

I 21295-66 EXP(a)/EXP(t) IPR(c) Jb/wu/wk

SOURCE CODE: FO/0045/65/028/003/0337/0347

70
69

AUTHOR: Ciaronynski, A.; Bujak, B.

ORG: Laboratory for Induced Electron Emission, Institute of Experimental Physics, Wroclaw University (Zaklad Wzbudzeniaj Emisji Elektronow przy Katedrze Fizyki Doswiadczalnej, Uniwersytet Wroclawski)

TITLE: Effect of oxide and measuring parameters on the decay of photostimulated (exo)electron emission in vacuum from plastically deformed aluminum (II)

1.55

11.57 37

SOURCE: Acta physica polonica, v. 28, no. 3, 1965, 337-342

TOPIC TAGS: plastic deformation, deformation rate, aluminum, electron emission, oxide, electric field, space charge

ABSTRACT: From considerations relating to the electrically charged walls of micro-chinks in the oxide layer on plastically deformed aluminum in vacuum, a dependence between the decay constant of the first component and the measuring parameters is derived. The steepness (tg a) of the tangent to the curve in a point t near t = 0 is considered. It is easily shown that tg a ~ λ. The following dependence is derived on the assumption of interaction between the space charge due to the presence of electrically charged chinks and the electrons emitted from the "bottoms" of the chinks:

$$I_{ex} \sim \frac{D(\bar{E}_0 - \bar{E})}{\rho} + I_{D=0}$$

Card 1/2

L 21296-66

ACC NR: AP5024615

15,445

where D is the thickness of the oxide layer coating the aluminum sample, E_0 —the effective electric field strength within the micro-chink, I —the stimulating light intensity, β —an exponent (less than unity), and $\lambda_{D=0}$ —the decay constant of the first component for $D = 0$. Orig. art. has: 1 figure and 23 formulas.
[Author's abstract.]

SUB CODE: // 20 SUMM DATE: 23Feb63/ ORIG REF: 005/ OTH REF: 001/ SOV REF: 001/

Card 2/2 fy

L 33438-66 EWP(t)/EII LJP(c) JD/AT/EN
ACC NR: AP6014319 SOURCE CODE: PO/0045/66/029/004/0523/0531

AUTHOR: Sujak, B.; Gieroszynski, A.

ORG: Laboratory for Induced Electron Emission, Institute of Experimental Physics,
Wroclaw University (Zaklad Wzbudzonej Emisji Elektronow przy Katedrze Fizyki
Doswiadczalnej Uniwersytetu Wroclawskiego)

TITLE: Spectral investigations of photostimulated emission of (exo)electrons in
vacuum from plastically deformed aluminum covered with an oxide layer, Part II.
Limiting oxide thickness D_g

SOURCE: Acta physica polonica, v. 29, no. 4, 1966, 523-531

TOPIC TAGS: electron emission, aluminum oxide, ~~deformation rate~~ plastic deformation,
oxide formation, ~~spectral investigation, work function~~ MONOCHROMATIC RADIATION,
~~photoemission source~~

ABSTRACT: It has been found that in the case of vacuum and monochromatic light
wavelengths $\lambda \leq \lambda_0$ the following relations hold for the limiting thickness D_g of
an oxide layer covering a deformed aluminium sample:

1) $D_g = a_1 \beta$, $\beta = 0.145$, I — intensity of the stimulating light,

2) $D_g = a_2 \left(\frac{1}{\lambda} - \frac{1}{\lambda_0} \right)$, $\lambda_0 = 5500 \times 10^{-8}$ cm, $a_2 = 1.4 \cdot 10^{-15}$ cm³, λ — wavelength of the
stimulating light,

Card 1/2

L 33438-66

ACC NR: AP6914319

$$3) D_g = a_0 e E, \quad E = \frac{\Delta U}{d}, \text{ where}$$

E is the accelerating field strength, ΔU is the accelerating voltage between the grid and the sample, and d is the distance between the grid and the sample. Assuming that the electrified fissure model is correct, the maximum energy of (exo)electrons emitted for definite oxide layer thickness D_g has been calculated, according to the derived formula

$$T_{\max} = \frac{hc}{a_0} D_g^2.$$

The T_{\max} values obtained are within the interval $0 \leq T_{\max} \leq 3$ eV, depending on the wavelength λ and the intensity I of the light stimulating the emission. The work function determined, $\phi = 22.25$ eV, has been assigned to electrons emitted from the aluminium base to the transitory oxide-metal layer which is the "bottom" of the fissure-emitting electrons. Orig. art. has: 7 figures and 15 formulas. [Based on author's abstract] [AM]

SUB CODE: 20/ SUBM DATE: 29Jun65/ ORIG REF: 007/ SOV REF: 002/ OTH REF: 004

Card 2/2 ULR

L 36271-66 IJP(c) AT
ACC NR: AP6014320

SOURCE CODE: PO/0045/66/029/004/0533/0547

70
B

AUTHOR: Gieroszynski, A.; Sujak, B.

ORG: Laboratory for Induced Electron Emission, Institute of Experimental Physics, Wroclaw University, Wroclaw (Zaklad Wzbudzonej Emisji Elektronow, Katedra Fozulo Doswiadczalnej, Uniwersytet Wroclawski)

TITLE: ²/ Spectral investigations of photostimulated emission of (exo) electrons in vacuum from plastically deformed aluminum covered with an oxide layer. Part III. Slope of the decay curve in its initial stage

SOURCE: Acta physica polonica, v. 29, no.4, 1966, 533-547

TOPIC TAGS: aluminum oxide, metal oxide, electron, free electron, electron emission, photoelectric effect, space charge, monochromatic light

ABSTRACT: It has been found that the slope of the decay curve in log $\frac{N}{t}$ vs t coordinates in the vicinity of t = 0 influenced by the wave-

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L 36271-66

ACC NR: AP6014320

length of the stimulating light. The value of the slope $tg \alpha$ increases with the increase of the wavelength λ . The dependence of $tg \alpha$ on the intensity I of white and monochromatic light, as well as on the oxide layer thickness D has been studied for various combinations of the parameters: intensity of the stimulating light I , its wavelength λ , and thickness D of the oxide layer covering the deformed aluminum. In the case of white light it was found that with increasing intensity the slope first decreases and then begins to increase in the high intensity range. The dependences of the slope $tg \alpha$ and λ , I , and D obtained in the present work, and analogous to those obtained in previous works under the assumption that the initial stage of the decay of the emission from deformed aluminum is controlled by the space charge of electrons which do not get out of the fissures. The results confirm the presumption that the emission of exoelectrons has its roots in the "bottom" of the fissures, which is regarded as a semiconductor layer. It is a photoelectric effect on free electrons in aluminum. The electrons enter the oxide layer contacting the metal, and then are emitted from the transient oxide-metal layer into vacuum. Orig. art. has: 17 figures and 23 formulas. [Based on author's abstract] [AM]

SUB CODE: 20/ SUBM DATE: 20Jul65/ ORIG REF: 009/

ms
Card 2/2

GIERSZEWSKI, M.

"Ramy. Obliczenia statystyczne" (Frames. Statistical calculations), by
M. Gierszewski. Reported in New Books (Nowe Książki), No. 15, August 1, 1955

GIERTYCH, M.

Interaction between auxin, kinetin, and citric acid in
relation to apical dominance. Acta soc botan Pol 33
no.2:297-306 '64.

