovskogo khlopchatobumazhnogo kombinata im. Lenina.
(Reels (Textile machinery))

Meshkov V. V.

3-58-2-2/33

AUTHORS: Golubtsova, A.A., Doctor of Technical Sciences and Meshkov, V.V., Professor, Doctor of Technical Sciences

TITLE: The Textbook and the Student's Independent Work (Uchebnik i samostoyatel'naya rabota studenta)

PERIODICAL: Vestnik Vysshey Shkoly, 1958, # 2, pp 8-13 (USSR)

ABSTRACT: The supplying of the higher schools with approved textbooks and training aids is far from perfect, either in quantity or quality. The issue of 350 textbooks and training aids per year does not satisfy demands, and a great number of approved textbooks and training aids, especially those on new scientific fields (automation, telemechanics, electronics, nuclear power, etc), have yet to be printed. The problems of coordinating the student independent work to give them full access to instructional literature is being studied.

Textbooks and training aids are divided into four groups: a) general theoretical subjects, taught in the first and second course (mathematics, physics, chemistry, descriptive geometry, theoretical mechanics, etc); b) general subjects, defining the scientific principles of the speciality (principles of electric engineering, thermal engineering, radio-

Card 1/4

technics, hydraulics, etc); c) general engineering subjects for non-specialists (e.g. electrical measurements, electrical machines, electrotechnical materials, elements of automatics and telemechanics, etc), i.e. for all student-electricians who do not specialize in these subjects; d) special basic subjects, which outline the trend and content of the student's speciality (area of concentration).

The textbook on general subjects, unlike the textbooks for the general theoretical courses, need not necessarily comply with the program. Textbooks on general engineering subjects should have a technical content, being encyclopedical in exposition. The content is defined by the engineering methods of computation, processes of operation, general principles and peculiarities of the constructional solutions of devices, apparatuses and machines. The content of the training aids on special basic subjects should be more esoteric than the content of a lecturing course. In the training aids on special basic subjects not only the established, commonly accepted technical solutions and methods should be presented, but also the unsolved questions and problems of the national economy must be taken up, and ways and means of solu-

 tion indicated. The exposition of material on special basic

subjects in the training aids should be connected with new technique, advanced practice, production and exploitation in the respective branch of national economy, and foreign experience. For the first 3 groups of subjects, the textbook must contain a systematic exposition of knowledge obligatory for every student, and the usual material. The situation is different with the educational literature for the special basic subjects. Instead of textbooks there should exist training aids containing not only the curriculum material but also material in excess of the program, reflecting the latest achievements in science and technique and the prospects of their development.

The textbooks compiled for vuz's should be founded on the methodical experience of the staff of the leading chairs. It is, therefore, expedient to entrust the compilation of textbooks to these staffs. Collectives are best for compiling textbooks on general theoretical and general subjects while it is more expedient to let only one author work on training aids for the special basic subjects.

To ensure a high quality of textbooks on all subjects, the competition method of compiling new textbooks should be practised more extensively, principally on general theoretical

The Textbook and the Student's Independent Work 3-58-2-2/33

subjects.

ASSOCIATION: Moskovskiy energeticheskiy institut (The Moscow Power Engineering Institute)

AVAILABLE: Library of Congress

Card 4/4

MASHKOV, V. Ye.

Automatic proportioning device for liquids. Biul. tekh.-ekon. inform. Gos. nauch.-issl.nauch. i tekh. inform. 17 no.9:19-20 S '64 (MIRA 18:1)

CHEPELEV, I., podpolkovnik tekhn. sluzhby; MASHKOV, Yu., inzh.-mayor.

Cleaning the caterpillar track. Tankist no.1:55-56 Ja '58.
(Tanks (Military science)--Maintenance and repair) (MIRA 11:3)

MASHKOV, Yu.

Did the council of producer's cooperatives act correctly?
Prom. koop. 13 no.4:29 Ap '59. (MIRA 12:6)

1. Chlen arteli "Oktyabr'", g. Prikumsk, Stavropol'skogo kraya.
(Prikumsk--Cooperative societies)

CHUKHLANTSEV, V.G.; MASHKOV, Yu.B.

Interaction of zircon with caustic alkalies under hydrothermal conditions. Zhur. neorg. khim. 9 no.6:1492-1493 Je'63 (MIRA 17:8)

1. Ural'skiy politekhnicheskoy institut imeni Kirova.

FILIPPOV, S.N. [deceased]; BEDA, N.I.; KRASOVSKIY, L.V.; KYSHKOV, P.Ya.; MASHKOVA, A.K.

Rails made of basic converter steel (with upper oxygen blast). Mul. TSNIIOMM no.22:51-52 '57. (MIRA 11:5)
(Railroads—Rails)

HEDA, M.I., inzh.; RYZHKOV, P.Ya., inzh.; GORYUCHKO, I.G., inzh.; MASHKOVA, A.K., inzh.; Prinimali uchastiye: LIFSHITS, S.I.; KOTOV, N.K.; KOSHCHEYEV, A.D.; CHUVICHKINA, N.K.; KOLPOVSKIY, N.M.; GOLOVKO, O.F.; LUDENSKIY, A.M.; SERBIN, I.V.; IVANOV, I.T.; ALEKSEYEVA, N.V.; MENDEL'SON, N.Ya.

Quality of pipe billets and pipes made of killed converter steel. Stal' 21 no.9:824-825 S '61. (MIRA 14:9)

1. Metallurgicheskiy zavod im. Petrovskogo i Truboprokatnyy zavod im. Lenina.

(Pipe, Steel)

1. MASHKOVA,A.S.
2. USSR (600)
7. "Concerning the Problem of Identification of the Intestinal Bacilli in Beer", Gigiyena i Sanitariya, No 8, 1951, pp 53-54.

9. Mikrobiologiya, Vol XXI, Issue 1, Moscow, Jan-Feb 1952, pp 121-132. Unclassified.

ACC NR: AP7003897 SOURCE CODE: GE/0030/67/019/001/0407/0415

AUTHOR: Evdokimov, I. N.; Mashkova, E. S.; Molchanov, V. A.; Odintsov, D. D.

ORG: Scientific Institute of Nuclear Physics, Moscow State University

TITLE: Dependence of the ion-electron emission coefficient on the angle of incidence

SOURCE: Physica status solidi, v. 19, no. 1, 1967, 407-415

TOPIC TAGS: ion emission, electron emission, ion electron emission, incidence angle

ABSTRACT: A study was made of the dependence of the coefficient of ion-electron emission on the angle of incidence of a graphite target and polycrystalline metal (Cu, Ag, Mo. Zr, W, Bi) targets, bombarded with inert gas and nitrogen ions at 25--30 kev. The application of a magnetic field parallel to the axis of rotation shows that both the positive and negative ion currents to the collector are negligibly small. The emission coefficient increases with an increase in the angle of incidence

Card 1/2

ACC NR: AP7003897

up to about 80 to 85°. Up to a certain angle (between 36 to 81°, depending on the ion-target combination) the angular dependence may be approximated by a reciprocal cosine law; for larger angles the variation is somewhat slower. Comparisons are made with calculations based on the transparency model. Orig. art. has: 4 figures and 1 table. [Authors' abstract]

[DW]

SUB CODE: 20/SUBM DATE: 01Aug67/ORIG REF: 001/OTH REF: 011/

Card 2/2

MASHKOVA, G B

MASHKOVA, G.B.

Structure of Mediterranean cyclones traversing the Black Sea. Trudy MOI 15:146-166 '59. (MIRA 12:6)
(Black Sea--Cyclones)

MASHKOVA, G.B.

Foehns of Batumi. Trudy MGI 16:74-88 '59. (MIRA 13:5)

(Batumi region--Foehn)

ACCESSION NR: AT4010218 S/3056/63/000/000/0003/0013

AUTHOR: Aleksandrova, A. K.; By*zova, N. L.; Mashkova, G. B.

TITLE: Experiments on the dissemination of precipitating contaminants from a point source in the lower atmosphere

SOURCE: Issledovaniye nizhnego 300-metrovogo sloya atmosfery*. Moscow, 1963, 3-13

TOPIC TAGS: meteorology, air pollution, precipitating contaminant, point source contamination, lower atmosphere, turbulent diffusion

ABSTRACT: In calculating the diffusion of either precipitating or weightless contaminants in the boundary layer of the atmosphere, a phenomenon which depends both on the properties of the contaminant particles and on the turbulence of the air, the maximum concentration of contaminants and the distance of this point from the source are of considerable interest. The authors therefore present the results of 53 experiments and derive formulas for these parameters on the basis of 2 systems of calculation, assuming either that the coefficient of vertical turbulent diffusion increases linearly with height, or that it is independent of height. For this purpose, 4 types of atmospheric stratification were distinguished (indifferent stratification and 3 degrees of instability), and inversions were not considered. As shown by graphs relating the height of the source to the dis-

Card 1/2

ACCESSION NR: AT4010218

tance between it and the point of maximum contaminant precipitation, as well as the relationships between atmospheric turbulence and the maximum contaminant concentration or length of the contaminated zone, the distance from the source to the area of maximum contaminant density, corrected for the effect of gravity, was proportional to the height of the source within each type of stratification and within the altitude range of 25-300 meters (error of ± 25%). The parameters of horizontal diffusion were determined by the type of stratification, while the position and magnitude of the maximum contaminant density and the length of the contaminated zone were determined by the ratio between the gravitational forces and the turbulence. At relatively high turbulence, the first type of calculation yielded better results for the maximum contaminant density, but the second type of calculation was preferable for determining the length of the contaminated zone; at relatively low turbulence, the method of calculation was immaterial. Orig. art. has: 3 tables, 5 figures and 12 formulas.

Card 2/2

ACCESSION NR: AT4010219 S/3056/63/000/000/0014/0025

AUTHOR: Volkovitskaya, Z. I.; Mashkova, G. B.

TITLE: Wind profile and the characteristics of the turbulent regime in the lower 300-meter layer of the atmosphere

SOURCE: Issledovaniye nizhnego 300-metrovogo sloya atmosfery*. Moscow, 1963, 14-25

TOPIC TAGS: meteorology, wind, wind profile, atmospheric turbulence, lower atmosphere, temperature profile

ABSTRACT: After reviewing the various techniques for calculating the wind profile in the lower levels of the atmosphere, with special reference to the methods of Obukhov-Monin and Monin-Kazanskiy, the authors apply these calculations to data on wind velocity and temperature obtained at 13 levels of a 300-meter meteorological tower between August and September of 1961. Particular attention is devoted to the profiles of wind and temperature in the layer nearest the ground, calculated by means of:

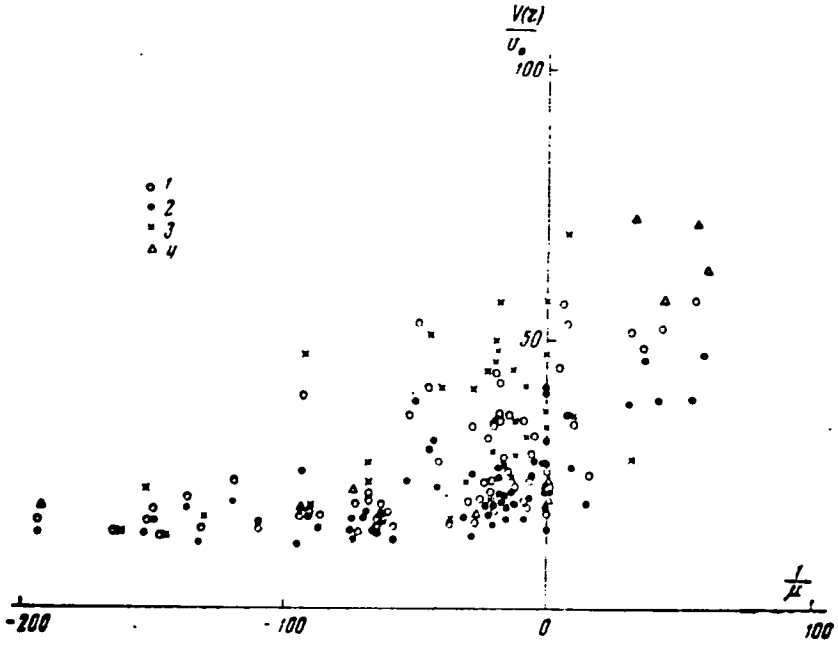
$$\frac{\varkappa u(z)}{v_*} = F_1\left(\frac{z}{L_1}, \mu\right) - F_1\left(\frac{z_0}{L_1}, \mu\right)$$

$$\frac{\varkappa v(z)}{v_*} = F_2\left(\frac{z}{L_1}, \mu\right) - F_2\left(\frac{z_0}{L_1}, \mu\right)$$

Card 1/4

ACCESSION NR: AT4010219

ENCLOSURE: 01



Card 3/4

ACCESSION NR: AT4010219

ENCLOSURE: 02

Citation to Fig. 1.

Fig. 1. Relationship between wind profile, altitude and μ (the relative heights of the dynamic sublayer and dynamic layer).
1 - 96.8 m; 2 - 193.0 m; 3 - 241.1 m; 4 - 289.2 m

Card 4/4

ACCESSION NR: AT4010222 S/3056/63/000/000/0041/0044

AUTHOR: Mashkova, G. B.

