

PUSHNITSYNA, A. D.

USSR/Medicine - Heredity, Mechanism  
Medicine - Heredity

Apr 1948

"Phenocopies of Mutations, Unlike Natural Selection," Yu. M. Olenov, K. F.  
Galkovskaya, A. D. Pushnitsyna, Cen X-Ray, Radiological and Cancer Inst, 4 pp

"Dok Ak Nauk SSSR" Vol LX, No 3

Analysis of data collected on wide distribution and frequently observed mutations  
showed phenotypic analogies but there was lack of similarity even in individual  
populations. Submitted by Acad I. I. Shmal'gauzen 10 Oct 1947.

PA 77T82

PUSHNITSINA, A. D.

"Phenotypic Mutations, Rendered Harmless by Natural Selection," Dok. AN, 60,  
No. 3, 1948. Mbr. Central Roentgeno-Radiological & Oncological Inst., -c1948-.

OLENOV, Yu. M.; PUSHETSINA, A. D.

Roentgen rays sensitivity of the embryonic central nervous  
system in mammals. Doklady Akad. nauk SSSR 84 no.2:405-407  
11 May 1952. (CLML 22:2)

1. Presented by Academician Ye. N. Pavlovskiy 13 February 1952.
2. Central Roentgenological and Radiological Institute, Leningrad.

1. CHERNY, V. I.: 1952, A. A. B.
2. USSR (695)
4. Nervous System; X-Rays, Physiological Effect;  
Embryology
7. X-Rays sensitivity of the embryonic central nervous system in mammals. Dokl. Akad. Nauk SSSR, No. 2, 1952  
Tsentrallyy Rentgenologicheskoy i Radio-izotopicheskoy Institut Leningrad. Vol. 6 No. 1952
9. Monthly List of Russia. Accessions, Library of Congress  
September 1952. UNCLASSIFIED.

PUSHNITZYNA, A.D.

(3)

The action of hormones on irradiated organs. L. A. Kashchenko and A. D. Pushnitzyna (*C. R. Acad. Sci., U.R.S.S.*, 1953, **88**, 575-578). The impairment of the response of frog ovaries, testes, and seminal vesicles to anterior pituitary extract, 3-60 days after X-irradiation of the whole abdomen, was investigated. Max. effects were found at about 25 days after irradiation.

G. S. BRINDLEY.

Pushnitsyna, A. D.

✓ Physiological shifts in the organism which occur after irradiation of sex glands with x-rays. L. A. Kashchenko and A. D. Pushnitsyna (Central X-Ray-Radiol. Inst., Ministry Health, Moscow). *Vestnik Rentgenol. i Radiol.* 31, No. 4, 3-11(1956).—The ovaries of mice are less sensitive to x-radiation applied during the period of relative functional rest of the glands, than during their active periods. Local irradiation of the seminal organs of male frogs with 5000-20,000 r. dose of x-radiation results in severe local degenerative processes, accompanied by a general reaction of the organism in which a vigorous secretion of the gonadotropic hormones of the frontal hypophysis develops.

2  
 Div. of Exptl. & Patholog. Morphology.

C. M. Kosolapoff

PUSHNITSINA, A.D.

Effect of prolonged irradiation with  $Co^{60}$  on hemopoiesis,  
stimulated by loss of blood. Radiobiologiya 2 no.6:847-854  
'62. (MIRA 16:11)

1. Tsentral'nyy nauchno-issledovatel'skiy institut meditsinskoy  
radiologii Ministerstva zdravookhraneniya SSSR, Leningrad.

43481

S/205/62/002/006/008/021  
E027/E410

211000

AUTHOR: Pushnitsina, A.D.

TITLE: The effect of prolonged Co<sup>60</sup> irradiation on  
haemopoieses stimulated by blood loss

PERIODICAL: Radiobiologiya, v.2, no.6, 1962, 847-854

TEXT: The author has investigated haemopoieses in white rats subjected to bleeding and prolonged irradiation. The animals were exposed to a cobalt source for 5 or 10 days, the total dose being 500 and 1000 r. Bleeding to the extent of 0.25 of the total blood volume was carried out by cardiac puncture immediately before the beginning of irradiation, and an equal number of control animals which had not been bled were irradiated in parallel. The animals were killed immediately after the end of irradiation and the bone marrow was examined. Fig.1 shows the percentages of erythroblasts (1), young (2) and mature (3) granulocytes and other cells (4) in three control groups and three irradiated groups. The animals subjected to bleeding showed a higher percentage of erythroblasts. The values in the first (500 r over 5 days) and second (500 r over 10 days) irradiated groups showed little difference from the controls. In the third group (1000 r over Card 1/4



The effect of prolonged ...

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10 days) there was again little change in the relative proportions of the cell types but there was a marked fall in their total numbers (Fig.2). There are 2 figures and 1 table.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut meditsinskoy radiologii MZ SSSR, Leningrad  
(Central Scientific Research Institute of Medical Radiobiology MZ USSR, Leningrad) X

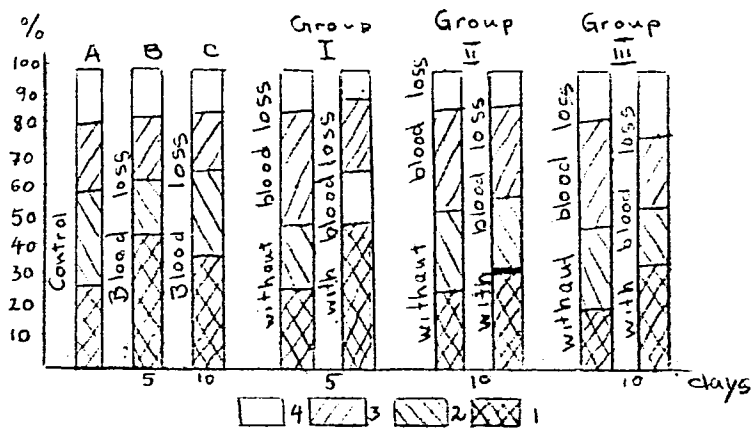
SUBMITTED: April 2, 1962

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The effect of prolonged ...

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E027/E410

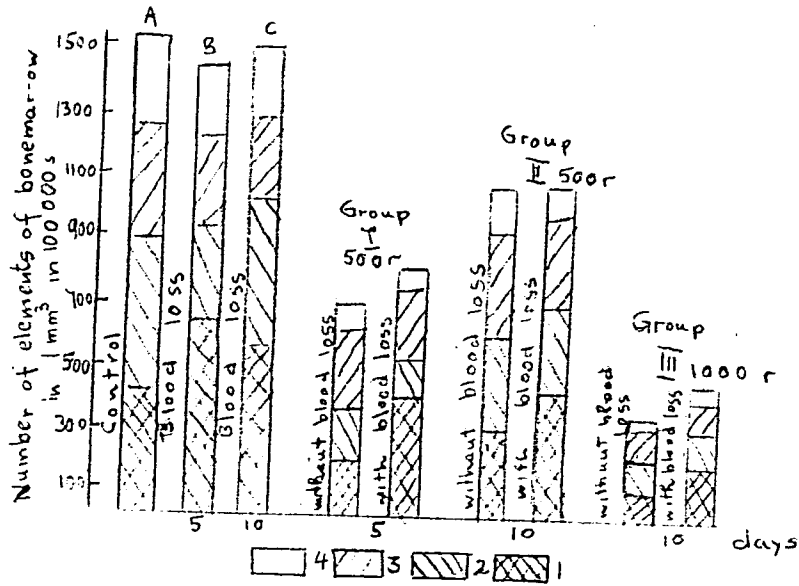
Fig.1.



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Fig.2.



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VUSHNINSINA, A D

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PHASE I BOOK EXPLOITATION

SOV/5435

Kiselev, P. N., Professor, G. A. Gusterin, and A. I. Strashinin, Eds.