1. Institute of Dendrology, Polish Academy of Sciences,
Kornik Arboretum.

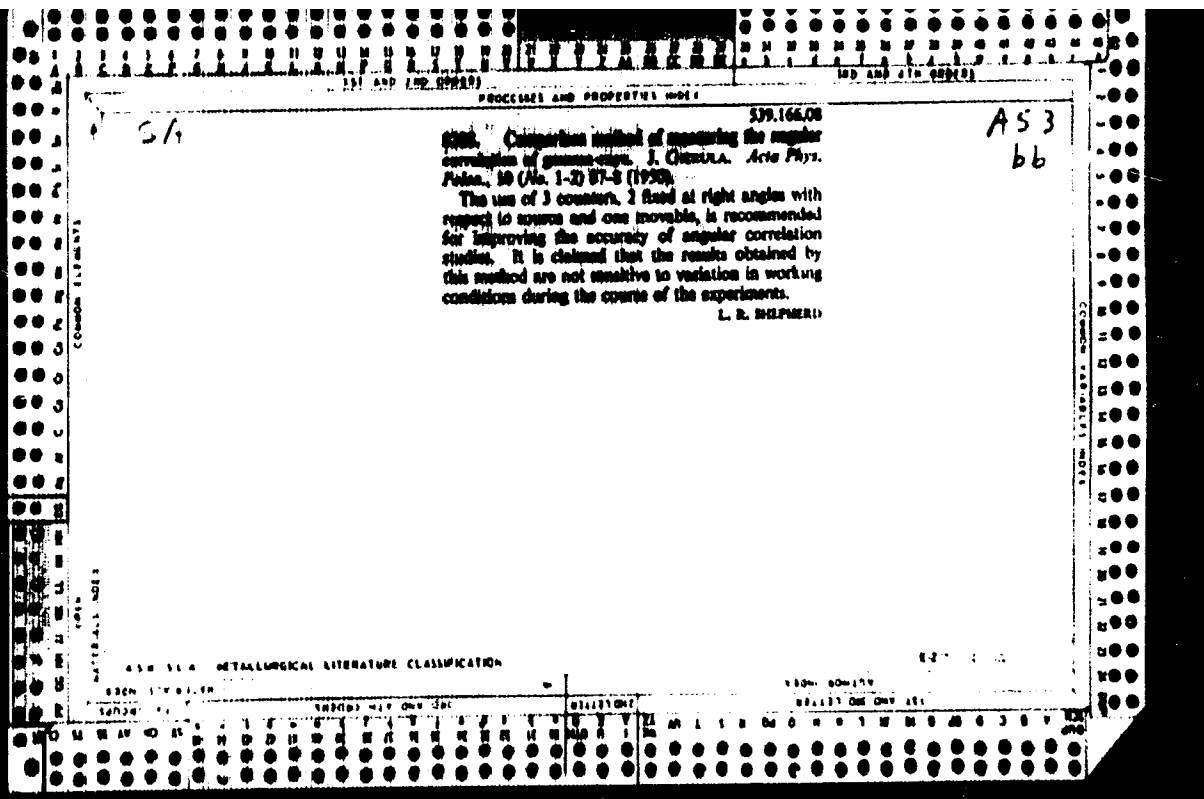
Math. & Natural Science

P. T. A.

461 5374
Gierula J. Technical Methods for Determining the Distribution of Luminous Flux in Space.

Metody techniczne wyznaczania rozkladu przestrzennego strumienia swietelnego. Przegląd Elektrotechniczny No 9 10 11 1950 pp 487 488,7 flux

The article deals with directional photometry of lighting sources in order to determine their candle power distribution with a description is given of a recording instrument designed by the author.



CA

34

Coincidences in Geiger-Müller counters due to single photons. Jozef Luszczka (Mining Acad., Krakow, Poland). *Acta Phys. Polon.* 10, 299-300 (1950). A collimated beam of ThC'' γ -rays filtered through 25 mm Pb was directed to a counter and scattered in it. The scattered γ -radiation was registered in a 2nd counter working in coincidence. The 2nd counter was rotated, and a max. in the rate of coincidences was observed at 28° . Assuming Compton scattering, the theoretical angular distribution of coincidences could be calculated and agreed well with the experiment. This effect explains why, in the measurement of cosmic radiation, an excess of twofold over threefold coincidences is obtained. H. Newcombe

GIERULA, J.

"A multidiamond scintillation counter" p. 330 (postępy fizyki, Vol. 4, No. 3, 1953,
Warszawa)

SO: Monthly List of ~~Books~~ Accessions East European Vol. 3, No. 3 Library of Congress, March ⁴ 195~~3~~, Uncl.

GIERULA, J.

DELAYED DECAY OF HEAVY FRAGMENTS EJECTED FROM COSMIC RAY STARS. P. Glik, M. Danyal, and J. Gierula (Inst. P. Warsaw, Poland). Nuovo cimento (9) 11: 438-44(1954) May. (in English).

Data concerning seven cases of production and decay of unstable nuclear fragments are compared, and different interpretations discussed. In all the seven cases the unstable fragments are produced in interactions the energy of which is in the range from a few to some tens of bev and which correspond to more or less central collisions of a neutral or singly charged particle with a heavy nucleus in the emulsion. The life time of the unstable fragments is longer than 10^{-11} sec. The evaluation of the total energy released in their decay is consistent with a unique Q value of 175 Mev but not with the value of 140 Mev. Energy distribution among the charged secondaries shows a marked nonuniformity. In the majority of cases no mesons are observed to be emitted among these secondaries. Considering the two modes of decay of a V_1 particle within the nucleus, the mesonic and non-mesonic decay, all the discussed features of the seven cases support the bound V_1 hypothesis. (auth)

10-28-54
RNF

GIERULA, J.

POLON

539.18

A possible reaction of decay in flight of a
hyperon Λ^0 into Σ^0 and π^0 is
discussed. The hyperon Λ^0 is assumed to be
produced in a nuclear reaction, e.g.,
 $p + p \rightarrow p + p + \Lambda^0$.

The hyperon Λ^0 is observed to
decay into Σ^0 and π^0 and its
lifetime is estimated to be 10^{-10} sec. The latter
assumes that the event is a single
hyperon Λ^0 and that the decay is a single
hyperon Λ^0 and that the mass of the primary is
 1.115 GeV .

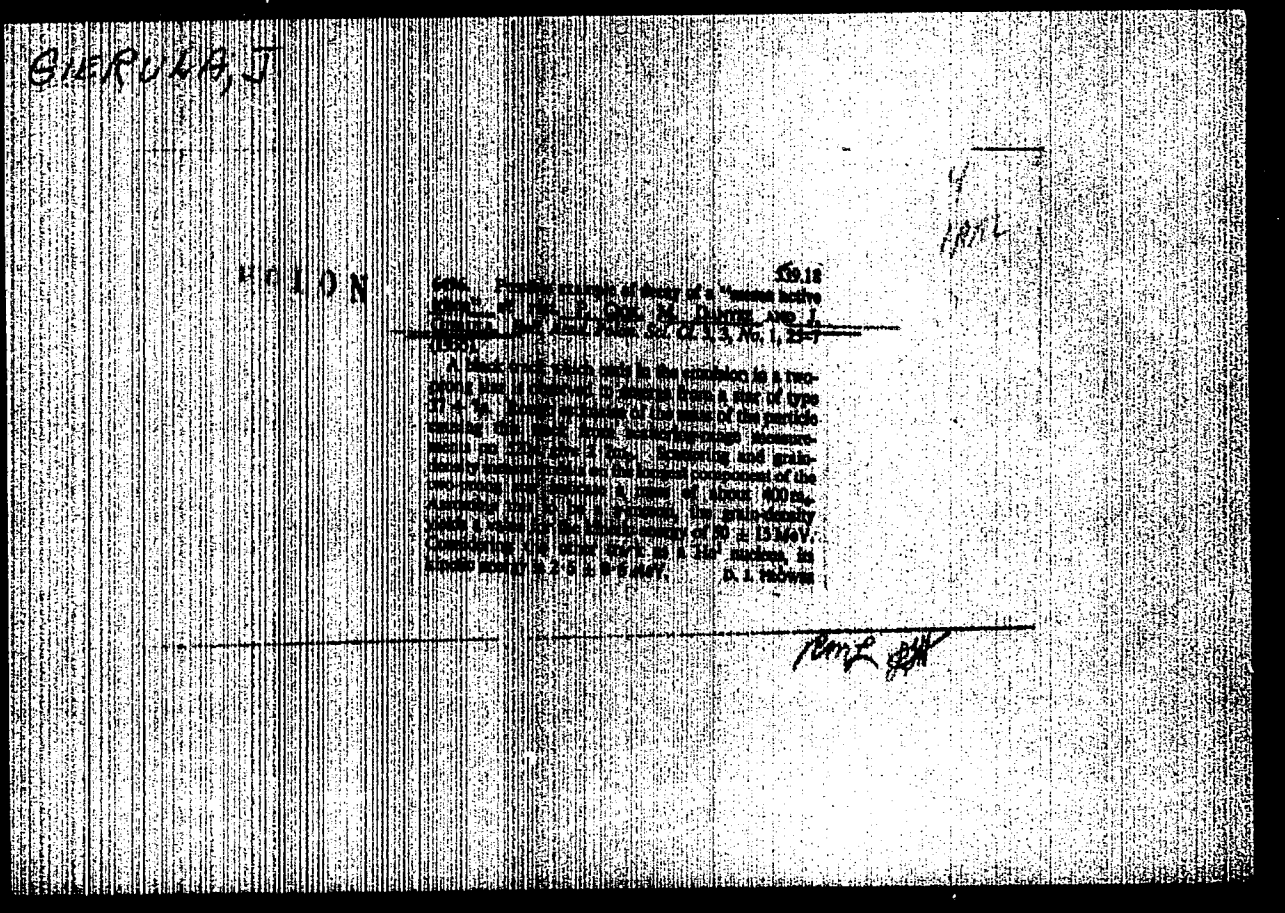
The decay scheme $\Lambda^0 \rightarrow \Sigma^0 + \pi^0$

is discussed. On this basis the Q-value is

$Q = 1.115 \text{ GeV} - 1.193 \text{ GeV} = 0.022 \text{ GeV}$

and the mass of the hyperon
is 1.115 GeV , the time of flight being 3×10^{-11} sec.
D. S. ROY

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GIERULA, J.