TITLE: Characteristics of atmospheric stratification during inversions

SOURCE: Issledovaniye nizhnego 300-metrovogo sloya atmosfery*. Moscow, 1963, 41-44

TOPIC TAGS: meteorology, air pollution, atmospheric stratification, inversion, contaminant diffusion

ABSTRACT: In previous work, the diffusion of contaminant particles has been found to depend on the parameter $(\Delta t/\Delta v)100$, where Δt is the difference in air temperature between 2 and 100 m and Δv is the difference in wind velocity between 100 and 9 m; however, this relationship is invalid for a stable atmospheric stratification (inversion). The author therefore analyzed the results of observations from a high meteorological tower in July 1961 to clarify the relationship between Δt (the difference in temperature between the upper and lower boundaries of the inversion) and ΔH (the difference in height between these boundaries), and the dependence of both of these parameters on A (the diurnal temperature amplitude at an altitude of 2 m). Empirically,

$$\Delta t = 0{,}5\ A \quad \text{and}$$

Card 1/3

- 6 (2/206) -

ACCESSION NR: AT4010222

$\Delta H = 0{,}25\ A$.

The relationship between $(\Delta t/\Delta v)100$ and ΔH is shown in Fig. 1 of the Enclosure. Graphs are also presented showing the diurnal changes in this parameter and in the wind and temperature profiles at varying altitudes. Owing to insufficient data, the author was unable to determine the characteristic changes in wind direction with height. He points out, however, that accurate information as to the height and temperature of the boundaries of an inversion is essential. Orig. art. has: 3 figures and 2 formulas.

Card 2/3

L 2667-66 EWT(1)/EWT(m)/EPF(c)/FCC/EWP(j)/EWA(h)

ACCESSION NR: AT5023958 UR/0000/65/000/000/0392/0402

AUTHOR: [illegible]; [illegible]; Osipov, Yu. S.

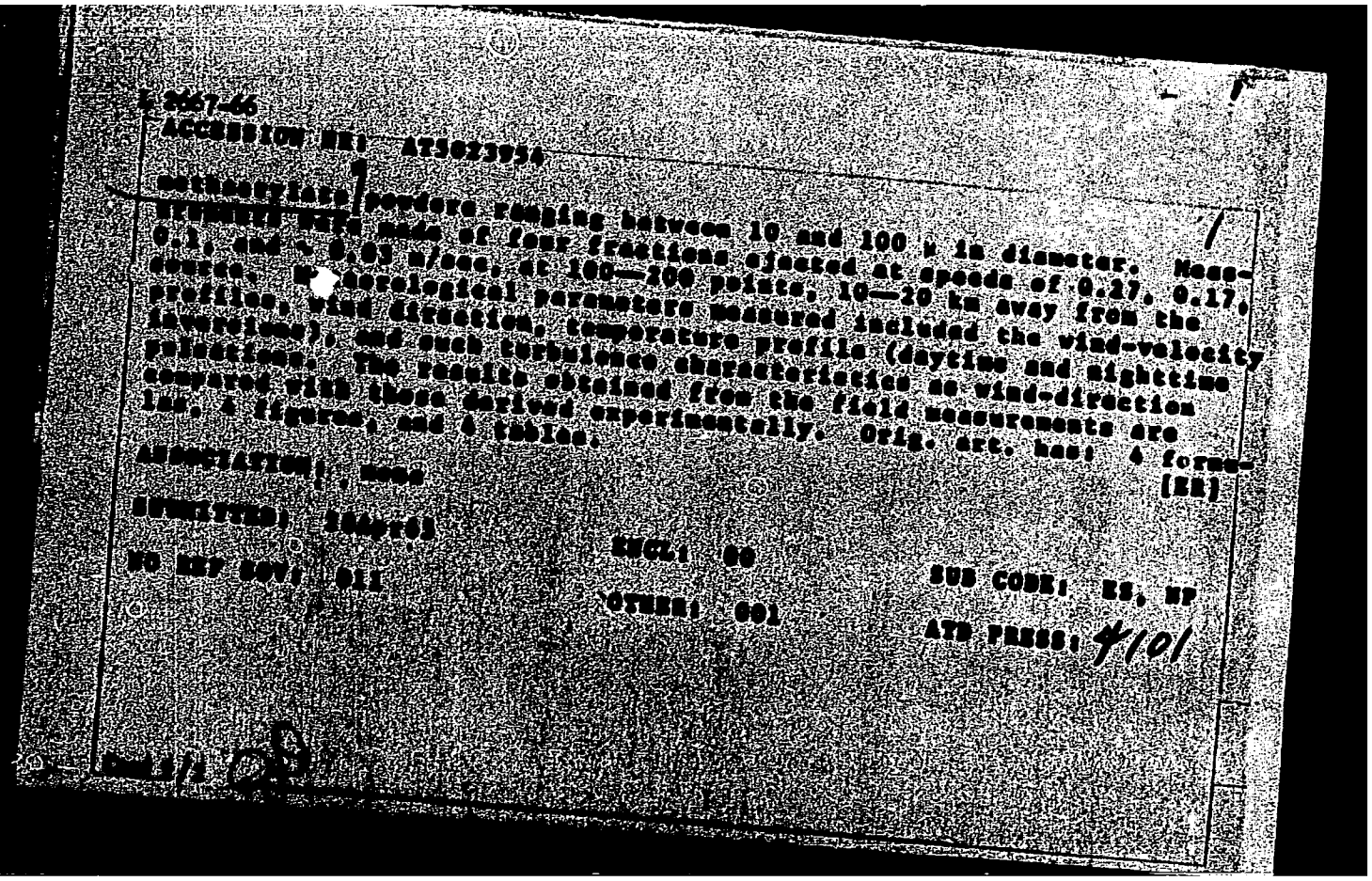
TITLE: Results of model experiments on the distribution of pollutants emitting into the lower layers of the atmosphere under various meteorological conditions

SOURCE: Vsesoyuznaya konferentsiya po yadernoy meteorologii. Obninsk, 1964. Radioaktivnyye izotopy v atmosfere i ikh ispol'zovaniye v meteorologii (Radioactive isotopes in the atmosphere and their use in meteorology); doklady konferentsii. Moscow, Atomizdat, 1965, 392-402

TOPIC TAGS: micrometeorology, meteorological tower, aerosol fallout, air pollution, atmospheric boundary layer, atmospheric surface boundary layer

ABSTRACT: This paper describes and summarizes the results of a series of theoretical model and field experiments carried out between 1959 and 1963 on the 300-m meteorological tower of the Institute of Applied Geophysics in Obninsk to study the dispersion of effluents from various heights. The aerosols were spherical particles of poly(methyl)-

Card 1/3



L 2667-66
ACCESSION NR: AT5023954

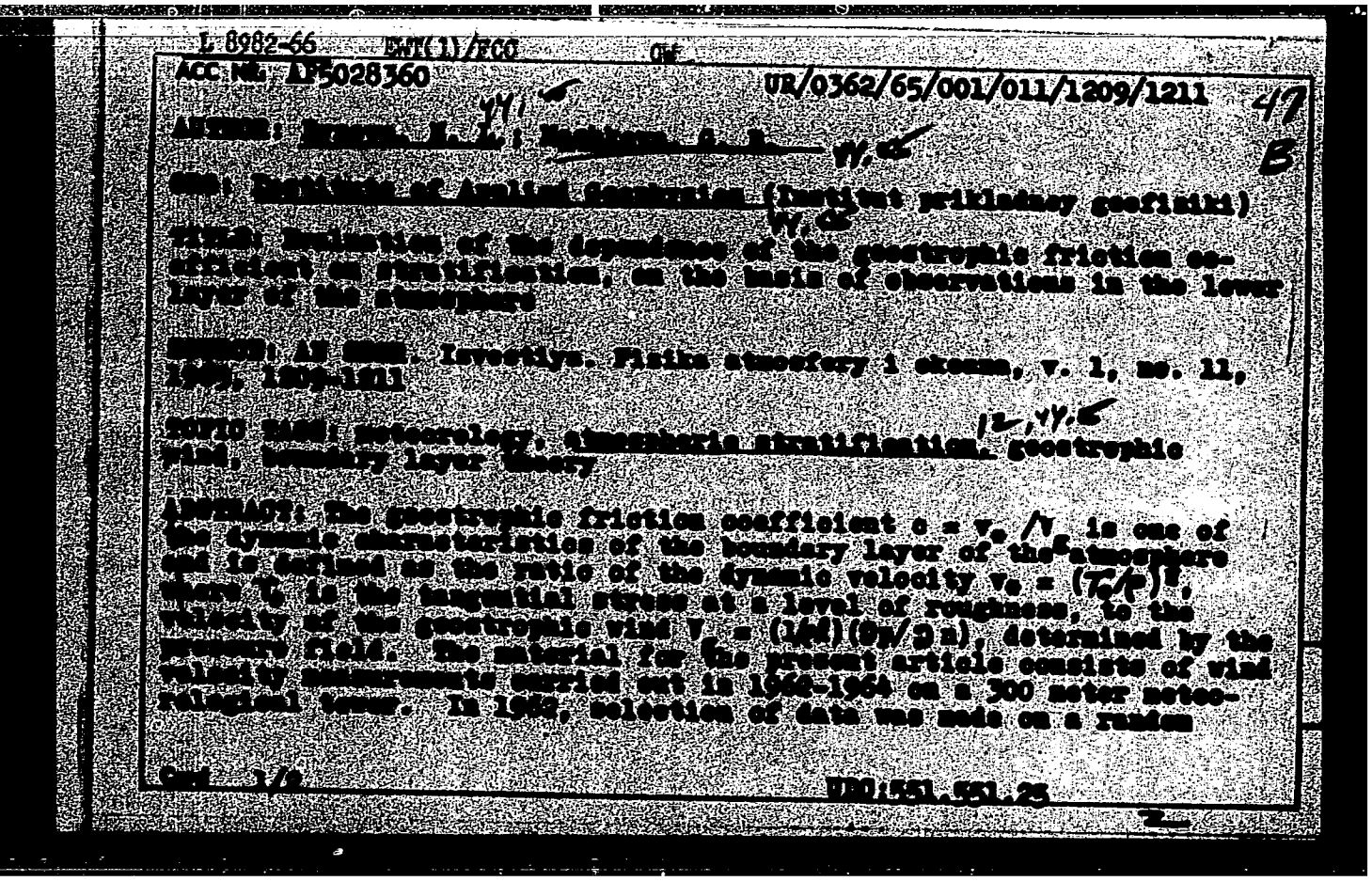
ABSTRACT: Aerodrome readings between 10 and 100 μ in diameter. Measurements were made of four fractions ejected at speeds of 0.27, 0.17, 0.1, and ~ 0.03 m/sec, at 100—200 points, 10—20 km away from the source. Aerological parameters measured included the wind-velocity profile, wind direction, temperature profile (daytime and nighttime inversions), and such turbulence characteristics as wind-direction pulsations. The results obtained from the field measurements are compared with those derived experimentally. Orig. art. has: 4 formulas, 4 figures, and 4 tables. [KK]

ASSOCIATION: none

SUBMITTED: 24Apr65 ENCL: 00 SUB CODE: ES, AP

NO REF SOV: 011 OTHER: 001 ATD PRESS: 4101

Card 1/1



L 8982-66 EWT(1)/FCC GW

ACC NR: AP5028360 UR/0362/65/001/011/1209/1211

AUTHOR: [illegible]

ORG: Institute of Applied Geophysics (Institut prikladnoy geofiziki)

TITLE: Evaluation of the dependence of the geostrophic friction coefficient on stratification, on the basis of observations in the lower layer of the atmosphere

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 1, no. 11, 1965, 1209-1211

TOPIC TAGS: meteorology, atmospheric stratification, geostrophic wind, boundary layer theory

ABSTRACT: The geostrophic friction coefficient $c = v_* / V$ is one of the dynamic characteristics of the boundary layer of the atmosphere and is defined as the ratio of the dynamic velocity $v_* = (\tau/\rho)^{1/2}$, where τ is the tangential stress at a level of roughness, to the velocity of the geostrophic wind $V = (1/\rho f)(\partial p/\partial n)$, determined by the pressure field. The material for the present article consists of wind velocity measurements carried out in 1956-1964 on a 300 meter meteorological tower. In 1962, selection of data was made on a random

Card 1/2 UDC 551.551.23

L 8982-66
ACC NR: AP5028360 C

basis in the course of the spring-autumn season, without previous calculation of the profile from the point of view of a steady state of the boundary layer. In all, 250 profiles were used, obtained at various times of day. In 1963 and 1964, the data were obtained in the course of 31 nights and 9 days. Data obtained in the morning hours after sunrise and up to complete destruction of the night inversion, as well as in periods following precipitation, were excluded from consideration. The calculated dependence of the geostrophic friction coefficient on the stratification parameter is presented in the figure: one for a steady state of the lower layer of the atmosphere, and one for an unsteady state. Orig. art. has: 2 figures and 1 table.

SUB CODE: ES/ SUBM DATE: 29Mar65/ ORIG REF: 002/ OTH REF: 001

L 2419-66 EWT(1)/FCC GW

ACC NR: AT6012590 SOURCE CODE: UR/3201/65/000/002/0035/0043

30

AUTHOR: Byzova, L. K.; Naumkova, O. B.