Voprosy radiobiologii. t. III: Sbornik trudov, posvyashchenny 60-letiyu so dnya rozhdeniya Professora M. N. Pobedinskogo (Problems in Radiation Biology. v. 3: A Collection of Works Dedicated to the Sixtieth Birthday of Professor M[ikhail] N[ikolayevich] Pobedinskiy [Doctor of Medicine]) Leningrad. Tsentr. n-issl. in-t med. radiologii M-va zdravookhrananiya SSSR, 1960. 422 p. 1,500 copies printed.

Tech. Ed.: P. S. Peleshuk.

PURPOSE: This collection of articles is intended for radiobiologists.

COVERAGE: The book contains 49 articles dealing with pathogenesis, prophylaxis, and therapy of radiation diseases. Individual articles describe investigations of the biological effects of radiation carried out by workers of the Central Scientific Research Institute for Medical Radiology of the Ministry of Public Health, USSR. [Tsentral'nyy nauchno-issledovatel'skiy institut meditsinskoy radiologii Ministerstva zdravookhraneniya SSSR] during 1958-59. The following

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# 6j

Problems in Radiation Biology (Cont.)

507/5435

topics are covered: various aspects of primary effects of radiation; the course of some metabolic processes in animals subjected to ionizing radiation; reactions in irradiated organisms; morphologic changes in radiation disease; and reparation and regeneration of tissues injured by irradiation. Some articles give attention to the effectiveness of experimental medical treatments. No personalities are mentioned. References accompany almost all of the articles.

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Problems in Radiation Biology (Cont.)

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OLENOV, Yu.M.; GALKOVSKAYA, K.F.; PUSHNITSYNA, A.D.

Characteristics of the action of ionizing radiation on individual  
development. *Tsitologiya* 1 no.3:293-305 My-Je '59.  
(MIRA 12:10)

1. Institut tsitologii AN SSSR, Leningrad.  
(RADIATION--PHYSIOLOGICAL EFFECT) (DROSOPHILA)

USSR/Human and Animal Physiology (Normal and Pathological) T  
The Effect of Physical Factors. Ionizing Irradiation

Abs Jour : Ref Zhur Biol., N. 6, 1959, 27209

Author : Kashchenko, L.A?, Pushnitsina, A.D.

Inst : -

Title : Physiological Shifts in the Organism Which Arise in Irradiation with X-Rays of Sex Glands.

Orig Pub : Vestn. rentfenol. i radiol., 1956, No 4, 3-11

Abstract : Sensitivity of ovaries (O) to irradiation 2-10 days after introduction to animals of 30 m. u. of prolactin (I) each was investigated in mice. Head, chest and extremities were screened at the time of irradiation. The dose was 200 r. 2 days after introduction of I, O were in the state of stimulation of growth of follicles; after 10 days, in the state of active activity of corpora lutea. O of mice which were irradiated 10 days after introduction of I lost less in weight, microscopic injuries were

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USSR/Human and Animal Physiology (Normal and Pathological) T  
The Effect of Physical Factors. Ionizing Irradiation

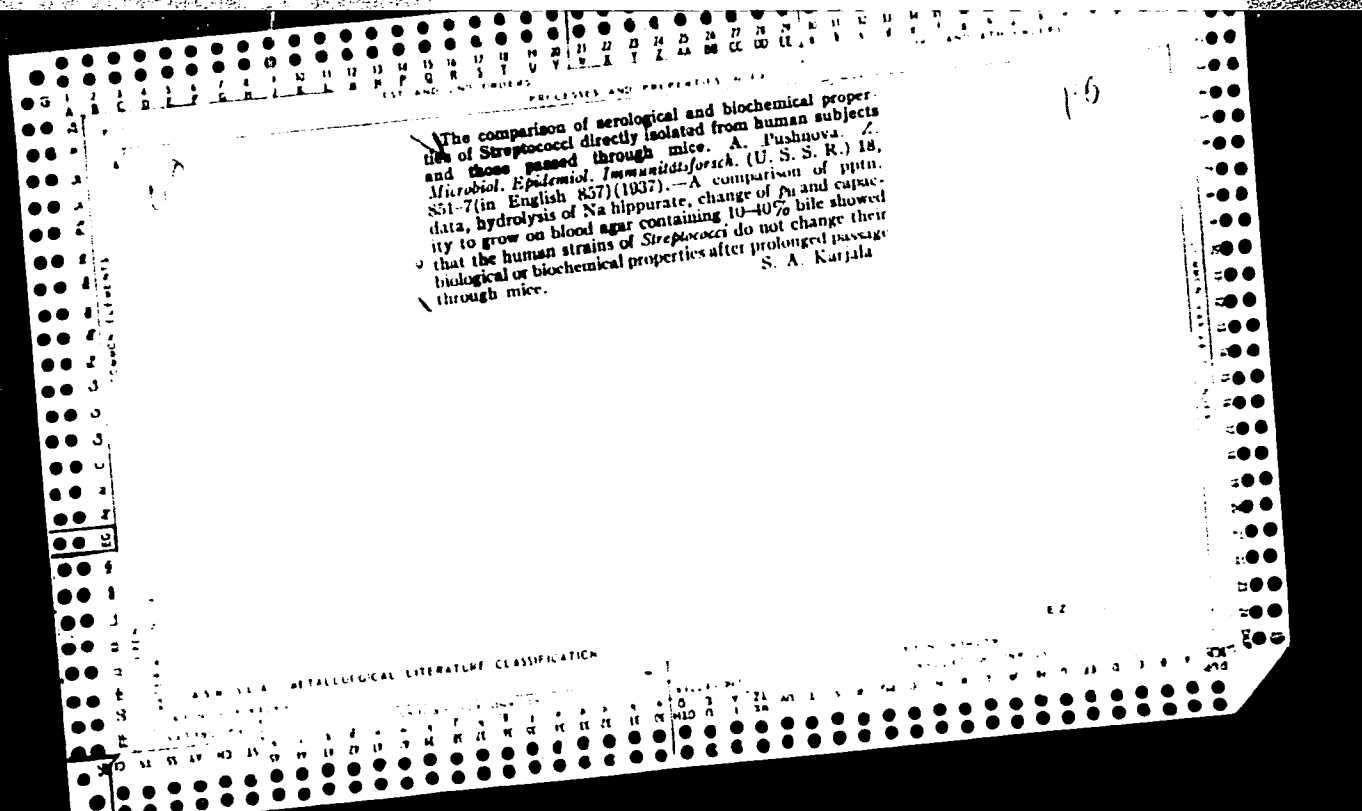
APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343620019-2

Abs Jour : Ref Zhur Biol., No 6, 1959, 27209

less pronounced in them, than in mice irradiated 2 days after I introduction. Reaction of irradiated testes (T) to introduction of the substance of the anterior lobe of hypophysis was studied. After local irradiation of T with 5000-20 000 r a gonadotrophic reaction, consisting of energetic excretion of spermatozoa from sperm ductules, decreased considerably (by 35-85%) and was restored only by the 45th day after irradiation. At the moment when radiation injury of T was sharply expressed, the anterior lobe of the hypophysis (ALH) of frogs recalled histologically the ALH of a castrate. In the period of complete restoration of injured T, a picture characteristic of ALH of normal frog was restored in ALH. As a result of local irradiation of T, secretory activity of ALH increases, which assures the possibility of repair of injured T. -- E.R. Raghamyan

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1951-1952, G. S. podpolkovnik meditsinskoy sluzhby, 1951-1952, M.V. Mayor  
meditsinskoy sluzhby

experienced in organizing otolaryngological services to patients  
under conditions of a military unit. Veer.-med. zhur. no. 9x71-72 '61.  
(MIR# 13+5)

YEVTEYSV, Ivan Petrovich; OSINOV, Sergey Ivanovich; PUSKOTCHIKOV,  
Mikhail Petrovich; PUSHEV, S.I., *ingn., nauch. soobshch.*;  
MELITSKIY, S.M., *ingn., nauch. soobshch.*; KSENIY, L.I., *ingn. nauch. soobshch.*

The ChS1 and ChS3 electric passenger locomotives, *Passa-  
zhirskie elektrovozy ChS1 i ChS3. Dostizh., Inzhenerno-  
dat, 1962. 128 p. (NPI 15:11)*  
(Electric locomotives)

AUTHORS:

Jerin, Yu. A., Ivanov, V. S.,  
Dushkova, T. A., Blatogorskaya, T. T.