Methods of the scintillation gamma-ray spectroscopy. p. 114
(Pokroky Matematiky, Fysiky A Astronomie, Vol. 2, no. 1, 1957. Praha,
Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 10, October 1957. Uncl.

19

~~Nuclear-nucleon interaction with energy greater than 10^{14} e.v. P. Chm, M. Danyś, J. Gierula, A. Jurak, M. Miśkiewicz, J. Piłchowski, J. Wójcik. *Acta Phys. Polon. B*, Nuclear Research, Warsaw, (1987).—An event of very high energy of 3.3×10^{14} e.v. was discovered in a track of emulsion irradiated at high altitudes. Allen I. Cohen~~

10
 463c (2)
 YE3d

Paul

POLAND/Nuclear Physics - Elementary Particles

C-3

Abs Jour : Ref Zhur - Fizika, No 4, 1959, No 5115

Author : Filipkowski A., Gierula J., Zielinski P.
Inst : Institute of Nuclear Research, Warsaw, Poland
Title : Survey of the Hyperfragment Experimental Data

Orig Pub : Acta phys. polon., 1957, 16, No 1-2, 139-150

Abstract : From the 120 decays of hypernuclei known in the literature, 72 decays are chosen that are known to be without any doubt. On the basis of an analysis of these decays, certain statistical conclusions are drawn relative to the generation, decay, binding energy, structure, and lifetime of hypernuclei. Tables are given that facilitate the determination of the binding energy of a Λ^0 hyperon in light hypernuclei.

Survey of the Hyperfragment Experimental Data

Card : 1/1

POLIND/Nuclear Physics - Cosmic Rays

C-7

Abs Jour : Ref Zhur - Fizika, No 4, 1959, No 5266

Author : Gierula J.

Inst : -

Title : Collision of a Nucleon with Energy of Approximation 3×10^{14}
ev with a Nucleon in Photoemulsion

Orig Pub : Postepy fiz., 1958, 9, No 1, 91-93

Abstract : A photograph of a nuclear star is presented, observed during
the exposure of a stack of emulsions.

Card : 1/1

GIERULA, I.

P/046/60/005/011/012/018
D249/D303

AUTHORS: Gierala, J., Miesowicz, M., and Zielinski, P.

TITLE: Double maximum angular distributions in high energy nuclear collisions

PERIODICAL: Nukleonika, v. 5, no. 11, 1960, 786

TEXT: Abstract - Report No. 146/VI (IBJ - Institute of Nuclear Research, PAS). A detailed statistical analysis of the shape of the angular distribution of secondary particles generated in 65 nuclear collisions for primary energies higher than 10^{12} eV has been presented. The double maximum shape of the distribution (in the coordinate $\log \tan \theta$) is a general feature of the events with a high degree of anisotropy of secondaries in the CM system. It has been found that the shape of the angular distribution is in agreement with the predictions of the two-center model of multiple meson production both for nucleon-nucleon and nucleon-heavy nucleus collision. A new parameter D , which is a measure of the deviation from the normal shape of the distribution towards the two-center

P/046/60/005/011/012/018

Double maximum angular distributions .. D249/D303

distribution and also a coordinate convenient for visualizing this deviation, have been introduced. [Abstractor's note: Full version]. ✓

ASSOCIATION: Cosmic Ray Department, Institute of Nuclear Research, Cracow; General Physics Department, School of Mining and Metallurgy, Cracow (J. Gierula, and M. Mięslowicz); Cosmic Ray Department, Institute of Nuclear Research, Warsaw; Physics Department, University of Warsaw, Warsaw (P. Zieliński)

Card 2/2

AUTHORS: Gierula, J., Miesowicz, M., P/045/60/019/01/008/008
Zieliński, P. BO18/B000

TITLE: Statistical Significance of Double Maximum Angular Distribution
in High-energy Jets

PERIODICAL: Acta Physica Polonica, 1960, Vol 19, Nr 1, pp 119-121 (Poland)

ABSTRACT: This is a letter to the editor. It was found that the angular distribution of secondary particles emitted in collisions of high-energy nucleons with nucleons or nuclei have the characteristic shape of two symmetric maxima in the coordinates dN/dx versus $\log \tan \Theta_1$ (Θ_1 denoting the angles between the direction of the secondary particles and the primary direction of the bombarding nucleon). On the other hand the hydrodynamic theories predict Gaussian distributions. For an explanation the authors introduced the so-called two-center model. The analysis was made on 56 jets. The two-center model allows to explain the distribution to be a superposition of two separate Gaussian curves. It turned out that the two maxima could be observed only for dispersions greater than 0.6. The authors therefore divided the jets in two classes: 21 events with dispersion smaller than 0.6 and 35 events with the same quantity greater than 0.6 (Fig 1). From table 1 it follows that the existence of the double-maximum angular distribution may be regarded as statistically well

Card 1/2

Statistical Significance of Double Maximum Angular
Distribution in High-energy Jets

P/045/60/019/01/000100
B018/B000

established. Thus, the two-center model proved to be a convenient hypothesis. The authors thank Professor N. Dobrotin for having sent the angular distributions of jets from collaborating laboratories, and they also express their gratitude to Dr. D.H. Perkins for the material from the H.H. Wills Laboratory, Bristol. There are 1 figure, 1 table, and 7 references, 2 of which are Soviet.

ASSOCIATION: Institute of Nuclear Research Kraków, and Warszawa General Physics Department, School of Mining and Metallurgy, Kraków

SUBMITTED: February 22, 1960

Card 2/2

S/058/62/000/010/028/093
A061/A101

AUTHORS: Gierula, Jerzy, Holyński, Roman, Mięslowicz, Marian
TITLE: Interactions of nucleons of energies higher than 10^{12} ev with heavy photoemulsion nuclei
PERIODICAL: Referativnyy zhurnal, Fizika, no. 10, 1962, 31, abstract 10B244
(Rept. Inst. badań Jądrow. PAN", 1961, no. 291/VI, 7 pp., illust., English; summaries in Polish and Russian) ✓

TEXT: The angular distributions of secondary particles of 14 showers of primary energies higher than 10^{12} ev and characterized by large evaporation and high multiplicity ($N_p > 8$, $n_s > 40$) have been investigated. A very clear double-humped angular distribution has been established in central collisions of nucleons with heavy nuclei. This effect grows constantly in proportion to the anisotropy increase of the angular distribution. In showers, in which the narrow and the broad cone are completely separated, asymmetry is observed in the number of particles and in the distribution shapes of these cones. These facts can be

Card 1/2

Interactions of nucleons of...

S/053/62/000/010/028/093
A061/A101

explained by the two-center model, if account is taken of secondary interactions between particles emitted by a "slow" center and the target nucleus.

[Abstracter's note: Complete translation]

Card 2/2

GIERULA, J.; HOLYNSKI, R.; MIESOWICZ, M.

Interactions of nucleons with heavy nuclei of photographic emulsions at energies higher than 10^{12} eV. Acta physica Pol 22 no.4:329-334 0 '62.

1. Institute of Nuclear Research, Laboratory of High Energy Physics, Krakow Department, Krakow, and 2d Department of Physics, Academy of Mining and Metallurgy, Krakow.

GIERULANKA, Danuta

Roman Ingarden. Nauka Polska 10 no.1:93-97 Ja-F '62.

1. Uniwersytet Jagiellonski, Krakow.

GIERULAXX, J.

JAUSS, L.
21(1)

PHASE I BOOK EXPLOITATION
International Conference on Cosmic Radiation. Budapest, 1956.
International Conference on Cosmic Radiation Organized by the Hungarian Academy of Sciences. Budapest, 1957. 187 p.
300 copies printed.

Sponsoring Agency: Magyar Tudományos Akademia

Eds.: E. Pusvas, and A. Somogyi

PURPOSE: This report is intended for geophysicists concerned with cosmic radiation.

CONTENTS: This report contains the six plenary sessions of the conference. Some of the problems dealt with include nuclear emulsions, extensive air showers and the program of cosmic ray measurements planned for the International Geophysical Year. Most of the reports are followed by references. Soviet scientists in the field of cosmic radiation attended the conference are: E. L. Andriushin, E. M. Bobrov, I. I. Gerasim, S. I. Khokhlov, and M. Vernov. The articles are written in English, German and Russian without parallel translations.