B+1

ORG: Institute of Applied Geophysics (Institut prikladnoy geofiziki)

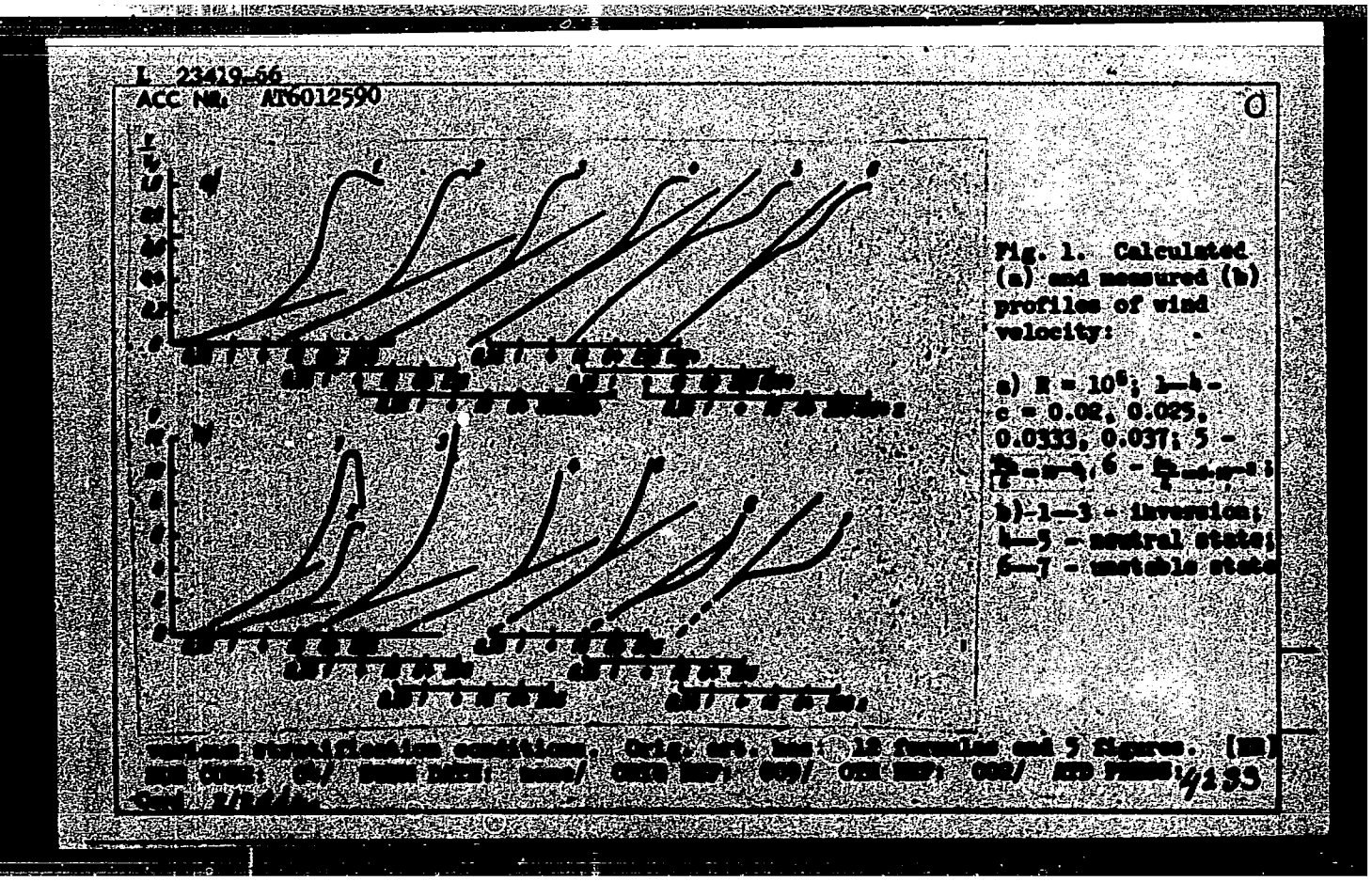
TITLE: Wind-velocity profiles in the atmospheric boundary layer

SOURCE: Leningrad. Institut prikladnoy geofiziki. Trudy, no. 2, 1965. Pogranichnyy sloy atmosfery (Boundary layer of the atmosphere), 35-43

TOPIC TAGS: micrometeorology, meteorological tower, atmospheric boundary layer, wind profile, atmospheric turbulence

ABSTRACT: Results derived by numerically calculating 350 wind-velocity profiles using the Yudin-Blinova method are compared with profiles measured at the 300-m meteorological tower's test area (1962-1964). Sample semilogarithmic wind-velocity profiles obtained by the two methods are presented in graphic form (see Fig. 1). An evaluation is made of the dependence of the geostrophic friction coefficient on

Card 1/2 UDC: 551.506+508+508.24508.5+510



L 23421-66 EWT(1)/FCC GW

ACC NR: AT6012591 SOURCE CODE: UR/3201/65/000/002/0044/0056

AUTHOR: Mukhikova, G. B.

ORG: Institute of Applied Geophysics (Institut prikladnoy geofiziki)

TITLE: Air temperature and wind profiles in the lower part of the atmospheric boundary layer

SOURCE: Leningrad. Institut prikladnoy geofiziki. Trudy, no. 2, 1965. Pogranichnyy sloy atmosfery (Boundary layer of the atmosphere), 44-56

TOPIC TAGS: micrometeorology, meteorological tower, surface boundary layer, wind profile, temperature profile, lapse rate, atmospheric turbulence

ABSTRACT: Observations made at the 300-m tower (1962) of wind speed and direction and of air temperature, and data from surface boundary-layer gradient observations made in the experimental area near the tower, were used as the basic data for a study of wind and air-temperature profiles as functions of surface boundary-layer stability criteria. The dimensionless parameter $B = \frac{gH}{T_0}\frac{\Delta T}{v^2}$ was used as the stability criterion (T_0 = mean temperature of the surface boundary layer, $T = T(2h) - T(h)$ = temperature difference between the heights of h and 1 m, v = wind speed at height of $H = 2$m. During the observation period $\frac{gH}{T_0} = 0.07$. Three groups of stability were used: $B = 0$, $B < 0$, and $B > 0$. Results are presented in graphs and tables. Orig. art. has: 5 figures, 1 formula, and 3 tables. [ER]

SUB CODE: 04/ SUBM DATE: none/ ORIG REF: 007/ OTH REF: 001/ ATD PRESS: 4210

Card 1/1

L 37700-66 EWT(1)/FCC GW

ACC NR: AP6024423 SOURCE CODE: UR/0362/66/002/007/0681/0687

34

B

AUTHOR: Byzova, N. L.; Mashkova, G. B.

ORG: Institute of Applied Geophysics (Institut prikladnoy geofiziki)

TITLE: Dimensionless characteristics of the wind-velocity profile from measurements in the lower 300-m layer of the atmosphere

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 2, no. 7, 1966, 681-687

TOPIC TAGS: micrometeorology, [redacted], wind velocity [redacted], meteorological tower, [redacted] surface boundary layer, [redacted], geostrophic drag, atmospheric turbulence, atmospheric stratification

ABSTRACT: Extensive wind velocity data obtained in 1962 and 1963 from 13 levels of the 300-m meteorological tower of the Institute of Applied Geophysics [Obninsk] and from 5 levels of the surface boundary-layer gradient tower have been used to obtain dimensionless wind profiles in the lower 300 m of the atmosphere for the stratification parameters B and μ. Here

$$B = (gH / T_0) \cdot (\Delta\theta / v^2),$$

where $\Delta\theta$ is the temperature difference at the 1- and 4-m levels, v is the wind speed at the 2-m level, g is the gravity acceleration, and T_0 is the mean absolute temperature);

$$\mu = lv_*^2 / [\varkappa^2 g / T_0(-q / c_p\rho)],$$

UDC: 551.554

Card 1/2

L 37700-66

ACC NR: AP6024423

where $q/c_p\rho$ is the vertical turbulent-heat flux divided by the specific heat of the air at constant pressure and density. The scale $L_1 = xv_*/\ell$ was used to normalize the vertical coordinates (v_* is the drag velocity, ℓ is the Coriolis parameter, and x is the Karman constant). The values v_* and B were calculated for each profile, and the profiles were grouped by the proximate values of both parameters; the averaged profiles were normalized using the mean value of v_* for the group. Subsequently, the normalized profiles were again grouped but only for the stratification parameters B or μ (total of 20 B groups and 16 μ groups). Results indicated that under stable conditions the dimensionless profiles were greatly dependent on the stability parameter but showed no dependence on this parameter under unstable conditions. Investigations made to determine the dependence of the geostrophic drag coefficient on stratification were compared with the theoretical conclusions of O'Neil. Changes in the profiles with changes in stratification were found to be essentially identical, but there were quantitative differences (greater spread in v/v_* values and in maximum speeds). Orig. art. has: 3 figures and 2 tables. [ER]

SUB CODE: 04/ SUBM DATE: 25Jan65/ ORIG REF: 007/ OTH REF: 004/ ATD PRESS: 5041

Card 2/2

SOV/12-91-2-16/21

3(5)

AUTHOR: Mashkova G.V.

TITLE: M.I. Davydova, A.I. Kamenskiy, G.K. Tushinskiy; Physical Geography of the USSR. Exercises; Uchpedgiz; Moscow 1956; 164 pp and maps.

PERIODICAL: Izvestiya Vsesoyuznogo geograficheskogo obshchestva, 1959, Nr 2, pp 188 - 189 (USSR)

ABSTRACT: The author reviews the above named handbook.

Card 1/1

MASHKOVA, L.K.; LIBERMAN, R.Yu. LIK, O.I.

Characteristics of the spreading of influenza among a group of children. Zhur. mikrobiol. epid. i immun. no.10:98 O '54. (MLRA 8:1)

1. Iz Dnepropetrovskogo instituta epidemiologii, mikrobiologii i gigiyeny i Detskoy klinicheskoy bol'nitsy Oktyabr'skogo rayona
(CHILDREN—DISEASES) (INFLUENZA)

MASHKOVA, L. K., Cand of Med Sci — (diss) "Certain Properties of Actinomycin, Obtained from a New Producer," Dnepropetrovsk, 1959, 15 pp (Dnepropetrovsk State Medical Institute) (KL, 2-60, 117)

MASHKOVA, L.P.; PLETYUSHKINA, A.I.; KHOMCHENKO, G.P.

Effect of temperature on the adsorption capacity of platinum with respect to hydrogen in various electrolytes. Vest. Mosk. un. Ser. 2:Khim. 20 no. 5:53-54 S-O '65. (MIRA 18:12)

1. Kafedra obshchey khimii Moskovskogo gosudarstvennogo universiteta. Submitted March 27, 1965.

MASHKOVA, M

OBSHCHIYE BIBLIOGRAFII RUSSKIKH PERIODICHESKIKH IZDANIY 1703-1954.
I MATERIALY PO STATISTIKE RUSSKOY PERIODICHESKOY PECHATI (GENERAL
BIBLIOGRAPHIES OF RUSSIAN PERIODICALS PRINTED 1703-1954, AND STATI-
STICAL MATERIALS OF RUSSIAN PRESS. BY) M.V. MASHKOVA I T.V. SOKUROVA.
LENINGRAD, 1956. 130 P. TABLES. (BIBLIOGRAFIYA RUSSKOY BIBLIOGRAFII)
AT HEAD OF TITLE: LENINGRAD. PUBLICHNAYA BIBLIOTEKA.

927.916 N/5
916 N/5
927.927 N/5
747 N/5

MASHKOVA, N.A., [illegible]; KAZANTSEV, N.F., [illegible] tekhn. nauk

Diffusion bonding of P 8 high-speed steel. Svar. proizv. 12:22-23 D '63. (MIRA 18:9)

1. Nauchno-issledovatel'skaya laboratoriya diffuzionnoy svarki v vakuume Soveta narodnogo khozyaystva Moskovskogo gorodskogo ekonomicheskogo rayona.

MASHKOVA, O. P.

"Losses of water-soluble vitamins B_2 and PP in connection with sweating of workers in hot shops of the bread-making industry."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists and Infectionists, 1959.

1. MASHKOVA, T. I.
2. USSR (600)
4. Generative Organs, Female
7. Two cases of female genital actinomycosis Akush i gin no. 6 1952

Monthly Lists of Russian Accessions, Library of Congress, March, 1953, Unclassfied.

MASHKOVA, T.I. and VORISOV, Yu.Ya.

"Experimental work on the acceleration of drying in an acoustic field."

report presented at the All-Union Scientific-Engineering Conference on the Application of Ultrasonics in Industry, Moscow, 22-26 November 1960.

MASHKOVA, V. S.

MASHKOVA, V. S. "The precise orbit of the planet (41) Daphne", Byulleten' Inst. teoret. astronomii (Akad. nauk SSSR), Vol. IV, No. 3, 1949, p. 97-102.

So; U-3261, 10 April 53, (Letopis 'Zhurnal Inykh Statey, No. 17, 1949..

MASHKOVA, Ye. P.