SOV/TD-89-4-13/77

TITLE:

Diene Hydrocarbons From Unsaturated Alcohols (Dipenentye uglovedorody iz nenasytel'nykh spirtov). III. Catalytic Cleavage of Allyl Carbinol (III. Kataliticheskoye razlozheniye allylkarbinola)

PERIODICAL:

Zhurnal Obshchey Khimii, 1959, Vol 33, Nr 4, pp 1104 - 1106 (USSR)

ABSTRACT:

On the strength of previous investigations of the authors (Ref C) and other chemists (Refs 1-6) it is shown in the present paper that under conditions under which an  $\alpha, \beta$ -unsaturated alcohol (allyl alcohol) readily splits off water and yielding divinyl with 85-93 mole%, the allyl carbinol primarily undergoes cleavage, thus yielding propylene and formaldehyde. The authors investigated the process of the catalytic transformation of allyl carbinol on some dehydrating components of the catalyst of S. V. Iefeev at 370° as well as on the silicagel-tantalum catalyst at 370°. Under these conditions divinyl is formed from allyl carbinol in small quantities only. It was found that on the dehydrating components of the cata-

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Diene Hydrocarbons From Unsaturated Alcohols. III. Data- 507/70-2)-1-13/78  
lytic Cleavage of Allyl Carbinol

lysts B and B<sub>2</sub> of Lebedev chiefly a cleavage of the allyl carbinol takes place to give propylene and formaldehyde. The data obtained do not support the assumption that the formation of divinyl via the allyl carbinol is possible in the process of Lebedev. In order to complete the above-mentioned data it must be said that the transformation of butanediol-1,3 on the dehydrating component of the catalyst of Lebedev takes place under the formation of a considerable quantity of propylene (Ref 15). In the liquid cleavage products of butanediol -1,3 on the Lebedev catalyst methyl alcohol was found (Ref 16). Comparing the data obtained by Lebedev and those of the present paper it may be assumed that butanediol -1,3 splits off in the beginning one molecule of water and is converted to allyl carbinol which is cleft under the influence of the dehydrating component to give propylene and formaldehyde. The latter is reduced to methyl alcohol (Scheme). There are 1 table and 26 references, 17 of which are Soviet.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State University)  
SUBMITTED: February 10, 1958  
Card 2/2

SOV/106-59-1-11/12

AUTHOR: Pushnoy, B.M.

TITLE: Experimental Determination of the Probability of Correct Reception of a Signal "in Entirety" (Ob eksperimental'nom opredelenii veroyatnosti pravil'nogo priyema signala "v tselom")

PERIODICAL: Elektrosvyaz', 1959, Nr 1, pp 77-79 (USSR)

ABSTRACT: A number of codes have been proposed which guarantee the best chance of receiving a signal of limited bandwidth in the presence of noise. The calculation of the probability of correct reception based on Kotel'nikov's work (Ref 1) is given by Eq (1). The evaluation of this expression for practical codes is extremely difficult and the present short note proposes to replace this calculation by an analogue shown in Fig 1. The outputs of a number of independent noise generators are combined in luminaire mixer so as to simulate the multi-dimensional representation of signal and noise. A special measuring circuit measures the time from which the output voltage from the mixers exceeds a value which represents the minimum distance between certain points in multi-dimensional space. A ratio of this measured

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SOW/106-59-1-11/12

Experimental Determination of the Probability of Correct Reception  
of a Signal "in Entirety"

time  $t$  to the total time of operations  $T$  of the  
circuit is an approximate measure of the probability of  
correct reception. No measurements are reported.  
There are 1 figure and 1 Soviet reference.

SUBMITTED: October 6, 1958

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SOV/106-59-10-1/11

6.9000

AUTHOR: Pushnoy, B. M

TITLE: Geometrical Construction of Optimum Codes

PERIODICAL: Elektrosvyaz', 1959, Nr 10, pp 3-12 (USSR)

ABSTRACT: Optimum codes must not only accord with the statistics of the information, but also give maximum probability of correct reception of each signal. The article examines the problem of constructing codes which will ensure the greatest interference-stability for a given signal-to-noise ratio. The examination is based on the geometric representation of code combinations as points located in an n-dimensional space, where n is equal to the number of elements in the combination. For codes, the signals of which have a constant number of elements  $n = 2FT$  and constant energy  $E$ , the points corresponding to the code-signals will lie on the surface of an n-dimensional sphere of radius

$$R_n = \sqrt{E}$$

Card 1/6 The rectangular co-ordinates of each signal-point are values proportional to independent readings of the



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Geometrical Construction of Optimum Codes

corresponding code combination taken at time-intervals  
of

$$t = \frac{T}{n} = \frac{1}{2F} .$$

The aggregate of the signal-points forms the geometric model of the code. The radius of the n-dimensional sphere and the distances between the different signal-points express important properties of the code, including its interference-stability. It is assumed that an ideal Kotel'nikov receiver (Ref 1) is used for reception and then, the greater the displacement between the signal-points, the smaller the probability of erroneous reception. Thus, to obtain a code having the greatest interference-stability, it is necessary to locate the signal-points on the surface of the sphere in such a way that the distances between neighbouring points are the maximum possible, i.e. it is necessary to cover the n-dimensional sphere with equal-diameter, (n-1)-dimensional spheres, which touch each other but do not intersect. Then the centres of the spherical segments will give the signal-points for the code having the highest

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Geometrical Construction of Optimum Codes

interference-stability. Although this geometric representation of the problem has been known for some time, a general method of fenestration of the necessary number of points on a sphere of given dimensions has not yet been found. The Author restricts his investigations to regular codes, i.e. codes in the geometrical model of which each signal-point is surrounded by a constant number of neighbouring points equidistant from it and equally spaced from each other. An optimum, regular code is one in which the distance between points of neighbouring signals is equal to the distance between an arbitrarily chosen point of the code and its neighbours. The Author then assumes that there is a geometrical model of a regular, optimum, n-element code. Around an arbitrarily chosen signal-point A some number of neighbouring points distance d from A lying on the surface of an n-dimensional sphere can be found. The neighbouring signal-points lie on the line of intersection of the n-dimensional sphere of radius

$$R_n = \sqrt{E}$$

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## Geometrical Construction of Optimum Codes

and the  $n$ -dimensional sphere of radius  $d$  (Fig 1). The line of intersection of the spheres is, in the general case, an  $(n-1)$ -dimensional sphere. The radius of this sphere will be

$$R_{n-1} = d \sqrt{1 - \frac{d^2}{(2R_n)^2}} \quad (1)$$

Any signal-point lying on the sphere of radius  $R_{n-1}$  (for example, B of Fig 1) is surrounded by neighbouring points, some of which are situated on the same sphere. Thus, point B which lies on a sphere of radius  $R_{n-1}$  is surrounded by a number of points lying on the line of intersection of an  $n$ -dimensional sphere of radius  $d$  with B as its centre and an  $(n-1)$ -dimensional sphere of radius  $R_{n-1}$ . The line of intersection will form an  $(n-2)$ -dimensional sphere of radius  $R_{n-2}$ . This process can be continued until a 2-dimensional sphere, i.e. a circle, is obtained on which are situated a number of points each of which is separated by a distance  $d$  from its neighbours. Arrangements of points which are the vertices of regular polyhedrals meet these conditions.