Card 1/6

HW/1911

International Conference (Cont.)

5. Friedlander, E.H. A High Energy Neutron Shower With an Anomalous Angular Spread 140

FIFTH SESSION

- 1. Pilekowsk, A.J., Gierulaxx, and P. Zielinski. Survey of the Experimental Apparatus and Data. Some Heavy Neutron Events Observed With a Multiplate Cloud Chamber 172
- 2. Friedlander, E.H., and E.H. Rayer. Some Remarks on the Possible Gamma Decay of the T-Meson 177
- 3. Petrlik, V. New Measurements of the Life Time of π^+ -Mesons From Anomalous Absorption Using a Graphite Absorber and Nuclear Emulsions 178
- 4. Kiss, D. Measurements of the Life Time of π^+ -Mesons by Charged Particles of Spin 1/2 and 0 in an External Field 184

Card 5/6

COUNTRY : Poland
CATEGORY : Forestry, Forest Management
ABS. JOUR. : RZhBiol., No. 14 1959, No. 43221
AUTHOR : Hieronimowski, Tadeusz
LIST. :
TITLE : The Variability of Valuation Indices of Trees in Spruce Stand Under Mountain and Plain Conditions (Preliminary Report)
ORIG. PUB. : Sylwan, 1956, 1102, No. 3, 10-13
ABSTRACT : Variability of the following was studied in three experimental areas: diameter at breast height and at the middle of the stem, height, species number, form coefficient, crown extension and volume of hole (Poland). Volume of hole turned out to be most variable (coefficient of variability of 50.0%), and the form coefficient was least variable (coefficient of variability of 5.0%). The variability of valuation indices according to degree of thickness was lower than in total mass of the stand. The largest difference in variability of valuation indices according to degree of thickness as compared with variability in total mass of the stand appears in
Cana: 1/2

COUNTRY :
CATEGORY :

ABS. JOUR. : *Botanika*, No. 14 1959, No. 6321

AUTHOR :
TITLE :

ORIG. PUB. :

SUBJECT : The following order: volume of hole, diameter at
middle of stem, and height. The smallest divergence
is observed for species number and form coefficient.
Substantial differences in nature of variability of
valuation indices in mountain and plain plantings
are not observed.--S. A. Bryzhev

CARD: 2/2

GIERUSZYNSKI, TADEUSZ

K-3

POLAND/Forestry - Forest Management.

No. Jour : *Les Arbres* - 1961, No. 20, 1961, 91/24

Author : Gieruszynski, Tadeusz

Institution : Structure and Growth Variability in Spruce Plantations
Under Different Ecological Conditions (Poland).

Orig. Pub : *Sylvius*, 1961, No. 3, 1961.

Abstract : No abstract.

Card 1/1

- 21 -

GIEBUSZYŃSKI, T.

Once more on inadmissible forms of criticism. p. 71

SYLMAN (Wydział Nauk Rolniczych i Lesnych Polskiej Akademii Nauk i Polskie
Towarzystwo Lesne) Warszawa, Poland. Vol. 103, no. 3, Mar 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 9, September 1959.
Uncl.

GIERUSZYNSKI, Tadeusz, professor

Centre for Forestry Research. Review Pol Academy 6 no.1:69-71
Ja-Mr '61.

1. Head, Center for Forestry Research. The address of the Center:
Kracow, Ojcowska 1.

(Polish Academy of Sciences) (Poland--Research)
(Poland--Forests and forestry)

1. The following information is derived from the

Origin of the information is as follows: The information is derived from the

information is derived from the information is derived from the information is derived from the

GIERYNG, Roman

Post-embryonal development of the central nervous system of
Diptera . Part 1. Ann. Univ. Lublin sect. D 19:377-393 '64.

1. Katedra i Zaklad Biologii Ogolnej, Wydzial Lekarski AM
w Lublinie (Kierownik: doc. dr. Wanda Stojalowska).

GIERZYNSKA, Monika, mgr., inż.

Analysis of factors influencing the durability of forging dies.
Mechanik 34 no.1:24-29 '62.

1. Politechnika Czestochowska.

Giese, F.

Maintenance of artificial grindstones. p. 214. PAPIR A CILNICA.
(Ministerstvo lesu a drevarskeho prumyslu) Praha. Vol. 9, no. 10,
Oct. 1954

SOURCE: EEAL - IC Vol. 5 No 10 Oct. 1956

Giese, E.

Maintenance of artificial grindstones. p. 237. FAJIP A CELULOSA.
(Ministerstvo lesu a drevarskeho prumyslu) Praha. Vol. 2, no. 11,
Nov. 1954.

SOURCE: EEAL - LC Vol. 5 No. 10 Oct. 1956

GIEBLYKIEWICZ, J.

Kleszczynska I., Stanowski, J., Bisek, A., Gutwinski, H., Wilkon, P.

Flasbert, E., Borzek, K., Lebrzynska, J.

Miejskiego Zaklad Badan Serca, Krakow. *Niewydolnosc wiekowa insufficiency
and heart infarct from the social - clinical and statistical points of view
Arch. Med. 1951, 54/2 (221-232) Graphs 2 Tables 5

Coronary circulation disorders appear primarily in occupations with a disproportionate of mental work but also in occupations, subject to harmful environmental influences resulting from an abnormal mode of living and working. These influences, disturbing the higher function of the nervous system, are important causal factors in coronary disease. Authors

So: Acta Medica, Vol. 1, No. 3, Section III, February 1951,

MARECKI, Jacek, dr inż.; GIESZCZYKIEWICZ, Stefan, mgr inż.

Economic scope of heat supply in centralized production by
small heating and power stations. Gosp paliw 11 no.8:288-282
'63.

1. Politechnika, Gdansk.

GIETKA, JAN

Poland/Pharmacology. Toxicology. Hormones.

V-8

Abs Jour : Ref Zhur-Biol., No 6, 1958, 28168.

Author : Gietka Jan.

Inst : Not given.

Title : Local Therapy of Rheumatic Diseases with
Hydrocortisone.

Orig Pub : Przegl. lekar, 1957, 13, No 6, 175-180.

Abstract : No abstract.

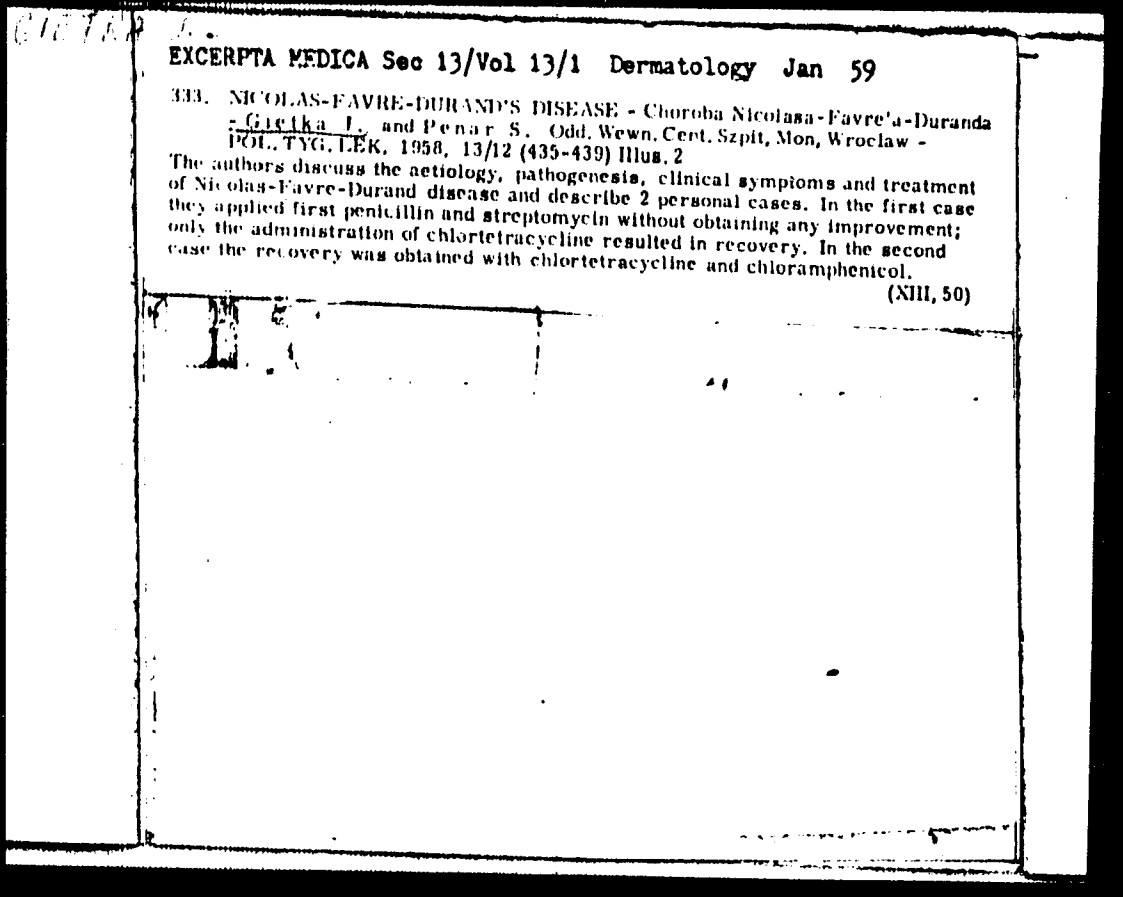
Card 1/1

EXCERPTA MEDICA Sec 19 Vol 2/5 Rehabilitation May 59

1081 Morton's metatarsalgia Choroba Mortonowa (metatarsalgia). GUŁKA J. Centr. Parady. Przewracumat., Warszawa *Wiad. Lek.* 1958, 11/8 (315-350)