Cand Agr Sci - (diss) "Effect of pruning on the biological characteristics of growth and fruit-bearing of the mazzard cherry (Cerasus avium)." Krasnodar, 1961. 21 pp; (North Caucasian Zonal Scientific Research Inst of Horticulture and Viniculture); 120 copies; price not given; (KL, 10-61 sup, 222)

MASHKOVA, Ye.S.

Category : USSR/Electronics - Photoeffect. Electron and Ion Emission H-2

Abs Jour : Ref Zhur - Fizika, No 2, 1957, No 4273

Author : Mashkova, Ye.S.
Title : Secondary Emission of Antimony-Caesium Cathode at Low Primary-Electron Energies.

Orig Pub : Radiotekhnika i elektronika, 1956, 1, No 2, 260-261

Abstract : The spherical-capacitor method was used to study the energy distribution of secondary electrons of antimony-caesium emitters at primary-electron energies from 4.7 to 50 ev. Emitters of three thicknesses were prepared under identical conditions with control based on the maximum coefficient of secondary emission. The measurement results showed that the genuine secondary electrons vanish regardless of the thickness of the layer at primary-electron energies $E_p'' = 2 \pm 0.2$ ev. It is evident that the value of E_p'' (which agrees within experimental accuracy with the value of the photoelectric work function) can be considered as the threshold of secondary emission of the antimony-caesium cathode. The data obtained confirm the depth character of the

Card : 1/2

Category : USSR/Electronics - Photoeffect. Electron and Ion Emission H-2

Abs Jour : Ref Zhur - Fizika, No 2, 1957, No 4273

secondary emission and indicate that the secondary electrons emerge from the filled zone of the $SbCs_3$ compound. Bibliography, 5 titles.

Card : 2/2

S/109/60/005/008/022/024
E140/E355

9.3120(1137,1138,1140)

AUTHOR: Mashkova, Ye.S.

TITLE: Secondary Emission of Piezoelectric Monocrystals

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol. 5, No. 8, pp. 1347 - 1348

TEXT: Barium titanate and lead titanate monocrystals have been observed to have a minimum in the secondary emission temperature characteristic in the neighbourhood of the Curie point (Ref. 1). It is shown that this is related to variations of the dielectric constant in that neighbourhood. There are 1 figure and 5 references: 3 Soviet and 2 non-Soviet.

ASSOCIATION: Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta imeni M.V. Lomonosova, Kafedra elektroniki (Physics Division of Moscow State University imeni M.V. Lomonosov, Department of Electronics)

Card 1/2

30

S/109/60/005/008/022/024
E140/E355

Secondary Emission of Piezoelectric Monocrystals

Кривая зависимости коэффициента вторичной эмиссии от температуры для монокристалла титаната бария при $E_p = 450$ в

SUBMITTED: November 14, 1959

Card 2/2

24 66(D

41334
S/020/62/146/003/010/019
B101/B144

AUTHORS: Mashkova, Ye. S., Molchanov, V. A.

TITLE: Angular distribution of fast particles emerging from a metal surface irradiated by an ion beam

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 146, no. 3, 1962, 585-587

TEXT: Copper, tungsten, or graphite targets were bombarded with 30-kev Ar^+ ions, current density 1 ma/cm^2, at an angle of incidence Θ near the sliding angle. The ionic current I_1 of the ions reflected under different angles φ was measured. As the greater part of the argon ions was neutralized on the target, the neutralized component of the reflected fast particles was determined by measuring the current I_2 of the secondary electron emission, after the manner of H. J. Montagne (Phys. Rev., 81, 1026 (1951)). The curves for the angular distribution had the same appearance for all targets. For $\varphi < \Theta$, no current occurred; as from $\varphi = \Theta$, the current increased rapidly, reached a maximum, and then decreased steadily. After passing the maximum, the curves for the same target nearly coincide. The

Card 1/2

Angular distribution of fast ...

current increase is caused solely by microrelief of the target. Comparison with the curve for the differential effective cross section of scattering, calculated on the assumption of nonrecurrent collisions of free particles interacting in accordance with the Coulomb law according to F. Everhart et al. (Phys. Rev., 99, 1287 (1955)), shows insufficient quantitative agreement, particularly for graphite. The limit scattering angle of 17.5° to be expected for graphite in the laboratory coordinate system was not observed. This indicates that multiple collisions too must be taken into account. There are 4 figures.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

PRESENTED: May 18, 1962, by L. A. Artsimovich, Academician

SUBMITTED: May 7, 1962

Card 2/2

ACCESSION NR: AP4005398 S/0188/63/000/006/0013/0017

AUTHOR: Mashkova, Ye. S.; Molchanov, V.A.; Faruk, M.A.

TITLE: Angular relationships in small-angle scattering of inert gas ions

SOURCE: Moscow. Universitet. Vestnik. Seriya III. Fizika, astronomiya, No. 6, 1963, 13-17

TOPIC TAGS: ion scattering, inert gas ion, fast ion, ion bombardment, surface bombardment, metal target, small angle scattering

ABSTRACT: Data in the literature indicate that by changing the angle of incidence of ions on a target and the velocity of the incident particles it is possible, within certain limits, to change the ratio of the number of particles experiencing single and multiple collision. However, the results of certain studies of the angular distribution of reflected particles do not agree with the results of investigation of the spectra of reflected ions and do not agree with current concepts on the mechanism of the interaction of ions with a solid body. A study, therefore, was made of the angular relationships of reflection of ion beams on metal surfaces. A beam of monoenergetic, singly-charged ions of inert gases (argon and helium) with energies of 30 kev was pre-

Card 1/3

ACCESSION NR: AP4005398

duced in a mass-monochromator. Angular convergence of the beam was plus or minus 1 degree and current density near the focus, where the target was situated, was about 1 ma/centimeter square. Grazing angles ranged from 4 to 26 degrees. Targets were semicrystalline metal specimens (W, Cu, Ti, Ni, Mo, Be) and graphite. Upon reflection from the target a large part of the ions were neutralized. Since the angles of scattering at which the measurements were made were small, the secondary electron emission current was proportional to the number of reflected particles incident on the collector, and the curves of the dependence of the secondary electron emission current on the scattering angle, in the case of a constant grazing angle, described the angular distribution of the reflected particles. Series of curves are given for the dependence of the secondary electron emission currents on the scattering angle for different grazing angles. All have a similar shape, regardless of the ratio of the masses of the incident particles and the atoms of the targets. In the case of small grazing angles the curves have a clearly expressed maximum, after which there is a monotonic drop-off. Increase of the curve to a maximum apparently is related to the microrelief of the specimen. The shape of the curves changes with an increase of the grazing angle: the slope becomes flatter.

Card 2/3

ACCESSION NR: AP4005398

When the targets are bombarded with helium ions, the drop-off occurs more slowly with an increase of the grazing angle than with bombardment with argon ions. The experimental data qualitatively confirm the applicability of a "gas model" of a solid body. Quantitatively, it is difficult to theoretically take into account the relative role of processes of multiple scattering. Experimental methods must be improved. Orig. art. has 6 figures.

ASSOCIATION: Nauchno-issledovatel'skiy institut yadernoy fiziki (Scientific Research Institute of Nuclear Physics)

SUBMITTED: 15Nov62 DATE ACQ: 20Jan64 ENCL: 00

SUB CODE: PH NO REF SOV: 006 OTHER: 006

Card 3/3

MASHKOVA, Ye.S.; MOLCHANOV, V.A.

Value of the effective collision radius in experiments on the sputtering and ion-electron emission of single crystals. Fiz. tver. tela 5 no.8:2383-2384 Ag '63. (MIRA 16:9)

1. Moskovskiy gosudarstvennyy universitet im. Lomonosova.
(Sputtering (Physics))
(Collisions (Nuclear physics))

MASHKOVA, Ye.S.; MOLCHANOV, V.A.; ODINTSOV, D.D.

Anisotropy of the sputtering coefficients and ion-electron emission from single crystals. Fiz. tver. tela 5 no.12:3426-3429 D '63. (MIRA 17:2)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

MASHKOVA, Ye.S.; MOLCHANOV, V.A.; FARUK, M.A.

Angular regularities of the scattering of ions of inert gases at small angles. Vest. Mosk. un. Ser. 3: Fiz., astron. 18 no.6:13-17 N-D '63. (MIRA 17:2)

1. Nauchno-issledovatel'skiy institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta.

L 18185-63 EWT(l)/EWG(k)/EWP(q)/EWT(m)/BDS/ES(w)-2 AFFTC/ASD/ESD-3/ Pz-4/Pab-4 IJP(C)/SSD JD/AT/JG
ACCESSION NR: AP3005433 S/0020/63/151/005/1074/1075

AUTHOR: Mashkova, Ye. S.; Molchanov, V. A.; Odintsov, D. D.

TITLE: Anisotropy of the ion-electron emission factor of single crystals

SOURCE: AN SSSR. Doklady, v. 151, no. 5, 1963, 1074-1075

TOPIC TAGS: ion emission, electron emission, ion electron emission factor, single crystal electron emission, emission factor anisotropy, emission factor angular anisotropy, copper single crystal, (100) face secondary emission

ABSTRACT: A study of the anisotropy of the ion-electron emission factor of single crystals of copper has been carried out. Measurements were obtained of the dependence of the ion-electron emission factor on the angle of incidence (ψ) of singly charged argon ions (with energies of 20 and 30 kev) striking the (100) face of a single-crystalline copper target. The measurement setup is shown in Fig. 1 of the Enclosure. Secondary electrons emitted by the

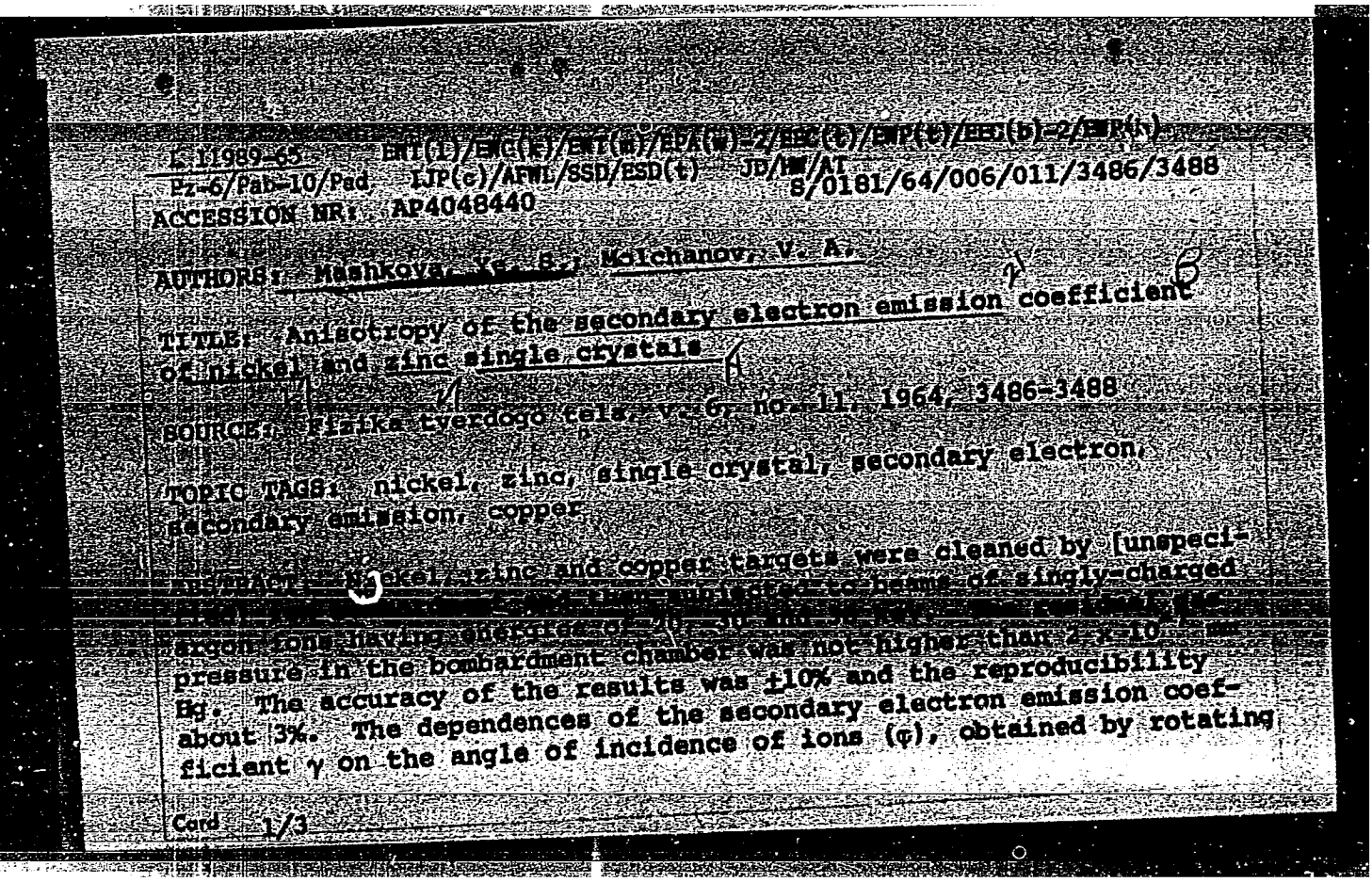
Card 1/4

ACCESSION NR: AP3005433

target were attracted by the collector before which a grid was placed to suppress "tertiary" electrons emitted by the collector. The experiment measured the ion current I_0 and current I_1, the latter being the sum of the ion current and the current of secondary-emission particles. The ion-electron emission factor was determined as the ratio of secondary current to the ion current. It was shown that the dependence of the emission factor on the incidence angle is nonmonotonic and that the number of emitted electrons decreases sharply whenever the direction of the primary beam coincided with a main crystal axis of the target. Calculations show that collisions with atoms of the first few layers alone are of substantial significance in electron emission and that the dependence of the number of electrons emitted upon the angle of incidence corresponds to the variation of collision probability.