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## Geometrical Construction of Optimum Codes

Eq (1) is re-written

$$R_n = \frac{d}{2 \sqrt{1 - \left(\frac{R_{n-1}}{d}\right)^2}} \quad (2)$$

Because, when

$$\frac{R_{n-1}}{d} = 1, \quad R_n = \infty,$$

polygons with more than five angles cannot form the basis for construction of optimum codes. Results of calculation by Eq (2), using the triangle, the square and the pentagon as the basis are tabulated in Table 1. The triangle gives multi-dimensional tetrahedra; the square -  $\ast$  multi-dimensional octahedra; and the pentagon - multi-dimensional icosahedra. There are other arrangements of points which also give optimum codes. These arrangements form the vertices of irregular multi-dimensional polyhedra, the vertices being the centres of the faces of multi-dimensional, regular polyhedra. The general construction of such irregular polyhedra is

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Geometrical Construction of Optimum Codes

complex and the Author investigates only those formed by the centres of multi-dimensional tetrahedra and octahedra. The geometrical method as applied to the theory of coding is considered illustrative and effective, leading to concrete results in obtaining optimum codes. Correspondent-Member of the AN UkSSR, Professor A. A. Kharkevich advised in this work. There are 4 figures, 3 tables and 5 references, 3 of which are Soviet, 1 English and 1 German. 4

SUBMITTED: February 21, 1959

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AUTHOR: Pushnoy, B. M.  
TITLE: Ideal reception of signals in "entirety"  
PERIODICAL: Elektrosvyaz', no. 5, 1960, 3-9

TEXT: The possibility of a practical application of the ideal receivers such as they were described by V. A. Kotel'nikov [Ref. 1: "Teoriya potentsial'noy pomekhoustoychivosti", (Theory of Potential Noise Immunity), Gosenergoizdat., 1956] is strongly limited, owing to the complexity of the required devices. On the other hand, the codes used in practice are almost exclusively codes with equal-energy signals, and, in their case, the ideal receiver is the inter-correlation receiver, i.e. a receiver in which is effected an element-by element multiplication of the received signal X by all the reference signals of the code, and each of the obtained functions is integrated. The comparing device finds the function with the greatest mean value. The object of the present article is to examine the simplest possible type of the ideal inter-correlation receiver, which can be used even if the reception of signals in "entirety" is necessary on principle. The author considers the n-digit code possessing the following

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Ideal reception of signals in "entirety"

properties: a) The elements of the code-combination can assume two values: 0 and 1. b) Each combination contains the same number of positive elements m. The number of combinations is:

$$N = C_n^m = \frac{n!}{m!(n-m)!}$$

and the nearest combinations differ in two elements. When n = 4 and m = 2, the code contains six signals:

1100            0110  
1010            0101  
1001            0011.

The receiver capable of an ideal reception of such signals without decoding is essentially constituted as follows: A synchronous switch distributes the elements of the received signal among four integrators that act here as memories. The integrators are connected to bilateral limiters with a controlled limiting level. A voltage of fixed magnitude appears at the outputs of the limiters if the integrator output voltages exceed the limiting level. With the aid of a follow-up system controlled by a very simple summation device, this limiting level is set so that voltage can appear only at the outputs of two limiters. This result is achieved thanks to an adequate choice of the reference voltage. Voltages at the

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Ideal reception of signals in "entirety"

receiver outputs correspond thus to positive elements of the received combination. After proving that this type of inter-correlation receiver can, in spite of its simplicity, be considered as an ideal one, the author determines the probability of correct reception of the signals of the above-mentioned code. He states that an error in the reception of an n-digit binary signal can manifest itself as follows: owing to interference, one positive element at least will have an amplitude smaller than that of the interference acting in one of the zero elements of the received signal. It is possible to ascertain that the probability of correct reception will be determined by the probability that none of the m independent readings of the interference, acting on the positive elements of the signal, will exceed a certain level x, which is, in its turn, determined by the maximum magnitude of the interference acting on the zero elements of the signal. Assuming that the interference elements are statistically independent and that they are distributed normally with parameters 0 and  $\sigma^2$ , the probability that none of the interference elements will exceed level x can be expressed as follows:

$$P_1(x) = \left( \frac{1}{\sigma\sqrt{2\pi}} \int_{-\infty}^x e^{-\frac{x^2}{2\sigma^2}} dx \right)^m$$

This expression can be considered as the distribution of the probabilities of a

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Ideal reception of signals in "entirety"

certain magnitude  $\eta_1$ . It is easy to show that  $\eta_1$  is distributed according to the normal law:

$$W_{\eta_1}(x) = \frac{1}{\sigma_1 \sqrt{2\pi}} e^{-\frac{(x - b_1)^2}{2\sigma_1^2}} dx \quad (3)$$

The parameters of this distribution are approximately:

$$a_1 = 1 - 0,425 \log m$$

$$b_1 = 1,5 \log m.$$

In analogous manner, the author finds the probability density of the magnitude  $\eta_2$  characterizing the behaviour of the interference elements acting on the zero elements of the received signal:

$$W_{\eta_2}(y) = \frac{1}{\sqrt{2\pi} a_2} e^{-\frac{(y - b_2)^2}{2a_2^2}} dy \quad (4)$$

$$a_2 = 1 - 0,425 \log(n - m),$$

$$b_2 = 1,5 \log(n - m).$$

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Ideal reception of signals in "entirety"

The probability of **correct** reception will be equal to the probability of satisfying the inequality: (5)

The density of the distribution of the sum of random magnitudes  $\mu_1 + \mu_2$  is:

$$W_{\mu_1 + \mu_2}(z) = \int_{-\infty}^{\infty} W_{\mu_1}(x) W_{\mu_2}(z-x) dx. \tag{6}$$

Substituting (3) and (4) in (6) and taking account of (5), the author obtains the following formula for the probability of correct reception (being distributed according to the normal law, the probability of correct reception can, indeed, be expressed in terms of the Laplace integral):

$$P_{\text{cor}} = \frac{1}{2} + \frac{1}{2} \Phi \left[ \frac{\frac{h}{\sigma} - (b_1 + b_2)}{\sqrt{a_1^2 + a_2^2}} \right]. \tag{7}$$

where

$$a_1 = 1 - 0.425 \log \sigma,$$
$$a_2 = 1 - 0.425 \log (\sigma - \pi).$$

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Ideal reception of signals in "entirety"

$$b_1 = 1.5 \log m.$$

$$b_2 = 1.5 \log (n - m).$$

The simple inter-correlation receiver described by the author does not differ essentially from the less simple systems, since it contains the most important component part, i.e. the comparing or follow-up system. At the end of the article, the author shows the importance of the "follow-up limiting threshold" in receivers capable of receiving signals in "entirety". Comparing the noiseproofness ensured by receivers with a follow-up limiting threshold to that which is ensured by receivers with a fixed limiting threshold, he proves that the inter-correlation receivers with a fixed threshold cannot be considered as ideal. There are 3 figures and 5 Soviet-bloc references.

SUBMITTED: October 12, 1959

[Abstracter's note: One subscript is translated in the text (in formula(7)) "cor" stands for "r<sub>1</sub>"]

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PUSHNOY, B. M.; ROMANOV, A. K.; SIMITSYN, B. S.

"Measurements and Cybernetics"

Report submitted at the Third Conference on Automatic Control and Electrical Measurement Methods was held at Novosibirsk, 19-23 Sept. 1961.

POKHOR, A. A.

Dissertation defended for the degree of Candidate of Technical Sciences  
at the Joint Scientific Council on Physico-mathematical and Technical Sciences;  
Siberian branch: *AS USSR* 1962

"Investigation of Communication Systems Approximating the Ideal."

Vestnik Akad. Nauk, no. 4, 1963, pp 119-145

PUSHNOY, B.M.