The pathology of Morton's metatarsalgia is briefly discussed on the basis of investigations by various authors appearing in the literature up to 1956. The present author sees the source of this disease in many conditions such as neuromas, local ischaemias, arthrosis of the metatarso phalangeal joints, rheumatoid arthritis, and gout. Observations on 20 cases of Morton's metatarsalgia are given, and a variety of symptoms reported. In this series only conservative treatment was applied using local 2% procaine injections (in 13 cases) or 2% procaine injections with 25 mg. cortisone acetate weekly (7 cases). Complete relief from pain in 17 cases is reported.

Wozny - Poznan



GIEKA, Jan

Nocturnal acroparesthesia of the upper extremities. Polski tygod.
lek. 13 no.17:631-636 28 Apr 58

1. (Z Oddz. Wewn. Centr. Szpitala M.O.N.; kier. prof. dr med.
Mieczyslaw Kedra i Centr. Poradni Przeciw reumatycznej w Warszawie
kier.: dr med. Halina Znajewska-Zarembina) adres: Warszawa, Centr.
Szpital MCH, ul. Koszykowa.

(PARESTHESIA,
acroparesthesia (Pol))

GIETKA Jan, (Warszawa, ul. Koszykowa 78. Szpital MON, oddz. Wewn.)

Lofgren syndrome. Polski tygod. lek. 13 no.42:1622-1626 20 Oct 58.

1. (Z Oddz. Wewn. Centr. Szpitala MON; kier. nauk: prof. dr. med.
M. Kedra)

(LYMPH NODES, dis.

Lofgren synd. (Pol))

(ERYTHEMA NODOSUM
same)

RYBYPTA MEDICA Sec 6 Vol 13/2 Internal Med. Aug 59

4859. WEBER-CHRISTIAN SYNDROME (PANNICULITIS NODULARIS FEBRILIS RECIDIVANS NONSUPPURATIVA, PANNICULITIS RECIDIVANS) - Zespót Webera-Christiana. (Panniculitis nodularis febrilis recidivans nonsuppurativa, panniculitis recidivans) - Gietka J., Oczkowski S. and Grabowski T. Warszawa - POL. ARCH. MED. WEWNĘT. 1958, 28/3 (377-395) Illus. 8

Three cases are described. Panniculitis recidivans is a syndrome induced by an allergic reaction to various factors, similar to the one appearing in rheumatic disease. In the 2nd and 3rd case the women patients had articular pains; in the 1st and 3rd case an acute inflammation of the naso-pharyngeal cavity was preceded by an appearance of s. c. nodules. In one woman patient 3 relapses of the disease appeared in the course of 20 yr. In this case a rapid improvement was obtained after the application of ACTH and cortisone. The 1st and 3rd case were classified as Weber-Christian syndrome, and the 2nd case was defined as Rothmann-Makar's syndrome. A great similarity between Weber-Christian's syndrome and erythema nodosum and Bazin's erythema induratum was noted. A histopathological examination is necessary in every case of nodular lesions in the s. c. tissue. A certain number of cases of Weber-Christian syndrome is erroneously diagnosed as non-typical erythema nodosum or erythema induratum.

~~(LIECKA Jan: GRABOWSKI, Tadeusz~~

Recurrent hyperbilirubinemia following viral hepatitis. Polski tygod.
lek. 14 no.27:1237-1243 6 July 59.

1. (Z Oddz. Chorob Wewn. Centralnego Szpitala M. O. H; kier: prof.
dr med. Mieczyslaw Kedra).

(HEPATITIS, INFECTIONS, compl.) (BILIRUBIN, blood)

GIETKA, Jan; KOZIOWSKI, Piotr

Posterior cervical syndrome of Barre-Lieou. Polskie arch.med.
wewnierz. 30.1:65-75 '60.

1. Z Oddz. Wewn. II Centralnego Szpitala Klinicznego W.A.M.
Kierownik: doc.dr.med. S. Bober. Z Wojewodskiej Poradni Prze-
ciwreumatycznej w Warszawie. Dyrektor: dr.med. H. Znajewska-
Zarembina. Z Pracowni Radiologicznej II Centr. Szpit.Klin.
W.A.M. Kierownik: dr.med. A. Kaczurba.

(SPINE dis.)

(SYMPATHETIC NERVOUS SYSTEM dis.)

GIETKA, Jan

Therapy of articular rheumatism with butazolidine (according to observations of 98 patients.). Polski tygod. lek. 15 no.19:714-718 9 My '60.

1. Z Oddziału Chorob Wewnętrznych 2 Centralnego Szpitala
Klinicznego WAM w Warszawie; 1 z Wojewódzkiej Poradni Przeci-
wreumatycznej; kierownik: dr. med. Halina Znajewska-Zarembina.
(PHENYLBUTAZONE ther.)
(ARTHRITIS RHEUMATOID ther.)

CZAPLICKI, Sylwester; GIETKA, Jan

Complications in glucocorticoid and ACTH therapy. Polskie arch.
med.wewn. 30 no.6:771-772 '60.

1. Z Oddz. Chorob Wewn. 2 Centr. Szpitala Klin. WAM. Kierownik:
prof. dr M.Kedra, pozniej doc. dr S.Bober
(ADRENAL CORTEX HORMONES toxicol)
(CORTICOTROPIN toxicol)

GIETKA, Jan; KRZAKOWSKI, Zenon

Acute articular rheumatism in adults following tonsillitis.
Polski tygod. lek. 16 no.52:2015-2019 25 D '61.

1. Z Oddziału Chorob Wewnętrznych 2 Centralnego Szpitala Klinicznego
WAM w Warszawie; kierownik naukowy: prof. dr med. St.Bober.
(TONSILLITIS compl) (RHEUMATIC FEVER etiol)

POLAND

ROBER, Stanislaw, HUCSMANOVA-PETKUSIEWICZ, Irena, and HLEBA, Jan; Chair and Clinic of Internal Diseases (Instytut i Klinika Chorob Wewnętrznych), Second Central Clinical Hospital (2 Centralny Szpital Kliniczny), WAM [Wojskowa Akademia Medyczna, Military Medical Academy] (Director: Prof. Dr. med. Stanislaw ROBER) and the Neurological Clinic (Klinika Neurologiczna), AM [Akademia Medyczna, Medical Academy] (Director: Prof. Dr. med. Irena HUCSMANOVA-PETKUSIEWICZ).

"Coexistence of Paroxysmal Paralysis with Hypothyroidism. Case Report."

Warsaw, Polski Tygodnik Lekarski, Vol 15, No 47, 1974, pp 991-993.

Abstract: [Authors' English summary] Article describing a case of a 40-year old man with recurring periodic paralysis of paralysis, which became more acute and frequent when hypothyroidism developed. Achievement of euthyroidism reduced the acuteness and frequency of attacks, and no paroxysms were noted during hypothyroidism. The authors discuss the connection between periodical paralysis and hypothyroidism. The 26 references contain one in Polish, two in German, and the others in English.

1/1

BAFANSKA, Wanda; GIETKA, Jan

Studies on the effect of butazolidine on thyroid morphology
in the rat. Reumatologia (Warsz.) 2 no.1:55-67 '64.

1. Z Zakładu Histologii i Embriologii Akademii Medycznej w
Warszawie (Kierownik: doc. dr med. K. Ostrowski) i z Kliniki
Chorob Wewnętrznych 2 C. Szpitala Klin. Wojskowej Akademii
Medycznej w Łodzi (Kierownik: prof. dr med. S. Bober).

GIB'63, Jan, KASABOWSKI, Zenon

Hi joint changes consecutive to the treatment of chronic
prolongive rheumatism with adrenal cortex hormones. Reumatologia
(Warsz.) 2 no. 2 243-249 '64.