"The authors thank N. I. Zakharov for aid in conducting the experiment." Orig. art. has: 3 figures and 2 formulas.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M. V. Lomonosova (Moscow State University)



L 11989-65 EWT(l)/EWG(k)/EWT(m)/EPA(w)-2/EWG(b)/EWP(t)/EED(b)-2/EWR(k)
Pz-6/Pab-10/Pad IJP(c)/AFWL/SSD/ESD(t) JD/HW/AT S/0181/64/006/011/3486/3488
ACCESSION NR: AP4048440

AUTHORS: Mashkova, E. S.; Molchanov, V. A.

TITLE: Anisotropy of the secondary electron emission coefficient of nickel and zinc single crystals

SOURCE: Fizika tverdogo tela, v. 6, no. 11, 1964, 3486-3488

TOPIC TAGS: nickel, zinc, single crystal, secondary electron, secondary emission, copper

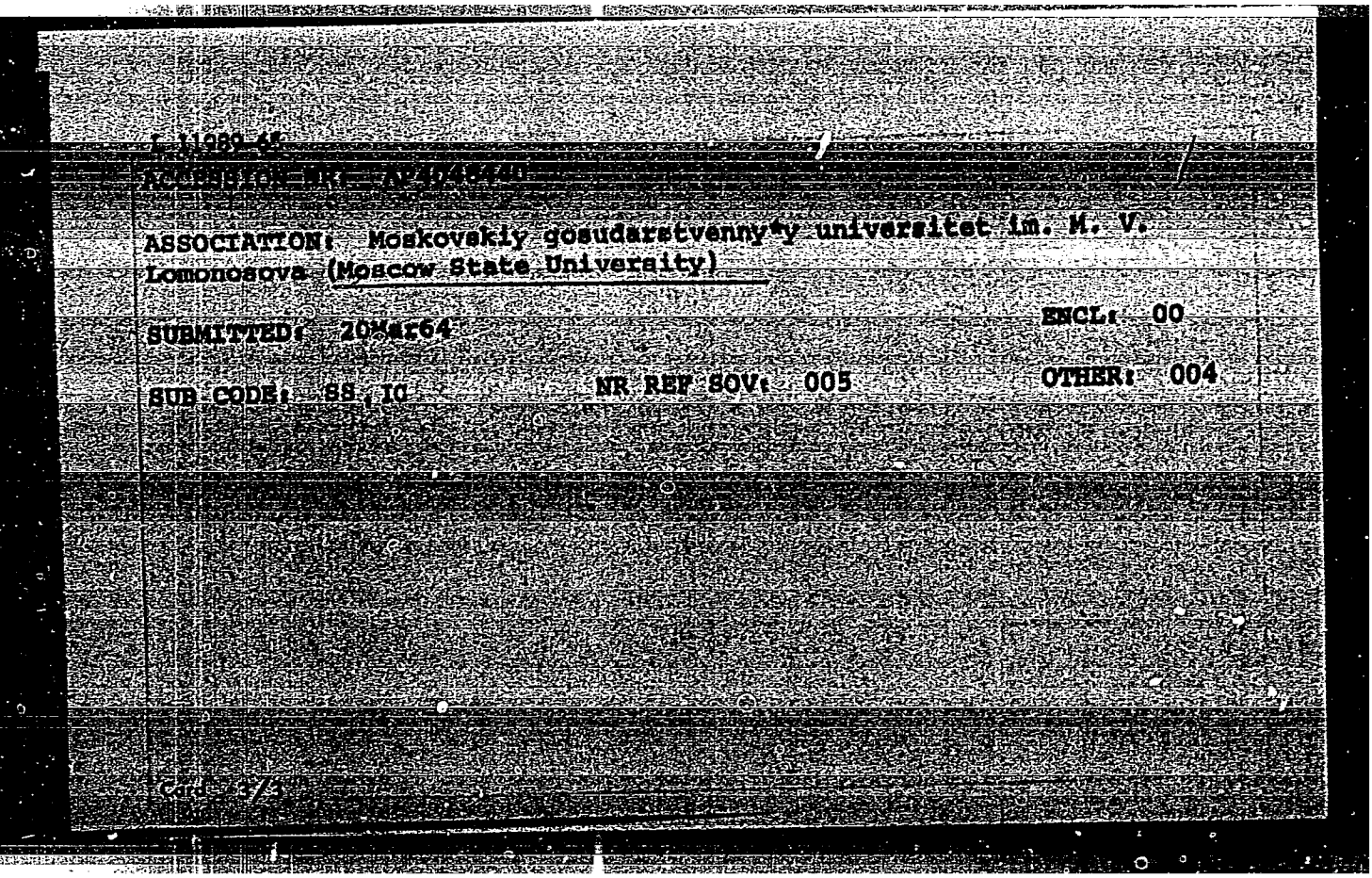
ABSTRACT: Nickel, zinc and copper targets were cleaned by [unspecified] and subjected to beams of singly-charged argon ions having energies of [illegible]. The pressure in the bombardment chamber was not higher than 2×10^{-6} mm Hg. The accuracy of the results was ±10% and the reproducibility about 3%. The dependences of the secondary electron emission coefficient γ on the angle of incidence of ions (φ), obtained by rotating

Card 1/3

L 11990-63
ACCESSION NR: AP4048440

the (100) face of a nickel single crystal about an edge of this face (the <100> axis) and by irradiating a plane of copper single crystal cut at 20° to (100) face, were similar to the sputtering coefficient curve for a corresponding rotation of the (100) face of a copper single crystal (A. V. Molchanov and V. G. Tel'kovskiy, Izv. AN SSSR, ser. fiz. v. 26, 1359, 1962). The sharpest minima for nickel and copper were observed when the ion beam direction coincided with the <100> and <110> axes. The $\gamma(\varphi)$ curves for a zinc single crystal rotated about the axes $\langle 10\bar{1}0\rangle$ and $\langle 1\bar{2}10\rangle$ with the ions incident on the basal plane, repeated qualitatively the form of the corresponding curve for the sputtering coefficient (M. Balarin, V. A. Molchanov, and V. G. Tel'kovskiy, DAN SSSR, v. 147, 331, 1962; V. A. Molchanov, V. Soshka, and M. A. Faruk, ZhTF, v. 33, 776, 1963). The anisotropy decreased when the incident ion energy decreased. The absolute values of the secondary electron emission coefficient varied with the energy E of the incident ions approximately as $\sqrt{E}$. Orig. art. has: 2 figures.

Card 2/3



L 11089-65
ACCESSION NR: AP4048440

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University)

SUBMITTED: 20Mar64 ENCL: 00

SUB CODE: SS, IC NR REF SOV: 005 OTHER: 004

Card 3/3

L 15310-65 EWT(l)/EWG(k)/EWG(m)/EPA(sp)-2/EPF(c)/EPR(k)-2/EPA(w)-2/
ESD(t)/T/EWP(t)/EWA/EWP(b)/EWA(m)-2 Pz-6/Pab-10/Pr-4/Pa-4 IJP(c)/
ASD(f)/AFWL/ASD(a)-5/AS(mp)-2 JD/AWW/AT

ACCESSION NR: AP5006075 S/0181/64/006/012/3704/3705

AUTHORS: Mashkova, Ye. S.; Molchanov, V. A.

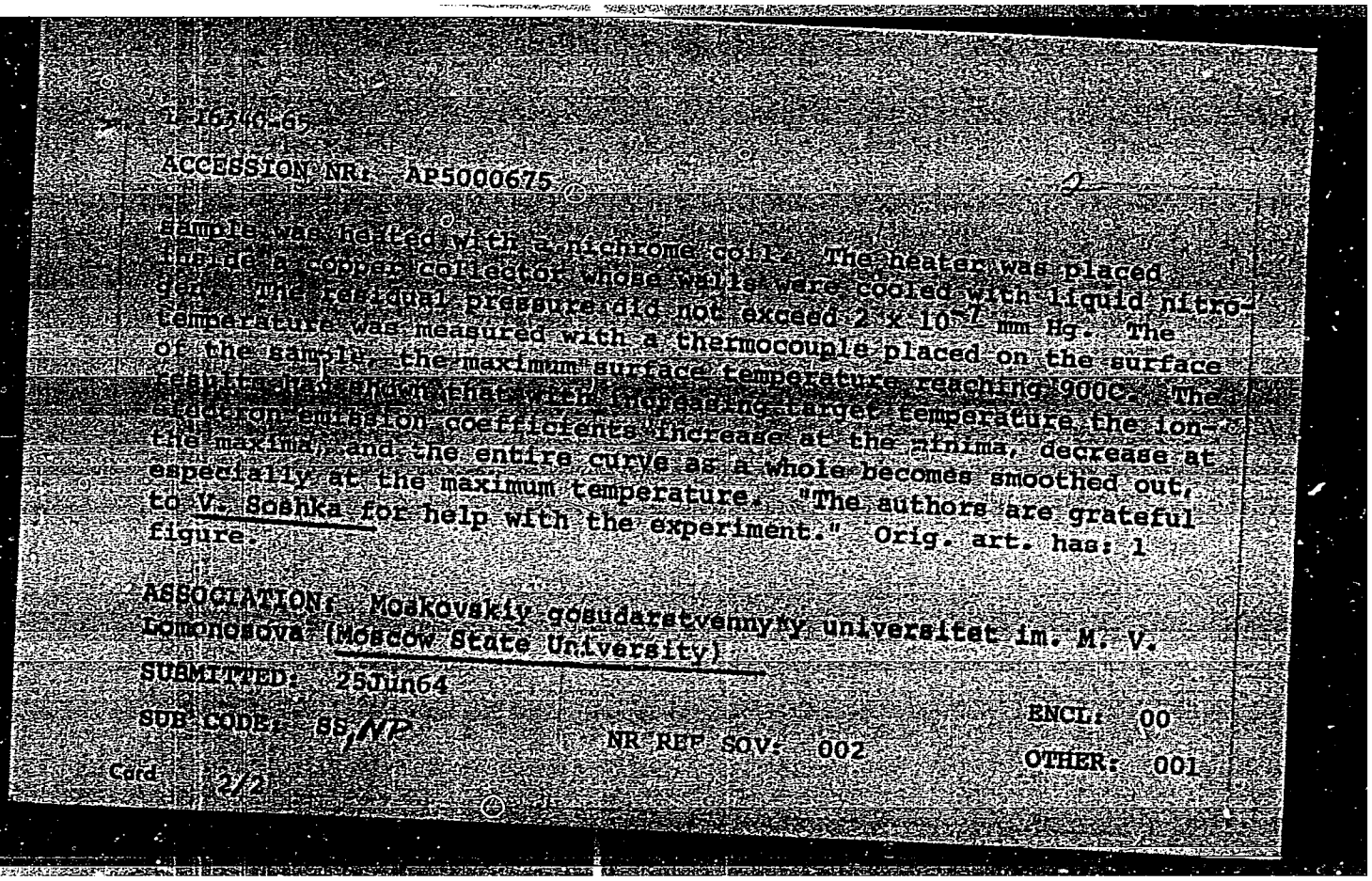
TITLE: Influence of thermal lattice vibrations on the anisotropy of the ion-electron emission coefficient of single crystals

SOURCE: Fizika tverdogo tela, v. 6, no. 12, 1964, 3704-3705

TOPIC TAGS: thermal lattice vibration, anisotropy, thermal vibration, ion emission, electron emission, single crystal

ABSTRACT: The authors ... whether an increase in the temperature of a ... the ... electron emission from its surface. The authors investigated ion emission from the (100) face of single-crystal copper, rotated about the [110] axis. The experiment was similar to that described by the authors elsewhere (with D. D. Odintsov, DAN SSSR v. 151, 1071, 1963). The bombarding argon ions had an energy 30 keV, and the

Card 1/2



L 16540-65

ACCESSION NR: AP5000675

Sample was heated with a nichrome coil. The heater was placed inside a copper collector whose walls were cooled with liquid nitrogen. The residual pressure did not exceed 2×10^{-7} mm Hg. The temperature was measured with a thermocouple placed on the surface of the sample. The maximum surface temperature reaching 900C. The [illegible] that with increasing target temperature the ion-electron emission coefficients increase at the minima, decrease at the maxima, and the entire curve as a whole becomes smoothed out, especially at the maximum temperature. "The authors are grateful to V. Soshka for help with the experiment." Orig. art. has: 1 figure.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University)