Information characteristics of electric measuring instruments.  
Izm. tekhn. no. 7:14-17 J1 '63. (MIRA 16:7)

(Electric instruments)

L 9030-65 KEO-2/EWT(d)/KEG-4/KEE-2 Fm-4/Pj-4 ESD(gs)/ASD(d)/ESD(o)

ACCESSION NR: AR4043053

8/0044/GA/000/006/V038/V039

SOURCE: Ref. zh. Matematika, Abs. 67222

AUTHOR: Pushnoy, B. M.

TITLE: Noise-proof ideal receiver

CITED SOURCE: TR. Sibirsk. fiz.-tekh. in-ta, vy\*p. 42, 1963, 184-188

TOPIC TAGS: signal reception, fluctuating interference, noise proof receiver, error probability, signal reception error probability, regular code, low error probability, noise interference formula

TRANSLATION: To calculate the error probability in signal reception, in the case of normal fluctuating interference, multiple integrals have to be calculated, which represents considerable difficulties. In this paper cases are examined where a) error probability is low, b) a regular code is used. These limiting conditions are almost always met in practice. Under these conditions the following approximating expression has been obtained by the author

Card 1/2

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ACCESSION NR: AB4043053

$$P_{\text{err}} = N_c \left[ \frac{1}{2} - \frac{1}{2} \Phi \left( \frac{d}{2} \right) \right] \quad (1)$$

where  $N_c$  is the number of neighboring signals,  $d$  - the distance between code points. It is shown that formula (1) has a sufficiently high accuracy. B. Yakovlev

SUB CODE: EC

ENCL: 00

Card 2/2



BURYY, L.V. (Novosibirsk); PUSHNOY, B.M. (Novosibirsk)

Top evaluation of the mean coefficient of counting reduction at the  
output of a differently discrete system. Avtometriia no.1:94-100 '65.  
(MIRA 18:7)

LUTSENKO, B.N.; PUSHNOY, B.M.

Use of the correlation method in measuring the angle of polarization  
of the magnetic component of natural electromagnetic fields. Izv.  
AN SSSR. Fiz. zem. no.3:103-108 '65. (MIRA 18:7)

1. Institut avtomatiki i elektrometrii Sibirskogo otdeleniya AN SSSR.

ACC NR: AM6004772

Monograph

Uiy

Karandeyev, Konstantin Borisovich; Karpyuk, Bogdan Vladimirovich; Kasperovich, Aleksandr Nikolayevich; Pushnoy, Boris Mikhaylovich; Rabinovich Vladimir Izrailevich; Sinitsyn, Boris Sergeyeovich; Tverdokhle, Petr YEmel'yanovich; TSapenko, Mikhail Petrovich

Electrical methods of automatic control (Elektricheskiye metody avtomaticheskogo kontrolya) Moscow, Izd-vo "Energiya", 1965. 383 p. illus., biblio. 10,000 copies printed

TOPIC TAGS: automatic control design, automatic control equipment, data processing

PURPOSE AND COVERAGE: The book, written by staff members of the Institute of Automation and Electrometry of the Siberian Department of the Academy of Sciences SSSR, deals with electric automatic control systems, their structure, and their principal elements and characteristics. The emphasis is on the relation between production quality control and automatic inspection of the manufactured products, and emphasizes statistical methods, automatization of various measurements, and the handling of the information and data generated by the automatic control devices. Different systems, components, and individual control and measurement equipment are also described. Chapter 1 was written by K. B. Karandeyev, B. V. Karpyuk, A. N. Kasperovich, V. I. Rabinovich, P. YE. Tverdokhle, and M. P. TSapenko, Ch. 3 by V. I. Rabinovich and M. P. TSapenko, Ch. 4 by B. S. Sinitsyn, Chs. 5 and 6 mainly by B. V. Karpyuk, Chs. 7 and 8 by A. N. Kasperovich, Ch. 9 by B. M. Pushnoy, Chs. 11 and 12 mainly by P. E. Tverdokhle, and the appendix by B. V. Karpyuk. Authors thank the scientific workers

UDC: 621.317

Card 1/3

ACC NR: AM6004772

V. M. YEFimov and G. G. Matushkin who wrote the main material of Chs. 2 and 10 respectively; and also to the scientific staff members M. A. Rozov, G. A. SHTamberger, G. YE. YERemenchuk, YU. I. Baklanov, and others for supplying some data and for a discussion of individual problems considered in the book. They also thank L. YE. Pinchuk for participating in the preparation of the manuscript.

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ACC NR: AM5004772

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SUB CODE: 13/    SUBM DATE: 30Jun65/    ORIG REF: 198/    OTH REF: 066

Card 3/3

L 42282 66 FWT(d)  
ACC NR: AP8015211

(N)

SOURCE CODE: UR/0410/65/000/001/0094/0100

AUTHOR: Buryy, L. V. (Novosibirsk); Pushnoy, B. M. (Novosibirsk)

ORG: none

TITLE: On the upper estimate of the mean count contraction factor at the output of a difference-discrete modulation system

SOURCE: Avtometriya, no. 1, 1965, 94-100

TOPIC TAGS: difference method, pulse code modulation, telemetry system, random process

ABSTRACT: The essential features of difference-discrete modulation (DDM) (the process whereby time functions are measured as they pass through the boundaries of different quantizing levels, with no measurement made until the quantity in question has actually reached the next level) are briefly discussed as they pertain to test systems as one of the possible ways of reducing test result redundancy by clearing the data link connecting the information source to the receiver. On the basis of general theoretical-probabilistic considerations an upper estimate is given for the data compression factor (the ratio indicating how many fewer counts are made at the output of the system than at its input) in a test-and-measurement system using the DDM method. The quantity to be measured is considered a normally-distributed random sta-

Card 1/2

UDC: 621.398+519.92

L 42282-66

ACC NR: AP6015211

tionary process, although in principle the efficiency computation method described in the article can be used with processes of other distribution laws as well. A time interval is considered, during which  $n$  counts reach the input of the system. During this interval, the action of the system is assumed to consist in no further transmission of the remaining  $n - 1$  counts after the transmission of the first count. The compression factor  $K$  in this time interval will thus equal  $n$ . Demonstrating that the computation of the mean compression factor resolves itself to a computation of the probabilities  $p_n$  (the probabilities that  $n$  counts reaching the input in a sequence will lie in the same quantizing step) an expression is derived for this factor and analyzed. The problem of prediction in the DDM system is also discussed. Orig. art. has: 3 figures and 10 formulas.

SUB CODE: 05,12/ SUBM DATE: 05Sep64/ ORIG REF: 004

Cord 2/2

*ldh*

KARANDEYEV, Konstantin Borisovich; KARFYUK, Bogdan Vladimirovich;  
KASPEROVICH, Aleksandr Nikolayevich; PUSHNOY, Boris  
Mikhaylovich; RABINOVICH, Vladimir Izrailevich; SINITSYN,  
Boris Sergeyeovich; TVERDOKHLEB, Petr Yemel'yanovich;  
TSAPENKO, Mikhail Petrovich; ~~Prinimal'skobiye: ZEPUMOV,~~  
V.M., ~~nauchn. sotr.~~; MATUSHKIN, G.G., ~~nauchn. sotr.~~

[Electrical methods in automatic control] Elektricheskie  
metody avtomaticheskogo kontrolya. Moskva, Energiia,  
1965. 383 p. (MIRA 18:8)



L-44157-65 EEC-4/EED-2/EEO-2/EWA(h)/EWT(1) P1-4/Pn-4/PeB JM

ACCESSION NR: AR4045070

S/0274/64/000/006/A012/A012

31  
B

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz'. Svodnyy tom, Abs. 6A58

AUTHOR: Pashnoy, B. M.