Dr. J. Katedry i Kliniki Chorob Wewnętrznych, 2 Centr. Szpit.
Klin. Wojskowa Akademia Medycyna w Warszawie (Nierownik: prof.
dr med. S. Jecher).

GIETKA, Jan; KRZAKOWSKI, Zenon

Clinical and therapeutic aspects of Weber-Christian syndrome.
Pol. tyg.lek. 19 no.6:216-219 3 P'64

1. Z Katedry i Kliniki Chorob Wewnętrznych 2 Centralnego
Szpitala Klinicznego WAM w Warszawie; kierownik: prof.dr.
med. S.Bober.

*

Hilinski, J. (1970) ...

... immunoprecipitates and electron-microscopic reactions in the presence of anti-streptococcal serum. Dokl. Akad. Nauk. 210:153-155.

... Institute of Microbiology, Academy of Sciences of the USSR, Leningrad.

W. H. HOFF, Wydział: Glizologia

A case of rheumatic fever with multi organ disease in an adult patient. Pol. Tyf. lek. 19 no.24:920-921 8 Dec 1974.

1. Kliniki Chorob Wewnętrznych 2 Centralnego Szpitala
Klinicznego i Państwowej Akademii Medycznej (Kierownik: prof.
dr n. s. J. Bielecki).

G... ..

Effect of
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Szpitala Klinicznego Wojskowej Akademii Medycznej (Kliniczny prof.
dr. med. S. Bober).

GIETKA, Jan

Effect of butazolidin on the gastric mucosa (attempted clarification of the mechanism of ulcer following the administration of butazolidin. II. Behavior of mucopolysaccharides in the gastric mucosa. Pol. arch. med. wewniet. 34 no.5:555-564 '64

GIETKA, Jan; BAKUSKA, Hanna

2 cases of Cattan's liver cirrhosis. Wiad. lek. 18 no.8:693-698
15 Ap '65.

1. Z Katedry i Kliniki Chorob Wewnętrznych 2. Centralnego
Szpitala Klinicznego Wojskowej Akademii Medycznej w Łodzi
(Kierownik: prof. dr. med. S. Bober).

GIETKA, Jan; KUZMINSKA, Dorota

Goiter die to butazolidin. Wiad. lek. 18 no.10:857-860 15 My '65.

1. Z Katedry i Kliniki Chorob Wewnętrznych 2. Centralnego Szpitala
Kliniki Wojskowej AM (Kierownik: prof. dr. med. S. Bober).

HABANSKA-PEWLOWSKA, Hanna; GIETKA, Jan; KEYSKO, Tofia

Electrophoretic determination of proteins in the synovial fluid and blood serum and of amino acids in the synovial fluid of chronic forms of rheumatism. Reumatologia (Warsz.) 3 no.2:117-125 1965.

z Katedry i Kliniki Chorob Wewnętrznych 2 Centr. Szpit. Klin. Wojskowej AM (Kierownik: prof. dr. med. S. Bober) i z Pracowni Klinicznej 2 Centr. Szpit. Klin. Wojskowej AM (Kierownik: lek. N. Symonowicz).

GIETKA, Jan; KOZŁOWSKI, Piotr

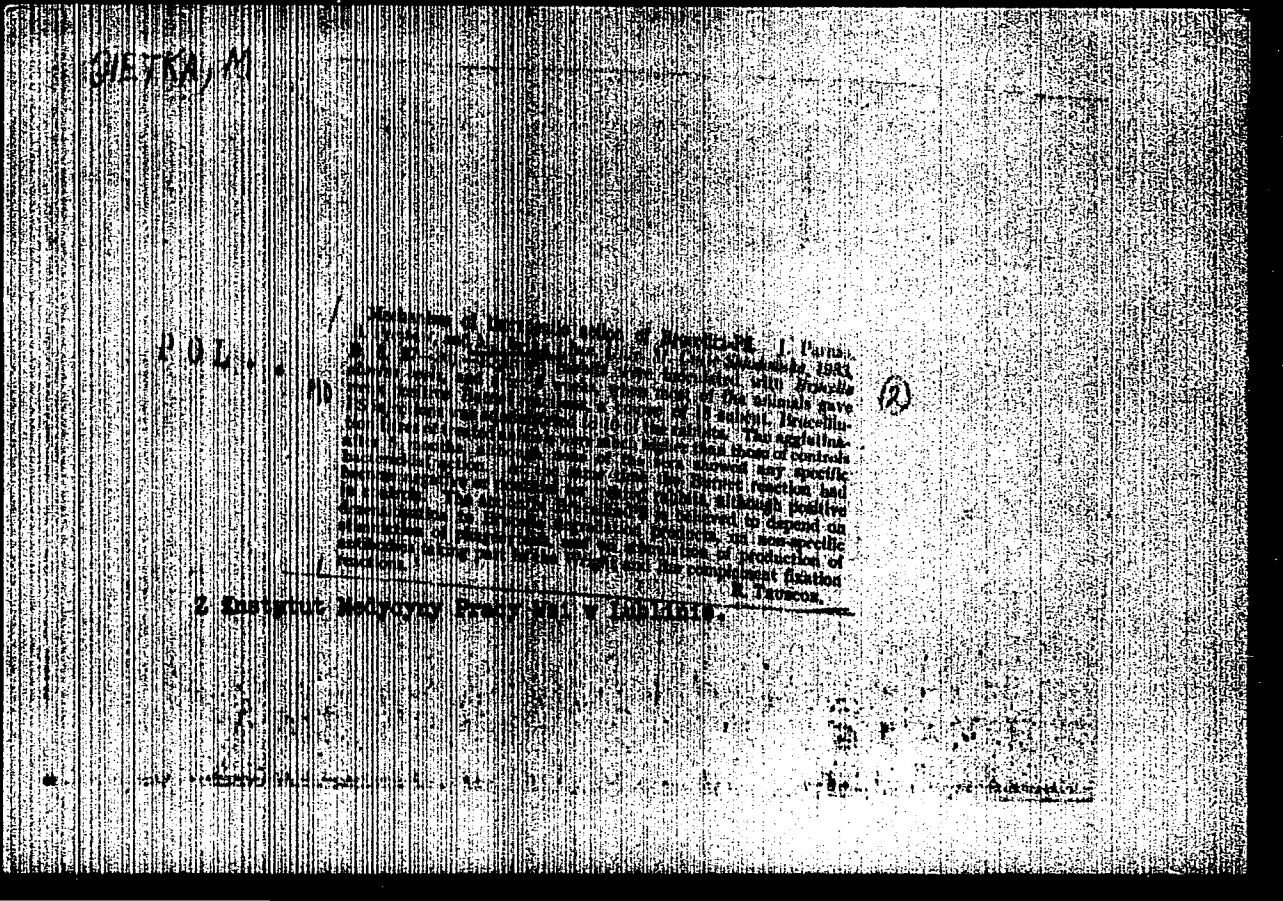
Pain syndrome of the brachial joint in relation to degenerative changes in claviculo-brachial joint. Pol. przegl. radiol. 29 no.4: 381-386 Ill-fig 165.

1. z Katedry i Kliniki Chorób Wewnętrznych Centralnego Szpitala Klinicznego Wojskowej AM w Warszawie; prof. dr. med. J. Roberg, z Wojskowej Poradni Reumatologicznej w Warszawie; kierownik: dr. med. H. Szajewska-Jurek; oraz z Zakładu Radiologii Centralnego Szpitala Klinicznego Wojskowej AM w Warszawie; (Pierwszy) dr. med. A. Kucurbał.

GIECKA, Jan; WOLKWA, Przemysław

Long-streptococcal syndrome in clinical infectious diseases.
Wiad. lek. 18 no.16:1285-1289 15 S 1965.

1. S. Katedry i Kliniki Chorob Wew. i Centr. Szpital Klin.
Wojskowej AM (kierownik: prof. dr. med. S. Rober).



GIETKA, Marian; TOMASZEWSKI, Leszek

Fanconi-de Toni-Debre syndrome in a 16 month old girl. *Pediat. polska*
32 no.7:837-840 July 58.

1. Z Kliniki Terapii Chorob Dzieci A. M. w Warszawie Kierownik: prof.
dr med. H. Brokman i z Laboratorium Oddziału Pediatrycznego A. M. w
Warszawie Kierownik: dr med. L. Tomaszewski. Adres: Warszawa, ul.
Działdowska 1/3.

(METABOLIC DISEASES, in inf. & child
Fanconi's rachitic synd., case report (Pol))

GINTKO, Marian (Warszawa, ul. Dzialdowska 1/3)

Arthrogryposis multiplex congenita. *Pediat. polska* 33 no.2:201-204
Feb 58.