SUBMITTED: 25Jun64

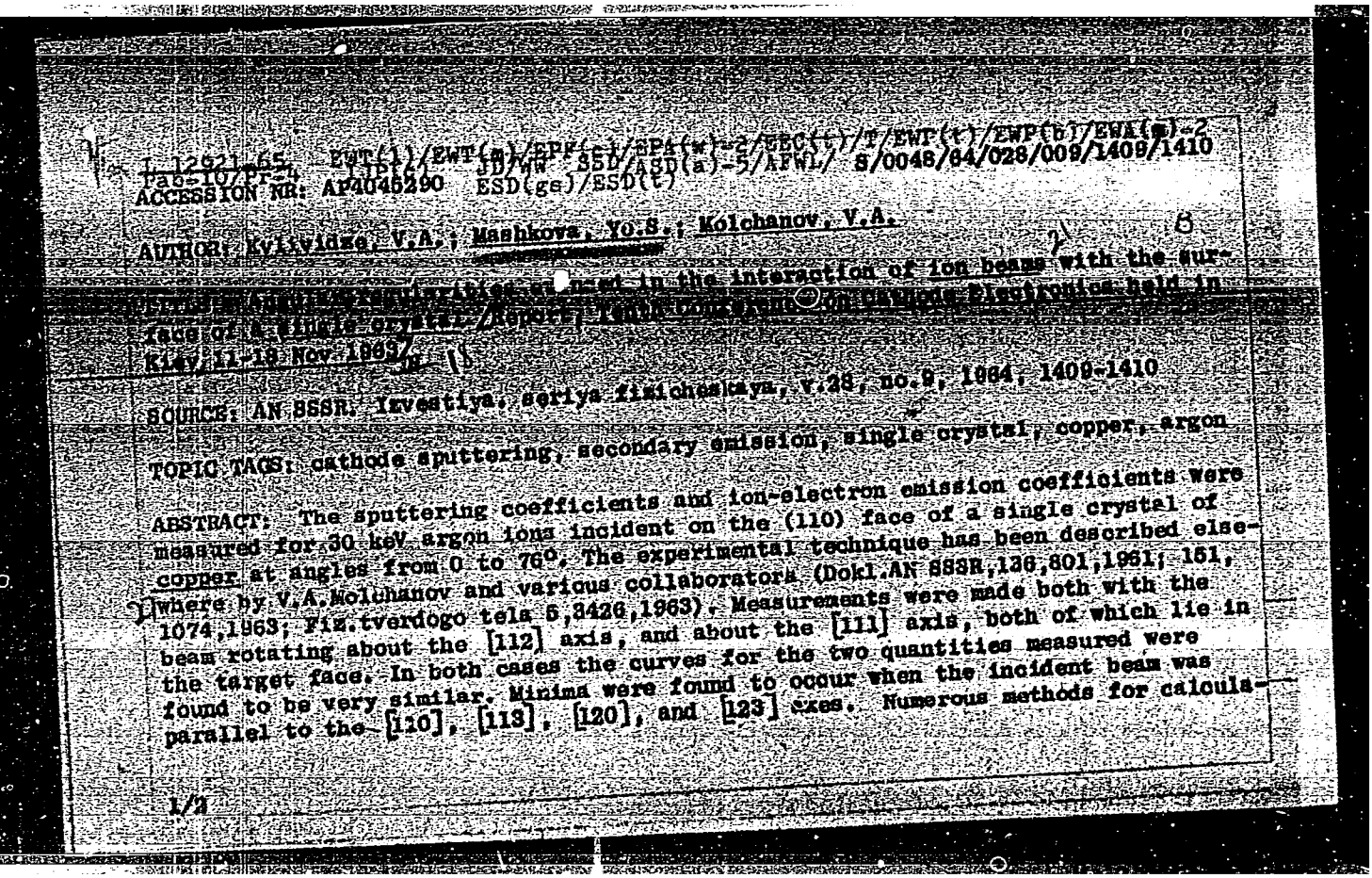
SUB CODE: SS, NP

NR REF SOV: 002

ENCL: 00

OTHER: 001

Card 2/2



L 12921-65 EWT(l)/EWT(m)/EPF(c)-1/EPA(w)-2/EEC(t)/T/EWP(t)/EWP(b)/EWA(m)-2
Pab-10/Pr-4 IJP(c) JD/WW/ ASD/ASD(a)-5/AFWL/ S/0048/64/028/009/1409/1410
ACCESSION NR: AP4045290 ESD(ge)/ESD(t)

AUTHOR: Kvitvidze, V.A.; Mashkova, Yo.S.; Molchanov, V.A.

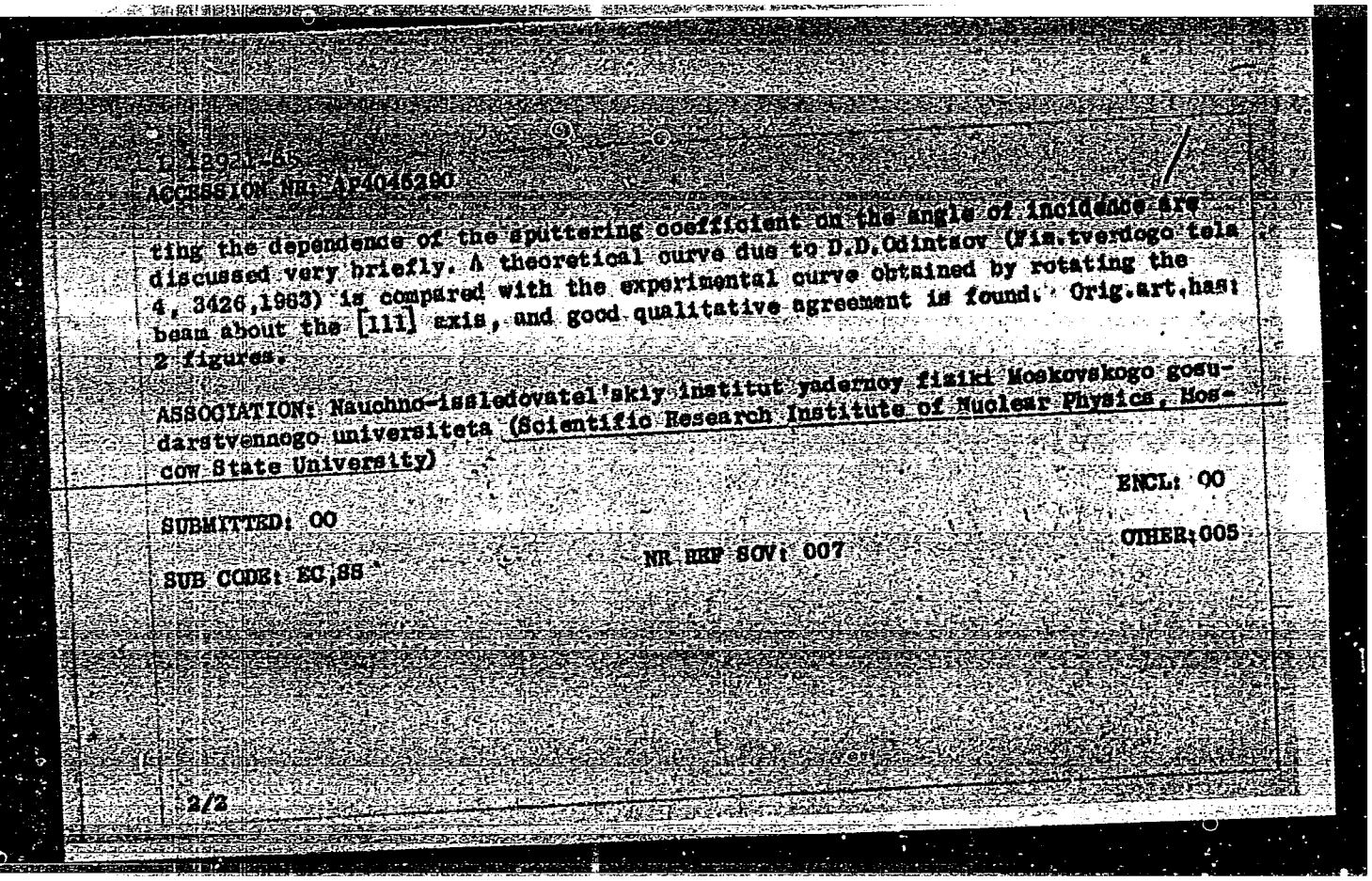
TITLE: [illegible] meet in the interaction of ion beams with the surface of a single crystal [Report, Tenth Conference on Cathode Electronics held in Kiev, 11-18 Nov 1963]

SOURCE: AN SSSR. Izvestiya, seriya fizicheskaya, v.28, no.9, 1964, 1409-1410

TOPIC TAGS: cathode sputtering, secondary emission, single crystal, copper, argon

ABSTRACT: The sputtering coefficients and ion-electron emission coefficients were measured for 30 kev argon ions incident on the (110) face of a single crystal of copper at angles from 0 to 76°. The experimental technique has been described elsewhere by V.A.Molchanov and various collaborators (Dokl.AN SSSR,136,801,1961; 151, 1074,1963; Fiz.tverdogo tela 5,3426,1963). Measurements were made both with the beam rotating about the [112] axis, and about the [111] axis, both of which lie in the target face. In both cases the curves for the two quantities measured were found to be very similar. Minima were found to occur when the incident beam was parallel to the [110], [113], [120], and [123] axes. Numerous methods for calcula-

1/2



L 12921-65
ACCESSION NR: AP4046290

ting the dependence of the sputtering coefficient on the angle of incidence are discussed very briefly. A theoretical curve due to D.D.Odintsov (Fiz.tverdogo tela 4, 3426,1963) is compared with the experimental curve obtained by rotating the beam about the [111] axis, and good qualitative agreement is found. Orig.art.has: 2 figures.

ASSOCIATION: Nauchno-issledovatel'skiy institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta (Scientific Research Institute of Nuclear Physics, Moscow State University)

SUBMITTED: 00 ENCL: 00

SUB CODE: EC,SS NR REF SOV: 007 OTHER: 005

2/2

L 19021-65 EWT(l)/EWG(k)/EWT(m)/EPA(sp)-2/EPF(c)/EPR(n)-2/EPR/EPA(w)-2/T/
EWP(t)/EWA/EWP(b) Pr-4/Ps-4/Pu-4/Pz-6/Pab-10/Pad IJP(c)/ASD(m)-3/ASD(a)-5/
ASD/APWL/ESD/ASD(t)-2/ASD(p)-3/AS(mp)-2/ESD(gs)/ESD(t) AT/JD/WW/JG
ACCESSION NR: AP4049053 S/0057/64/034/011/2081/2082

AUTHOR: Mashkova, Ye.S.; Molchanov, V.A.

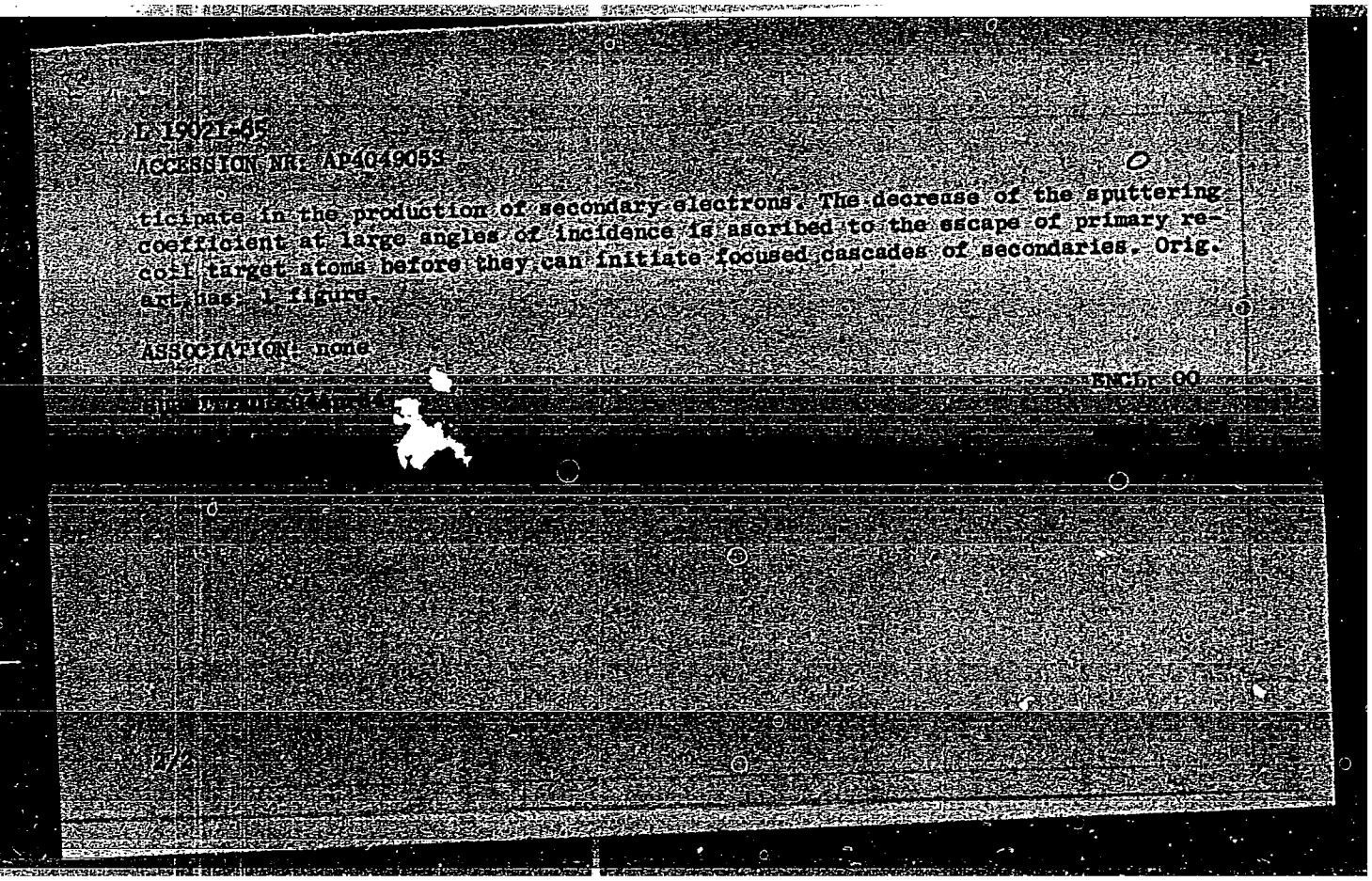
TITLE: Angular regularities in sputtering and ion-electron emission at large angles of incidence of the ions onto the target