TITLE: Noise immunity of a perfect receiver

CITED SOURCE: Tr. Sibirsk. fiz.-tekhn. in-ta, vyp. 42, 1963, 184-188

TOPIC TAGS: noise suppression, noise immunity, radio receiver

TRANSLATION: A relatively simple approximate formula for the probability of error is suggested which characterizes in Kotel'nikov's terms the stability of a perfect receiver handling regular-code signals. In accordance with a geometrical definition of the perfect receiver, in the case of an additive noise, the coordinates of the received-signal point will be equal to the noise-vector coordinates if the origin of coordinates is placed at the point of transmitted signal. The correct-reception probability, with a normal fluctuation noise, is:

$$P_{np} = (2\pi)^{-\frac{n}{2}} \sigma^{-n} \int \dots \int \left( \exp \frac{-1}{2\sigma^2} \sum_{i=1}^n x_i^2 \right) \times dx_1 dx_2 \dots dx_n$$

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ACCESSION NR: AR4045070

where  $V$  is the area of correct reception. The above equation can be solved approximately if we admit two limitations which nearly always occur in practice: (1) the probability of error is very low; (2) a regular code is used. As an example, operation of a perfect receiver with an orthogonal code is considered, and its noise immunity is determined. Let a signal with the coordinates  $\{h; 0; \dots; 0\}$  to be transmitted. A noise  $\{\xi_1; \xi_2; \dots; \xi_n\}$  is superimposed on the signal. Assuming that values  $\xi_i$  are statistically independent and normally distributed with parameters 0 and 1 and considering that the distance between the signal points in an orthogonal code is determined by  $d = h\sqrt{2}$ , and the number of adjacent signals in an orthogonal code equals  $N_c = n - 1$ , the probability of error will be given by:

$$P_{om} = N_c \left[ \frac{1}{2} - \frac{1}{2} \Phi \left( \frac{d}{2} \right) \right] \quad (2)$$

The probability of error, with a great excess, is determined only by the minimum distance between the signal points and by the number of signal points deployed around a certain point at a minimum distance. Peculiarities of configuration of the correct-reception region are unimportant. Formula (2) holds also true for other regular codes, such as binary, octahedral, or simplex. It is demonstrated that a relative error of formula (2) is low and is close to the sought-for probability. Bibliography: 3 titles.

Card 2/2mb

SUB CODE: EC

ENCL: 00

PUSHNOY, L.A.

Observations of telescopic meteors during the IGY in the Crimea.  
Bul. VAGO no.35:18-27 '64. (MIRA 18:4)

1. Simferopol'skoye otdeleniya Vsesoyuznogo astronomo-geodezicheskogo obshchestva, meteornaya stantsiya imeni G.O. Zateyshchikova.

GAVRILOV, B.G.; PUSHNOY, S.K.

Thermocatalytic conversions of alkynaphthalenes. Uch.zap.Len.un.  
169:210-219 '53. (MLRA 9:6)  
(Naphthalene)

PUSHNOY, S.K.

5

✓ Thermocatalytic transformations of alkylnaphthalenes  
B. G. Gavrilov and S. E. Pushnoi, Uchenye Zapiski  
Leningrad Gosudarst. Univ. im. A. A. Zhdanova No. 169  
Ser. Khim. Nauk No. 13, 210-18 (1963). Heating EtC<sub>10</sub>H<sub>8</sub>  
to 230-40° with activated gumbin aluminosilicate at atm.  
pressure gave C<sub>10</sub>H<sub>8</sub>, EtC<sub>10</sub>H<sub>7</sub>, and Et<sub>2</sub>C<sub>10</sub>H<sub>6</sub>. At 275° and  
20-30 atm. more drastic changes take place forming tetra-  
hydronaphthalene, EtPh, C<sub>8</sub>H<sub>8</sub>, and (C<sub>8</sub>H<sub>7</sub>)<sub>2</sub>. The sources  
of H for hydrogenation appear to be the tarry materials  
formed from condensation of aromatic rings. This the  
translocation of Et radicals is apparently a reversible reac-  
tion. The results appear to support the hypothesis of nat-  
ural modification of petroleum by const. simplification of  
structure of the petroleum mass, with internal hydrogene-  
tion.  
G. M. Kosolapoff

5(4)  
AUTHORS: Migal', P. K., Fushnyak, A. N. SOV/78-4-6-20/44

TITLE: Investigation of the Composition and the Stability of the Complexes of Copper, Lead, and Zinc With Monoethanol-amine (Izucheniye sostava i ustoychivosti kompleksov medi, svintsa i tsinka s monoetanolinom)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 6, pp 1336-1340 (USSR)

ABSTRACT: The composition and the instability constants of the ethanol-amine complexes of copper, zinc, and lead were determined by the polarographic method. The determinations were carried out with the polarograph SGM-8. The complex formation process of  $\text{Cu}(\text{NO}_3)_2$  with monoethanol-amine was investigated in the concentration intervals amine 0.01 - 5.0 mol/l;  $\text{Zn}(\text{NO}_3)_2$  - 0.05 - 1.0 mol/l; and  $\text{Pb}(\text{NO}_3)_2$  - 0.1 - 5.0 mol/l. The polarographic characteristics of the different elements ( $\text{Cu}^{2+}$ ,  $\text{Zn}^{2+}$  and  $\text{Pb}^{2+}$ ) in the case of monoethanol-amine being present are given in table 1. It was found that the potential of the half wave shifts towards the negative values with an increase of the concentration of the addend. The dependence of the potential

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SOV/78-4-6-20/44

Investigation of the Composition and the Stability of the Complexes of Copper, Lead, and Zinc With Monoethanol-amine

of the half wave on the complex ions  $\text{Cu}^{2+}$ ,  $\text{Zn}^{2+}$ , and  $\text{Pb}^{2+}$ , on the logarithm of the concentration as well as on the monoethanol-amine is given in figures 1 and 3. It was found that copper and zinc with monoethanol-amine form complex compounds with the coordination number  $p = 4$ . The instability constants of the complexes  $[\text{Cu}(\text{MEA})_4]^{2+}$  and  $[\text{Zn}(\text{MEA})_4]^{2+}$  amount to  $K_{\text{Cu}} = (3.6 \pm 0.7) \cdot 10^{-16}$  and  $K_{\text{Zn}} = (1.5 \pm 0.6) \cdot 10^{-10}$ . Lead forms with monoethanol-amine a complex with the coordination number  $p = 2$  and the instability constant  $K_{\text{Pb}} = (3.6 \pm 0.4) \cdot 10^{-8}$ .

The dependences of the amount of the diffusion current of Cu and Pb on the concentration of the monoethanol-amine are given in the figures 4 and 5. (MEA = monoethanol-amine). There are 5 figures, 1 table, and 8 references, 6 of which are Soviet.

ASSOCIATION: Kishinevskiy gosudarstvennyy universitet (Kishinev State University)

SUBMITTED: March 18, 1958

Card 2/2

PUSHNYAK, A.N.

Some variants of automatic fraction collectors. Trudy po khim. prirod.  
soed. no.3:3-10 '60. (MIRA 16:2)

1. Kishinevskiy gosudarstvennyy universitet. Laboratoriya khimii  
belka.

(Chromatographic analysis) (Amino acids)



5.2620

AUTHORS: Migal', P. K., Fushnyak, A. N.