1. Z Kliniki Terapii Chorob Dziecięcych A.M. w Warszawie. Kierownik
prof. dr med. H. Brokman.

(JOINTS, abnorm.

arthrogryposis multiplex, case report (Pol))

GIFKO, Marian (Warszawa, ul. Działdowska 1/3)

Recognition of staphylococcal anginas and evaluation of certain associated conditions. *Pediat. polska* 34 no.3:287-292 Mar 59.

I. Z Kliniki Terapii Chorob Dzieci A. M. w Warszawie Kierownik:
prof. dr med. H. Brokman.

(TONSILLITIS, etiol. & pathogenesis,
micrococcal infect. in child. (Pol))

(MICROCOCCAL INFECTION, in inf. & child.
causing tonsillitis (Pol))

GIEPKO, Marian

Observations on the course and therapy of primary tuberculosis in children. *Pediat.polska* 34 no.11: 1413-1422 '59.

1. Z Poradni Przeciwgruźliczej dla Śródmieścia Warszawy. Kierownik:
dr.med. Z. Kowalski.

(TUBERCULOSIS PULMONARY in inf.& child.)

BROKMAN, Henryk; CHMIELEWSKA, Danuta; GIETKA, Marian; GUTKOWSKA, J.

Effect of tuberculous sera on the growth of staphylococcal strains.
Postępy hig. med. dosw. 16 no.3:597-604 '62.

1. Z Kliniki Terapii Chorob Dzieci AM w Warszawie Kierownik: prof. dr
H. Brokman.

(STAPHYLOCOCCUS)

(TUBERCULOSIS)

GIETKA, Marian

Analysis of the etiology of erythema nodosum in children based
on our observations. Gruzlica 31 no.1:1-6 '63.

I. Z Kliniki Terapii Chorob Dzieci AM w Warszawie Kierownik:
prof. dr med. H. Brokman.

(ERYTHEMA NODOSUM)
(TUBERCULOSIS IN CHILDHOOD)
(TUBERCULIN REACTION)

GIETKA, Marian; OKOLSKA, Wanda; ZMUDZKA, Barbara

Bacteriological studies in infections of the urinary system
in children. *Pediat. pol.* 38 no.2:125-132 '63.

1. Z Kliniki Terapii Chorob Dzieci AM w Warszawie Kierownik:
prof. dr med. H. Brokman i z Laboratorium Zespołu Klinik
Pediatricznych Wydziału Pediatricznego AM w Warszawie
Kierownik: dr med. L. Tomaszewski.

(URINARY TRACT INFECTIONS)
(ESCHERICHIA COLI INFECTIONS)
(PROTEUS INFECTIONS)
(STAPH INFECTIONS)
(AEROBACTER AEROGENES)
(STREPTOCOCCAL INFECTIONS)
(MYCOSES)

GABLER, Barbara; GIETKA, Marian

Contribution to the prognosis in cases of diseases of the myocardium and endocardium in infants. *Pediat. pol.* 38 no.4: 399-403 '63.

I. Z Kliniki Terapii Chorob Dzieci AM w Warszawie Kierownik:
prof. dr med. H. Brokman.

(ENDOCARDIAL FIBROELASTOSIS)
(MYOCARDITIS) (PROGNOSIS)

GIETKA, Marian

Observations on prolonged antibacterial therapy of chronic
and recurrent infections of the urinary tract. *Pediat. pol.*
38 no.6:537-543 Je '63.

1. Z Kliniki Terapii Chorob Dzieci AM w Warszawie Kierownik:
prof. dr med. H. Brokman.

(URINARY TRACT INFECTIONS) (NITROFURANTOIN)
(SULFONAMIDES)

GIETKA, Marian; SIENIAWSKA, Maria

Difficulties in the differential diagnosis of the early stages
of some collagen diseases. *Pediat. pol.* 38 no.9:799-806 S '63.

1. Z Kliniki Terapii Chorob Doleci AM w Warszawie Kierownik:
prof. dr med. H. Brokman.

(ARTHRITIS, RHEUMATOID) (LUPUS ERYTHEMATOSUS, SYSTEMIC)
(DERMATOMYOSITIS) (RHEUMATIC HEART DISEASE)
(DIAGNOSIS, DIFFERENTIAL) (BLOOD CELL COUNT)
(BIOPSY)

GIETKA, Marian; SIENIAWSKA, Maria

Exacerbation of latent and chronic glomerulonephritis in
children. *Pediat. pol.* 38 no.9:807-810 S '63.

1. Z Kliniki Terapii Chorob Dzieci AM w Warszawie Kierownik:
prof. dr med. H. Brokman.

(GLOMERULONEPHRITIS)

GIETKA, Marian; KOTARBINSKA, Barbara

On some causes of habitual vomiting in infants. *Pediat. pol.* 38
no.10:869-873 0 '63.

1. Z Kliniki Terapii Chorob Dzieci AM w Warszawie Kierownik:
prof. dr med. H. Broknan i z Zakladu Radiologii Peditrycznej
AM w Warszawie Kierownik: prof. dr med. K. Rowinski.
(VOMITING) (CARDIOSPASM)
(DIAGNOSIS, DIFFERENTIAL)

GILTKA, Marian; GULEWSKA, Jadwiga; LARGER, Hanna

Causes of failure in the treatment of staphylococcal infections
in children. *Pediat. Pol.* 29 no.5:511-518 My '64.

1. z Kliniki Terapii Chorób Dzieci Akademii Medycznej w Warszawie
(Kierownik: doc. dr. med. H. Łaszczyk-Kobierska) i z Laboratorium
Zespołu Klinik Pediatrycznych Wydziału Pediatrycznego Akademii
Medycznej w Warszawie (Kierownik: dr. med. I. Tomaszewski).

GIETKO, M.; GUTKOWSKA, J.; LANGBROWA, H.

Clinical value of the determination of anti-staphylolysins in staphylococcal infections in children. *Pediat, polska* 35 no.4: 385-394 Ap '60.

1. *Z Kliniki Terapii Chorob Dzieci A.M. w Warszawie*, Kierownik: prof. dr med. H. Brokman.
(STAPHYLOCOCCAL INFECTIONS diag.)

3

~~CONFIDENTIAL~~

TO: DIRECTOR

FROM: SAC, [illegible]

RE: [illegible]

DATE: [illegible]

CLASSIFICATION: [illegible]

1. [illegible]

[illegible]

GIETKO, Marian; SŁOMOWNA-WALEJKO, Barbara; STOKOWSKI, Leonard

A case of staphylococcal septicemia with pericarditis. *Pediat. polska* 35 no.10:1235-1240 0 '60.

1. Z Kliniki Terapii Chorob Dzieci A.M. w Warszawie, Kierownik:
prof. dr med. H.Brokman i z Zakładu Radiologii Pediatricznej A.M.
w Warszawie, Kierownik: prof. dr med. K.Rowinski.
(SEPTICEMIA in inf & child)
(STAPHYLOCOCCAL INFECTIONS in inf & child)
(PERICARDITIS in inf & child)

GIETKO, M.; GUTKOWSKA, J.; LANGEROWA, H.

On the problem of the diagnosis of staphylococcal pneumonias and pleurisy. *Pediat. polska* 35 no.8:877-880 Ag '60.

1. Z Kliniki Terapii Chorob Dzieci A.M. w Warszawie Kierownik:
prof. dr med. H. Brokman
(STAPHYLOCOCCAL INFECTIONS diag)
(PLEURISY diag)
(PNEUMONIA diag)