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.11, 1964, 2081-2082

TOPIC TAGS: ion bombardment, sputtering, electron emission, copper, tungsten, nickel, molybdenum, argon

ABSTRACT: The sputtering and ion-electron emission coefficients of copper, tungsten, nickel and molybdenum for approximately 30 keV argon ions were measured at angles of incidence of the ions onto the target from 60° to 86°. The experimental conditions have been described elsewhere (Ye.S.Mashkova, V.A.Molchanov and D.D.Odintsov, FTT 5,3426,1963; DAN SSSR 151,1074,1963). In each case the sputtering coefficient exhibited a maximum as a function of angle of incidence within the range investigated, and the electron emission coefficient increased monotonically with increasing angle of incidence. It is concluded that the presence of a maximum in the sputtering coefficient curve is due to displaced lattice atoms that do not par-

1/2



L 19021-65
ACCESSION NR: AP4049053

ticipate in the production of secondary electrons. The decrease of the sputtering coefficient at large angles of incidence is ascribed to the escape of primary recoil target atoms before they can initiate focused cascades of secondaries. Orig. art. has: 1 figure.

ASSOCIATION: none

ENCL: 00

L 38614-65 EWT(1)/EPA(sp)-2/EPF(c)/EPA(w)-2/EEC(t) Pab-10/Pr-4/Peb WW/AT
ACCESSION NR: AP5009309 S/0181/65/007/002/0619/0621

AUTHOR: Kvlividze, V. A.; Mashkova, Ye. S.; Molchanov, V. A.

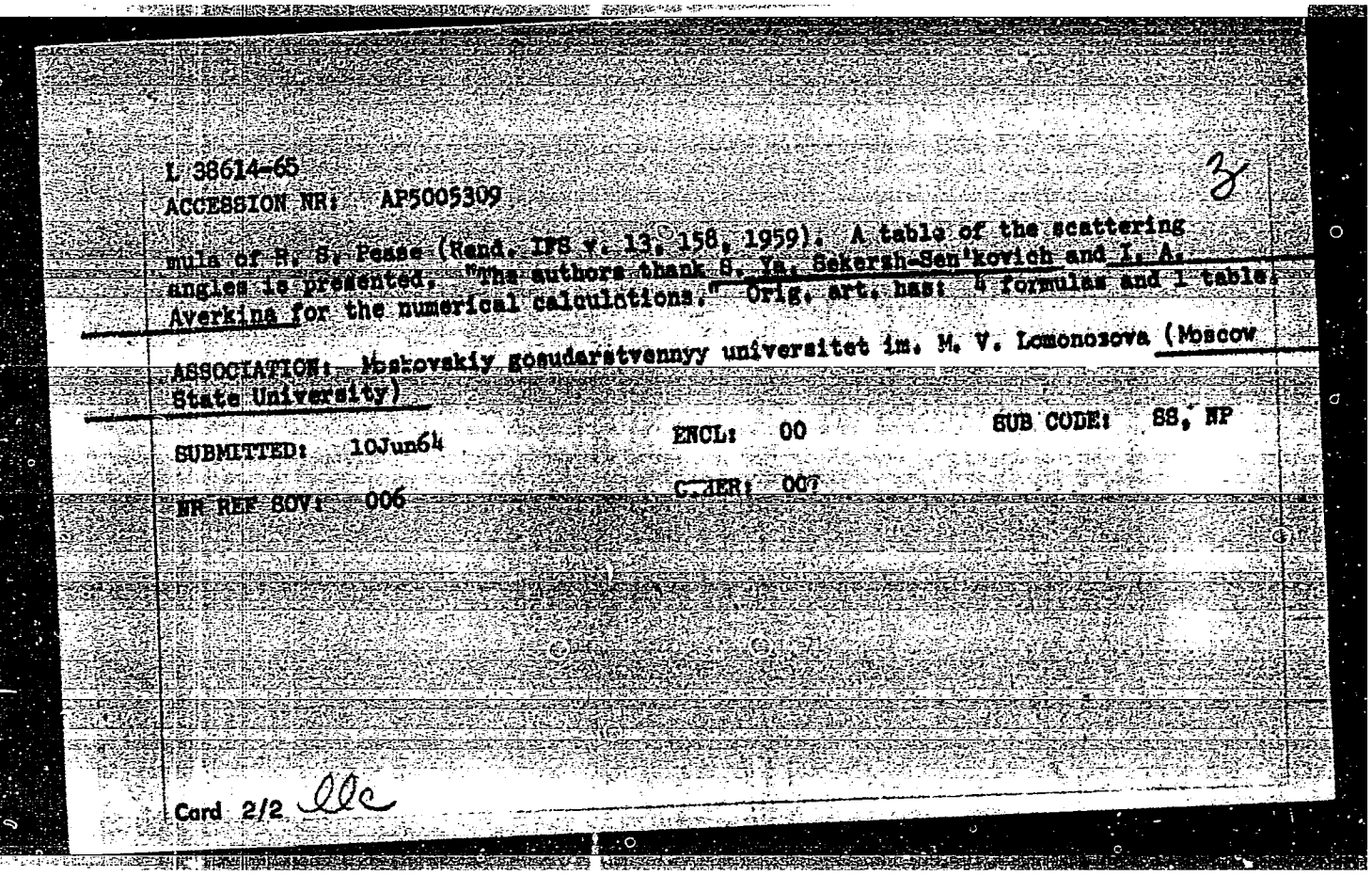
TITLE: Concerning the scattering of ions by metallic surfaces

SOURCE: Fizika tverdogo tela, v. 7, no. 2, 1965, 619-621

TOPIC TAGS: ion scattering, metal sputtering, scattering angle, angular distribution, sputtering coefficient, copper

ABSTRACT: Results are presented of a numerical calculation of the dependence of the scattering angle on the impact parameter over a wide range of energies, using the potential of L. B. Firsov (ZhETF v. 33, 696, 1957). It is assumed in this approach that the incoming particle interacts with the lattice atoms like with free particles. The calculations, accurate to 5%, were made at the VTs MGU (Computation Center, Moscow State University). The number of fast sputtered particles in experiments on the angular distribution of scattered particles is estimated on the basis of this calculation. An estimate is also given of the sputtering coefficient of polycrystalline copper tombarded by 30 keV argon ions, using the for-

Card 1/2



L 38614-65

ACCESSION NR: AP5005309

3

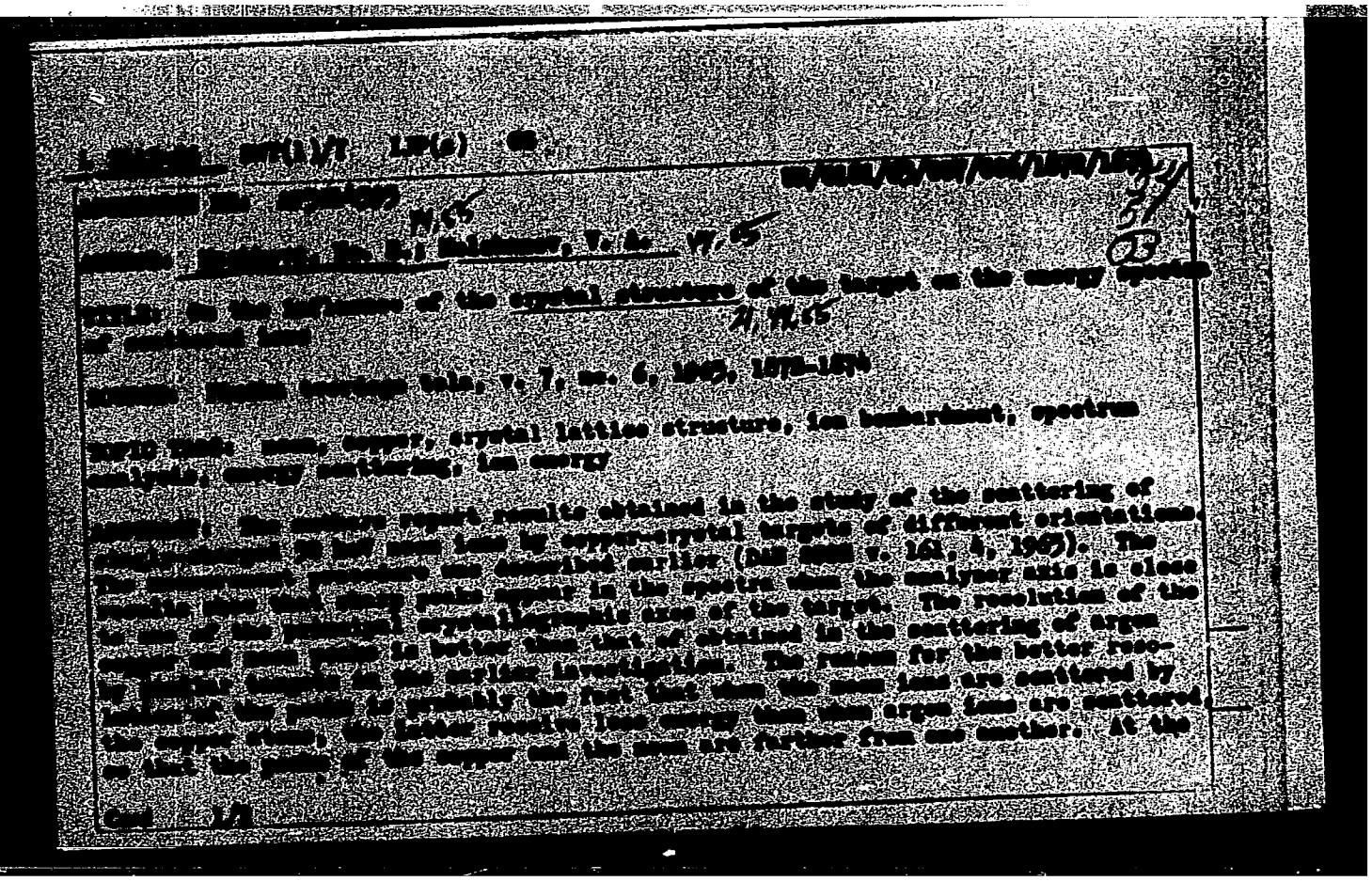
mula of H. S. Pease (Rend. IFS v. 13, 158, 1959). A table of the scattering angles is presented. "The authors thank S. Ya. Sekerzh-Sen'kovich and L. A. Averkina for the numerical calculations." Orig. art. has: 4 formulas and 1 table.