69053  
S/078/60/005/03/018/048  
B004/B002

TITLE: Complex Compounds<sup>1</sup> of Cadmium With Monoethanol Amine, Diethanol Amine, and Triethanol Amine

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol 5, Nr 3, pp 610-614 (USSR)

ABSTRACT: The authors first give some data on the complex formation of ethanol amines and mention I. A. Korshunov and L. V. Lipatova (Ref 2) et al. They investigated the reaction of cadmium and ethanol amines within a very wide range. The investigation was carried out polarographically, with D. D. Deford's and D. N. Hume's (Ref 5) and also K. B. Yatsimirskiy's (Ref 9) computation methods being applied.  $Cd(NO_3)_2$  ( $10^{-4}$  mole/l) was brought into reaction with ethanol amines, while the concentration of mono- and di-ethanol amines was varied within 0.01 - 5.0 moles/l, and that of triethanol amines within 0.01 - 1.0 mole/l. The background used was 0.1 mole  $KNO_3$ . Half-wave potentials were measured by means of the polarograph type SGM-8 of the zavod Geolograzvedka (Works of Geological Research). Table 1 gives the measuring results, table 2 the pH values. As is shown by figure 1, the process takes place in stages. Figures 2-4 give the J. Leden functions (Ref 10)

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69053

Complex Compounds of Cadmium With Monoethanol Amine,  
Diethanol Amine, and Triethanol Amine

S/078/60/005/03/018/048  
B004/B002

of the reaction of Cd with mono-, di- and triethanol amine. The authors found 5 monoethanol amine complexes of Cd with the coordination indices of 1 - 5 and three di- and triethanol amine complexes with coordination indices of 1 - 3. The instability constants computed according to Deford, Hume and Yatsimirskiy are shown by table 3. The increasing content of ethanol radicals has no influence on the stability of the complexes. There are 4 figures, 3 tables, and 13 references, 7 of which are Soviet. ✓

ASSOCIATION: Kishinevskiy gosudarstvennyy universitet  
(Kishinev State University)

SUBMITTED: October 26, 1958

Card 2/2

MIGAL', P.K.; PUSHNYAK, A.N.

Complex compounds of cadmium with ethanolamine, diethanolamine, and triethanolamine. Zhur. neorg. khim. 5 no.3:610-614 Mr '60.

(MIRA 14:6)

1. Kishinevskiy gosudarstvennyy universitet.

(Cadmium compounds)

(Ethanol)

PUSHNYK, A. N., BEREZOVITOV, A. D., PINEGINA, R. I., TSUPKANY, P. A.,  
WARRIHIKOVA, T. V., and KLIMENKO, V. G. (USSR)

"Forms Taken by the Protein and other Nitrogen Compounds in  
the Vegetative Parts of Plants."

Report presented at the 5th International Biochemistry Congress,  
Moscow, 10-16 Aug 1961

PUSHOVSKIY, N.V.

[Soviet military science] O Sovetskoi voennoi nauke. Moskva,  
Voennoe izd-vo, M-va oborony SSSR, 1953. 84 p. (MIRA 11:4)  
(Military art and science)

00350

21.2100

SCV/120-50-5-2/46

AUTHORS: Kotov, V. I., Obukhov, Yu. L. and Pushtarik, V.A..

TITLE: On the Theory of a Cyclic Phasotron with Radial Sectors

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 5, pp 19-22  
(USSR)

ABSTRACT: An analysis is given of the free oscillations in a cyclic phasotron with radial sectors in the ideal case. The analysis is an extension and a generalization of the theory given by Cole, Hoxby et al. (Ref 4) and Symon, Kerst et al. (Ref 6). Formulae are derived which may be used to calculate the geometric parameters of an accelerator (angular apertures of the sectors, frequencies of free oscillations etc.) and also to determine the permissible range of values for the mean field exponent  $k$ . The magnetic field in a cyclic phasetron is determined by the function given by Eq (1) which is taken from the paper by Symon et al. (Ref 6). The equations of free oscillations in such a field are of the form given by Eq (3) which are taken from the paper by Kotov et al. (Ref 7). Eqs (3) are solved assuming that the instantaneous orbit consists of a circular orbit of radius  $\rho_1$  in the

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66379

SOV/120-59-5-2/46

On the Theory of a Cyclic Phasotron with Radial Sectors

positive and  $\rho_2$  in the negative sectors, while in the interval between them it is a straight line (Fig 1). It is also assumed in the solutions of Eq (3) that the local field exponent on the orbit remains constant within each sector and is equal to the mean value of the exponent (along the orbit) for the given sector. Under these assumptions the equations of motion are of the form given by Eq (13). It is shown that a change in the mean field exponent has a much stronger influence on the frequency of radial oscillations than on the frequency of vertical oscillations.

There are 1 figure and 9 references, 3 of which are Soviet, 1 German and 5 English.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy  
(Joint Institute for Nuclear Studies)

SUBMITTED: September 2, 1958

Card2/2

24(2)

SOV/89-7-3-18/29

AUTHORS: Kotov, V. I., Pushtarik, V. A.

TITLE: On the Influence of the Space Charge on the Motion of Particles in Accelerators

PERIODICAL: Atomnaya energiya, 1959, Vol 7, Nr 3, pp 268, 272 (USSR)

ABSTRACT: In references 1 and 2 the influence of the space charge of a particle beam in an accelerator upon the free oscillation of particles is investigated, the shielding effect of the chamber walls and of the iron of the electromagnet not being taken into account. Taking this influence into account, for which purpose only the horizontal chamber wall need be considered, the authors without derivation write down the equations for the vectorial and scalar potential, the components of the electric and magnetic fields, and, finally, the formulas for the variation of the frequencies of the free oscillation. From the analysis of the last-mentioned formula it follows that the screening effect for the nonrelativistic case amounts to only 10-20%. In the relativistic case, on the other hand, it may play a decisive part. There are 5 references, 2 of which are Soviet.

Card 1/2



5(4)

SOV/62-59-9-9/40

AUTHORS:

Levshin, V. L., Mamedov, Kh. I., Sergiyenko, S. R.,  
Pustil'nikova, S. D.

TITLE:

Fluorescence Spectra of Aromatic Hydrocarbons of the Diphenyl Series and Their Oxygen- and Sulfur Containing Analogs

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 9, pp 1571-1578 (USSR)

ABSTRACT:

Petroleum fractions of high molecular weight can be analyzed with fluorescence spectra, but the spectra of the individual components of the fractions are not well enough known, so that there is a lack of comparative information to interpret the spectra. It is the aim of this paper to carry out further investigations in this field. The authors investigated the spectra of the hydrocarbons of the homologous series of biphenyls starting with diphenyl itself. The further compounds extend the aliphatic chain, introduced between the benzene rings, to pentane. A type of compounds was also investigated in which one CH<sub>2</sub>-group of the aliphatic chain is replaced by oxygen or sulfur. The table shows structure and properties of the nine

Card 1/3

2

SOV/62-59-9-9/40

Fluorescence Spectra of Aromatic Hydrocarbons of the Diphenyl Series and Their Oxygen- and Sulfur Containing Analogs

compounds investigated. The fluorescence spectra of the compounds solved in isoctane were recorded at room temperature and at the temperature of liquid nitrogen. The spectra were examined with a quartz spectrograph of the ISP-66-type. The synthesis of the substances investigated is described. The spectra of the individual compounds are represented on figures 1-8. The influence of the elongation of the aliphatic bridge makes itself felt by the strong splitting up of the spectral bands. The spectrum is markedly more intense at low temperatures and may be used for analyzing the substances. The luminiscence spectrum changes considerably when an oxygen- or sulfur atom is introduced. At strongly marked  $\pi$ -electron bonds between the two benzene rings, the spectrum is shifted toward the longer-wave range at low temperatures as compared to spectra at room temperature. There are 8 figures, 1 table, and 7 references, 4 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova  
Card 2/3 fizicheskiy fakul'tet (Moscow State University imeni M. V.

SOV/62-59-9-9/40

Fluorescence Spectra of Aromatic Hydrocarbons of the Diphenyl Series and Their  
Oxygen- and Sulfur Containing Analogs

Lomonosov, Physics Department)  
Institut nefti Akademii nauk SSSR (Petroleum Institute of the  
Academy of Sciences, USSR)

SUBMITTED: December 20, 1957

Card 3/3

PUSHTORSKIY, Ye.

TUMAS, Ye., inzhener; PUSHTORSKIY, Ye., inzhener

Loads and dimensions for city bridges. Zhil. kom. khoz. 5  
no.2:18-21 '55. (MIRA 8:6)  
(Bridges--Specifications)

PUSHTORSKIY, YE.

Streets

"City roads" Reviewed by D. Aronovich, Ye. Pushtorskiy. Zhil. -kom. khoz.  
2 no. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, July 1952, Uncl.