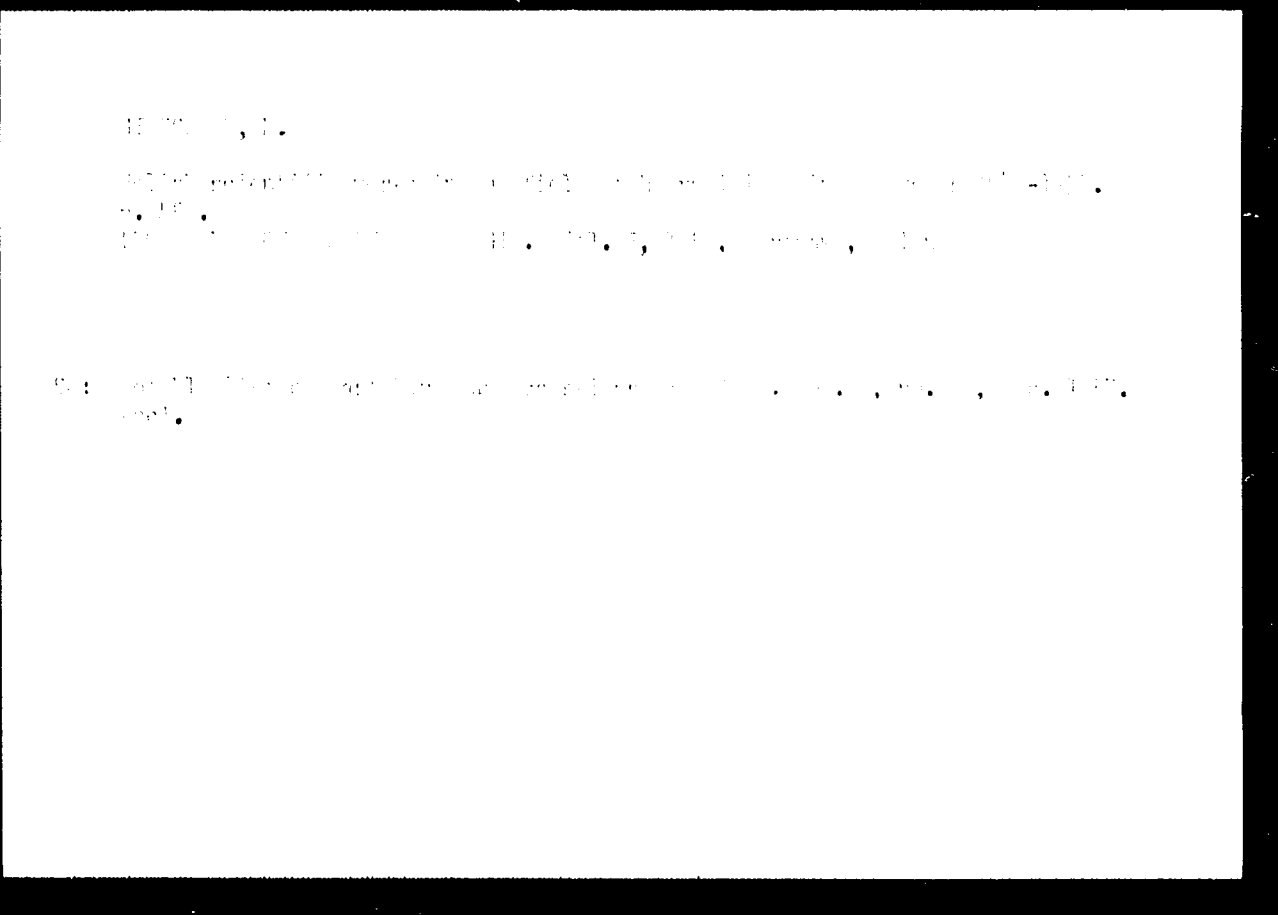
WROBLEWSKI, W.; GIETNER, M.; DOMOSLAWSKA, Z.; JAKUBOWSKI, A.; BLASZCZYSZYN, M.

Reticuloses X with observations on 3 cases. *Pediat. pol.* 36 no.7:
743-750 '61.

1. Z Oddziału Dziecięcego Centr. Szpit. Klin. MSW w Warszawie
Ordynator: prof. dr med. T.Chrapowicki i z Zakładu Radiologii Centr.
Szpit. Klin. MSW w Warszawie Kierownik: doc. dr med. W.Trzetrzewinski.
(RETICULOENDOTHELIOSIS in inf & child)

GIEYSZTOR, Aleksander

Reception of Christianity in Poland during the 10th - 11th
centuries. Nauka polska 8 no.3:19-32 JI-S '60.



COUNTRY : Poland
 CATEGORY :
 ABS. JOUR. : RZRNik., No. 1950, No. 74597
 AUTHOR : Hlebowitka, M. and Wesołowska, E.
 TITLE : The concentration of dissolved gases and
 oxygen of Marston lakes in the Biebrzka region
 ORIG. PUB. : Polska Arch. Hydrobiol., 4, 123-130 (1958)
 ABSTRACT : Descriptive note on the Marston lakes (in
 Poland) during the months of August, September
 and October. Samples of various depths were taken
 and tables of meteorological data are
 given. The concentration of O_2 (in % of saturation)
 at the surface was found to be 12.5-128.6
 up to 22.26; mean of less than 10.0 at depth,
 usually concentration of ≥ 10.0 . Data

COUNTRY : MALAYSIA
GEOGRAPHY :

ABC. JOUR. : RMKhan., No. 1959, No. 1959

ABSTRACT :
ICHT. :
PLANT. :

ORIG. SOURCE :

ABSTRACT : This also presented on the transparency and color of the water, total hardness, alkalinity, oxygen demand, and Fe, Cl, SO₄, Ca, and Na content. 1. Florida

CARD: 1/1

1e

GIEYSZTOR, M.

On a continuous series of lakes. Polskie arch hydrobiol 6:175-187 '59.
(EEAI 9:8)

(Poland--Lakes)
(Poland--Fresh-water fauna)

GIEYSZTOR, M.

On the thermal conditions of the littoral zone of lakes. Polskie
arch hydrobiol 7:171-193 '60. (EEAI 10:3)
(Poland--Lakes)

GIEYSZTOR, Marian

Alfred Litynski, obituary. Polskie arch hydrobiol 11:
Supplements 7-14 '63.

Zygmunt Kozminski, obituary 15-24

Jerzy Wiszniewski, obituary 25-33

YEVYETOROVA, I.

K. Markov's Studies on the Geography of the Quaternary Period; a book
review.

p. 399
Vol. 28, no. 2, 1956
PACIFIC OCEANOGRAPHY
Moscow

SO: Monthly List of East European Accessions (EAL, 22, Vol. 1, no. 1)
December 1956

GEOPHYSICS, I.

A visit of Professor K. Markov, Soviet geophysicist, in Poland. n.444.
Geophys. Int. 1975, 10: 1-10. (English)
Instytut Geografii Warszawa
Vol. 27, no. 2, 1975

So. East European Accessions list

Vol. 5, No. 1

Jan. 1966

GIEYSZTOROWA, Irena; KONDRACKI, Jerzy

Stanislaw Kalebnik's jubilee. Przegl geogr 34 no.2:442-444
'62.

GIEYSZTOROWA, Irena

Remarks on the precipitation in the Polish Tatra Mountains.
Przeł. geogr 34 no.3:527-540 '62.

GIEZYNSKI, A., mgr., inż.; TYSZKA, K., mgr., inż.

A visit in Czechoslovakia. Biol inform inst techn bud no 9:24-96 161.

GIEYSZTOROWA, Irena, dr. (Warszawa, Krakowskie Przedmieście 30)

Report on a conference concerning college students excursions
in the Tatra Mountains. Czasopismo geograficzne 32 no.4:476-
478 '61.

1. Uniwersytet, Warszawa.

GIFING, S., inz.

What the autogenous crushing is, and is it applied in practice?
Rudar glasnik no.3:82 '62.

L 12788-66 EWT(1)/T IJP(c) MW/GG

ACC NR: AP5026618

SOURCE CODE: UR/0056/65/049/004/1237/1247

AUTHORS: ^{44,55} Gifeyman, Sh. N.; ^{44,55} Perlin, Yu. Ye.

ORG: ^{21,44,55} Kishinev State University (Kishinevskiy gosudarstvennyy universitet)

57
B

TITLE: Impurity light absorption for arbitrary electron phonon

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 4, 1965, 1237-1247

TOPIC TAGS: electron interaction, light absorption, phonon interaction, impurity center, thermodynamic function, Coulomb interaction, ionic crystal

ABSTRACT: The method of arbitrary coupling, previously developed by one of the authors (Perlin, with I. Ya. Ogurtsov, FTT v. 7, 1467, 1965) for the calculation of thermodynamic functions of the impurity-phonon system, is extended in the present article to include the theory of impurity absorption of light. In this method, the spectral admittance of the system in an external spatially-homogeneous electric field is calculated by continual integration along the trajectories. In the zeroth approximation the system is described by a trial Lagrangian in which both the

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L 12788-66
ACC NR: AP5026618

Coulomb and the electron-phonon interactions are imitated by elastic forces. The need for this approach is dictated by the fact that the adiabatic approximation becomes inaccurate when the Bohr frequency of the pure electronic transition and the frequencies of the impurity-active phonons have the same order of magnitude, as is the case for shallow traps of the F-center type in some ionic crystals. The intensity of the no-phonon and one-phonon impurity absorption peaks is derived in first approximation for such traps. The formulas obtained are valid in the case of small heat release and arbitrary electron-phonon coupling. The temperature shift of the impurity absorption lines is also calculated. Orig. art. has: 1 figure, 51 formulas, and 1 table.

SUB CODE: 20/ SUBM DATE: 30Apr65/ NR REF SOV: 009/ OTH REF: 007

HW
Cont 2/2