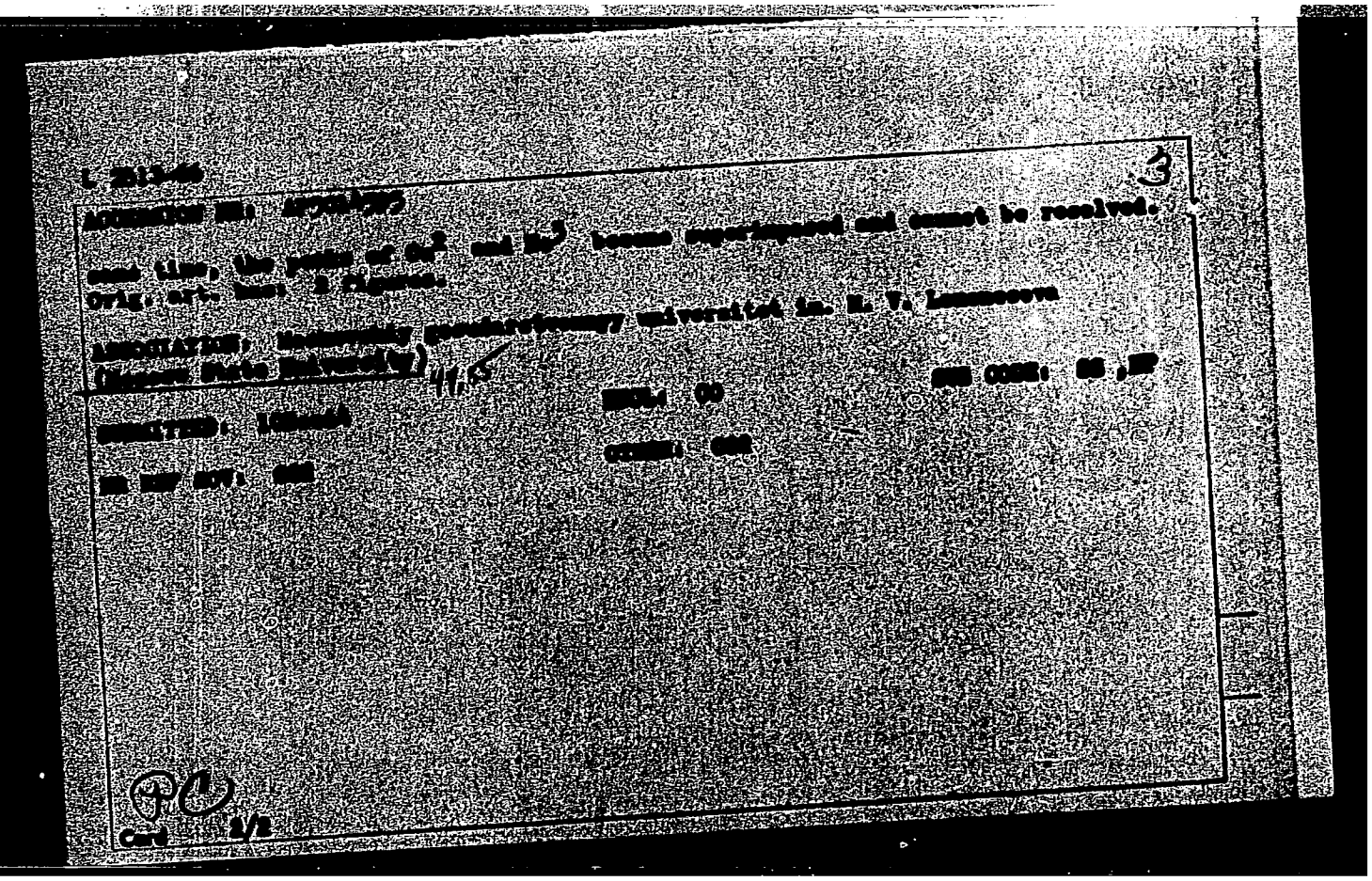
ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University)

SUBMITTED: 10Jun64 ENCL: 00 SUB CODE: SS, NP

NR REF SOV: 006 OTHER: 007

Card 2/2 dlc





L [illegible]-66 EWT(1)/EWT(m)/T/EWP(t) IJP(c) JD/JG/AT

ACC NR: AP[illegible] SOURCE CODE: UR/0181/65/007/010/2921/2924

AUTHOR: Mashkova, Ye. S.; Molchanov, V. A.; [illegible], V.; Faruk, M. A.

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

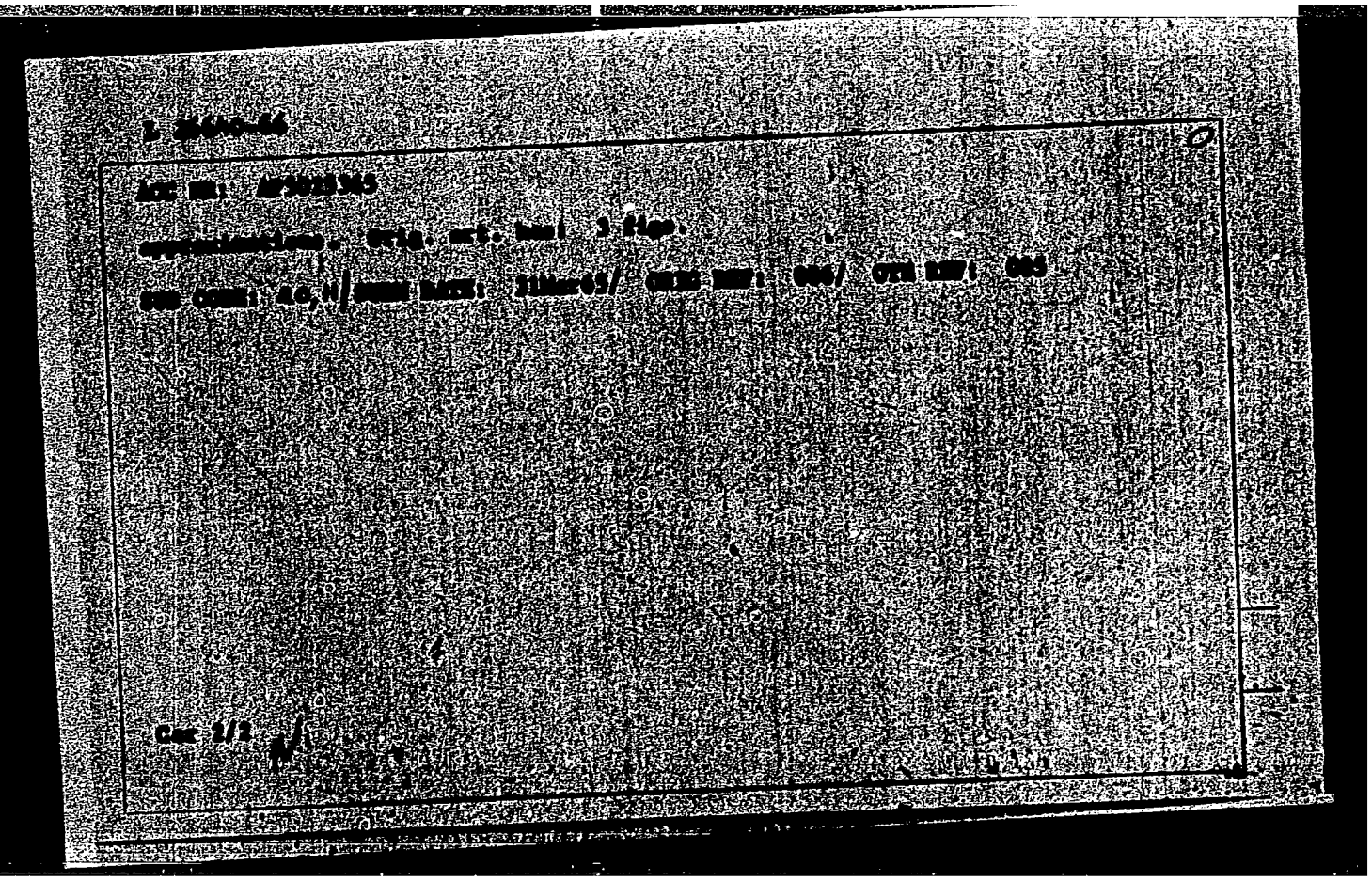
TITLE: Scattering of ions from alloy surfaces

SOURCE: Fizika tverdogo tela, v. 7, no. 10, 1965, 2921-2924

TOPIC TAGS: argon, ion emission, copper, silver, copper alloy, silver alloy, neon, [illegible] spectrum, crystal lattice, particle collision

ABSTRACT: The energy spectra were investigated during scattering of ions of argon and neon (30 kev energy) by targets from copper, silver, and copper-silver alloy in order to investigate a number of questions: (1) on the limits of applicability of a concept of collision pairing and on consideration of the atom combination in the crystal lattice; (2) on the role of the nonelastic loss of energy in a range lower than [illegible] adiabatic criteria; (3) on the relative role of multiple collisions in various processes of ion interaction with solid substance. Results obtained are confirmed on the basis of paired collision [illegible]

Card 1/1



L 40928-65 EEC(b)-2/EWA(c)/EWT(l)/EWT(m)/EWP(b)/T/EWP(t) IJP(c) GG/JD

ACCESSION NR: AP5007312 S/0057/65/035/003/0575/0576

AUTHOR: Mashkova, Ye.S.; Molchanov, V.A.

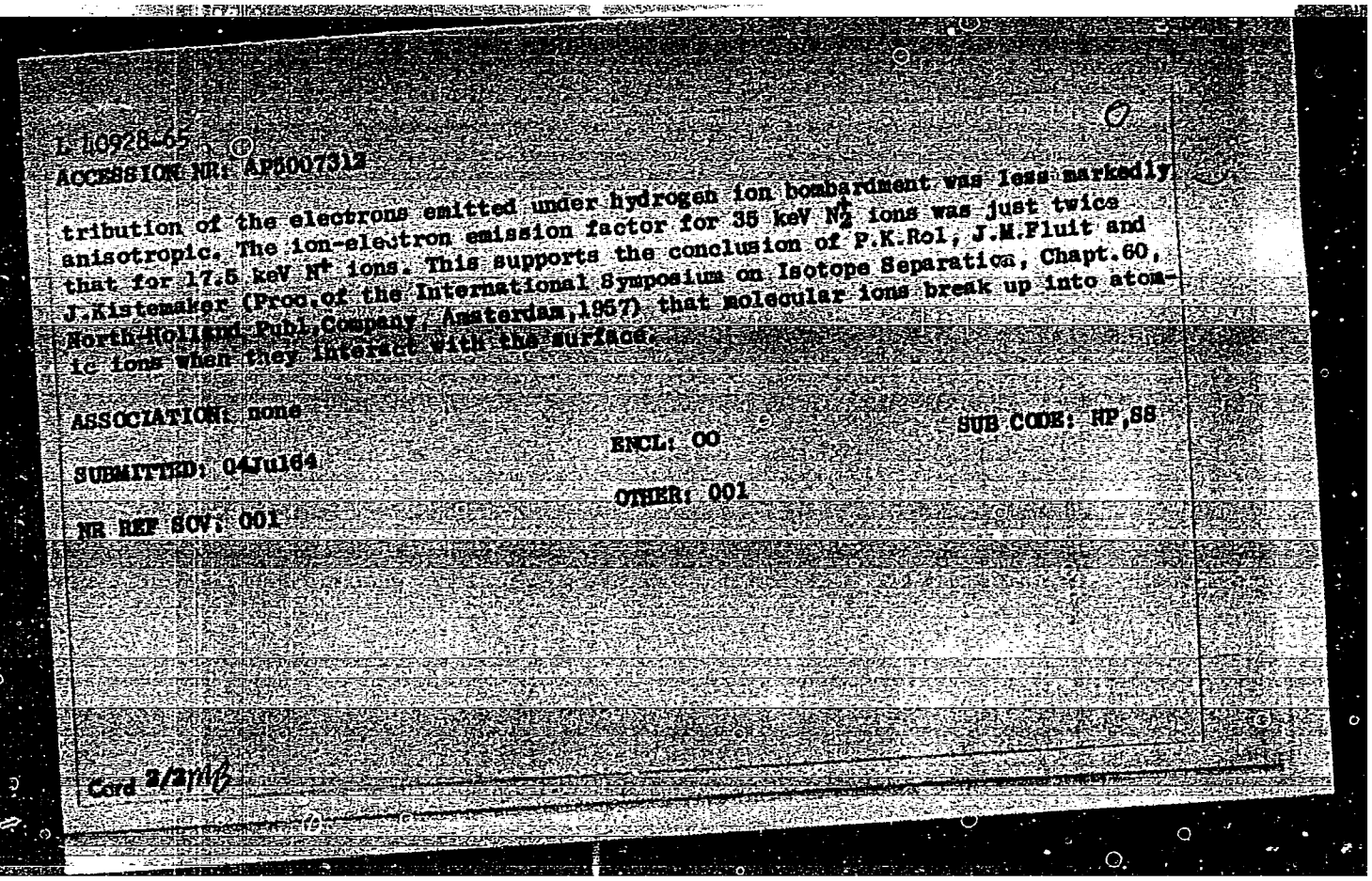
TITLE: On the anisotropy of the ion-electron emission coefficient of a copper single crystal

SOURCE: Zhurnal tekhnicheskoy fiziki, v.35, no.3, 1965, 575-576

TOPIC TAGS: electron emission, ion bombardment, single crystal, copper, anisotropy, molecular ion, nitrogen, hydrogen

ABSTRACT: The authors, in collaboration with D.D. Odintsov (DAN SSSR 151, 1074, 1963) have previously shown that the electrons emitted from a copper surface under bombardment with argon ions are anisotropically distributed. They have now bombarded the (100) face of a copper crystal (cleaned by prolonged heating at 900°C) with 17.5 and 35 keV N^+ and N_2^+ ions and with 15 and 30 keV H^+, H_2^+ and H_3^+ ions, and have determined the angular distributions of the emitted electrons. The experimental technique, except for the method of cleaning the crystal surface, was the same as that employed in the previous work. The electrons ejected by nitrogen ion bombardment were distributed in much the same way as those ejected by argon ions. The dis-

Card 1/2



L 10928-65
ACCESSION NR: AP5007312

tribution of the electrons emitted under hydrogen ion bombardment was less markedly anisotropic. The ion-electron emission factor for 35 keV N_2^+ ions was just twice that for 17.5 keV N^+ ions. This supports the conclusion of P.K.Rol, J.M.Fluit and J.Kistemaker (Proc.of the International Symposium on Isotope Separation, Chapt.60, North-Holland Publ.Company, Amsterdam,1957) that molecular ions break up into atomic ions when they interact with the surface.

ASSOCIATION: none

SUBMITTED: 04Jul64 ENCL: 00 SUB CODE: NP,SS

NR REF SOV: 001 OTHER: 001

Card 2/2