PUSHTORSKIY, Ye.

Doc. No. - 001010

Handwritten notes and indexes in the design of city buildings. Engr.-Arch. Khark.  
Inst. 1944-45. In 1944

Manuscript Collection Acquisitions, Library of  
Congress, July 1994. Unclassified

FUSHYORSKIY, YE.

Reinforced Concrete

Prefabricated reinforced concrete constructions for municipal bridges and overpasses. Zhil.-kom.khoz. 2, No. 7, 1952

9. Monthly List of Russian Accessions, Library of Congress, November 1952 Uncl.

PUSHTORSKIY, Yevgeniy Ivanovich; KUZNETSOV, I.A., redaktor; AVRUSHCHENKO,  
P.A., redaktor izdatel'stva; ZHOROV, D.M., tekhnicheskiy redaktor

[Principles of city bridge design] Osnovnye printsipy proektirovaniia  
gorodakikh mostov. Moskva, Izd-vo Ministerstva kommunal'nogo  
khoziaistva RSFSR, 1956. 338 p. (MLRA 9:7)  
(Bridges)



PUSH'ORSKIY, Ye., Hand. tekhn. nauk

Large-span reinforced-concrete bridges. Avt.dor. 24 no.12:5-7  
D '61. (MIRA 14:12)

(Bridges, Concrete)

GIBSHMAN, Ye.Ye., redaktor; DZHUNKOVSKIY, N.N., redaktor; YEGOROV, P.A.,  
inzhener, redaktor; NITROPOL'SKIY, N.M., professor, redaktor;  
PUSHTORSKIY, Ye.I., inzhener; ROYER, Ye.N., inzhener;  
POLIVANOV, N.I., dotsent; KURDYUMOV, M.D., inzhener;  
OSTROVIDOV, A.M., inzhener; KROPOTOV, I.I., inzhener;  
VOLKOV, V.P., dotsent.

[Handbook on the planning, construction and operation of  
city roads, bridges and hydraulic structures] Spravochnik  
po proektirovaniu, stroitel'stvu i ekspluatatsii gorodskikh  
dorog, mostov i gidrotekhnicheskikh sooruzhenii. Pod red.  
E.E.Gibshman, N.N.Dzhunkovskii, P.A.Egorov. Moskva, Izd-vo  
Ministerstva kommunal'nogo khoziaistva RSFSR. Vol. 1.  
[Bridges] Mosty. Pod red. N.M.Nitropol'skii, 1953. 984 p.  
(MLRA 7:1)

(Bridges) (Tunnels) (Retaining walls)

S.C.L.

35. Synth Rub. &  
Allied Products

Low temperature properties of oils containing viscous additives. N. G. PUSHTOV (Nef. Khim., 1948, No. 3, 48-58; J. Inst. Petroleum, 1948, 24, 208A).—Tests were made using polyisobutylene with molecular weight 6,000-20,000 and Voltol. Blends were prepared with distillate and residual oils having viscosity 12-200 cs at 50° C. The polyisobutylene has marked effect on flattening of viscosity-temperature curve. The effect of increasing molecular weight of the polyisobutylene is to increase the viscosity of the blend and accentuate the other effects.

352125 01

1948

B1-3 Petroleum.

Ev. abs.

Low-temperature properties of oils containing viscous additives.  
 N. G. Finkov, *INOP. Rep.*, 1948, No. 3, 69-68; *J. Ind. Petrol.*,  
 1948, 34, 305A. — The additives studied were polyisobutene (mol.  
 wt. 6000-30,000) and Voltol blends were prepared from distillate  
 and residual oils having a  $\eta_{sp}$  12-200 centistokes.  $\eta$  down  
 to -40°, pour points, and the temp. at which fluidity was lost  
 under a head equiv. to 25 cm. of H<sub>2</sub>O were determined for the  
 blends. Polyisobutene has a marked flattening effect on the  $\eta$ -temp.  
 curve. In the case of an additive-free oil with a  $\eta_{sp}$  of 10 centistokes,  
 the  $\eta$  is ~7500 times higher at -20°; in additive-containing blends  
 of similar  $\eta_{sp}$ , the  $\eta$  is only 600-800 times higher at -20°. To avoid  
 a marked effect on pour point and loss of fluidity, the amount of  
 additive should be >2%. The  $\eta$  of a blend containing polyisobutene  
 rises with the mol. wt. of the latter. Blends containing polyisobutene  
 (even when 10% of polymeride with mol. wt. 30,000 is present)  
 do not show anomalous  $\eta$  effects, i.e., flow remains Newtonian.  
 Such effects are noticeable in blends containing 2% of Voltol, and  
 are pronounced at a concn. of 5%. The additives do not separate  
 from the blends on storage (16 months). R. B. CLARK.



PUSHUNOV, I. V.

"The Scattering of a Fast Electron Beam of 1—2 MV," Zhur. Eksper. i Teoret. Fiz.,  
9, No. 3, 1939;

"Emission of an Impulse Tube over a Voltage-Range of 1 to 3 MV," ibid.

W376, I.

Is the modern machinery for fish preservation suitable to our industry? p. 24. MORSKO RIBARSTVO. (Udruzenje morskog ribarstva Jugoslavije) Rijeka. Vol. 8, no. 1, Jan. 1956.

So. East European Accessions List Vol. 5, No. 9 September, 1956

FUSIC, I.

SOŠTANJE (IZ OPGU); Given Names

Country: Yugoslavia

Academic Degrees: [ not given ]

Affiliation: [ not given ]

Source: Belgrade, Veterinarski glasnik, No 6, 1961, pp 525-527.

Data: "Examination of Shellfishes in Our Country."



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PUSIKOV L.D.

✓1965

CORRELATION OF THE PLANES OF  $V^0$ -PAIR DECAY

AND  $\phi^0$ -MESON SPIN. L. D. Pusikov and Ya. A.

Smorodinskii. Doklady Akad. Nauk S.S.S.R. 104, 843-

5 (1955) Oct. 21. (In Russian)

The angular distribution of  $\lambda^0$  and  $\phi^0$  decay products and the correlation of both decays are investigated. It is concluded that the spin of the  $\lambda^0$  meson is  $\geq 7/2$ , the spin of  $\phi^0$  differs from zero, and the spin of  $\phi^0$  is smaller than the spin of  $\lambda^0$ . (R.V.J.)

(1) *BR* *JW*

YUGOSLAVIA

I. PUSIC [Affiliation not given.]

"Life in the Sea."

Belgrade, Veterinarski Glasnik, Vol 17, No 4, 1963; pp 361-363.

Abstract : General discussion about phytoplankton and its vital role hence role of all factors affecting phytoplankton such as sunshine and other meteorologic phenomena. The obscure enzootic in fish in the Northern Adriatic in the Summer 1962 (centering in the Kvarner channel and affecting principally *Dentex vulgaris* C.V., *Box salpa* L. and *Cantharus lineatus*) is speculatively considered due to natural climatic or physicochemical stasis rather than primarily to pathogenic bacteria or viruses or chemical poisons. Two references: Yugoslav, Italian.

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FUSEN, N.

"Binary systems composed of halogenated silicium, titanium, tin, arsenic, antimony, and bismuth, with varied organic compounds." p. 469. (Priroda. Vol. 18, no. 8, 1953. Zagreb.)

SO: Monthly List of East Euronean Accessions, Vol. 3, no. 3. Library of Congress. March 1954.  
Uncl.

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Smiljanic, M.; Rikovski, I.; Fusin, N.

"Refractive Index of Some Organic Compounds at Various Temperatures and Its Temperature Coefficient." II p. 271

(GLASNIK,

Vol. 18, No. 5, 1953, Beograd.).

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Heat of combustion and heat of formation of the isomeric organic compounds.  
Glas Hem dr 19 no.9:531-547 '52.

1. Zavod za fizicku hemiju i elektrohemiju Tehnickog fakulteta  
Univerziteta u Beogradu.

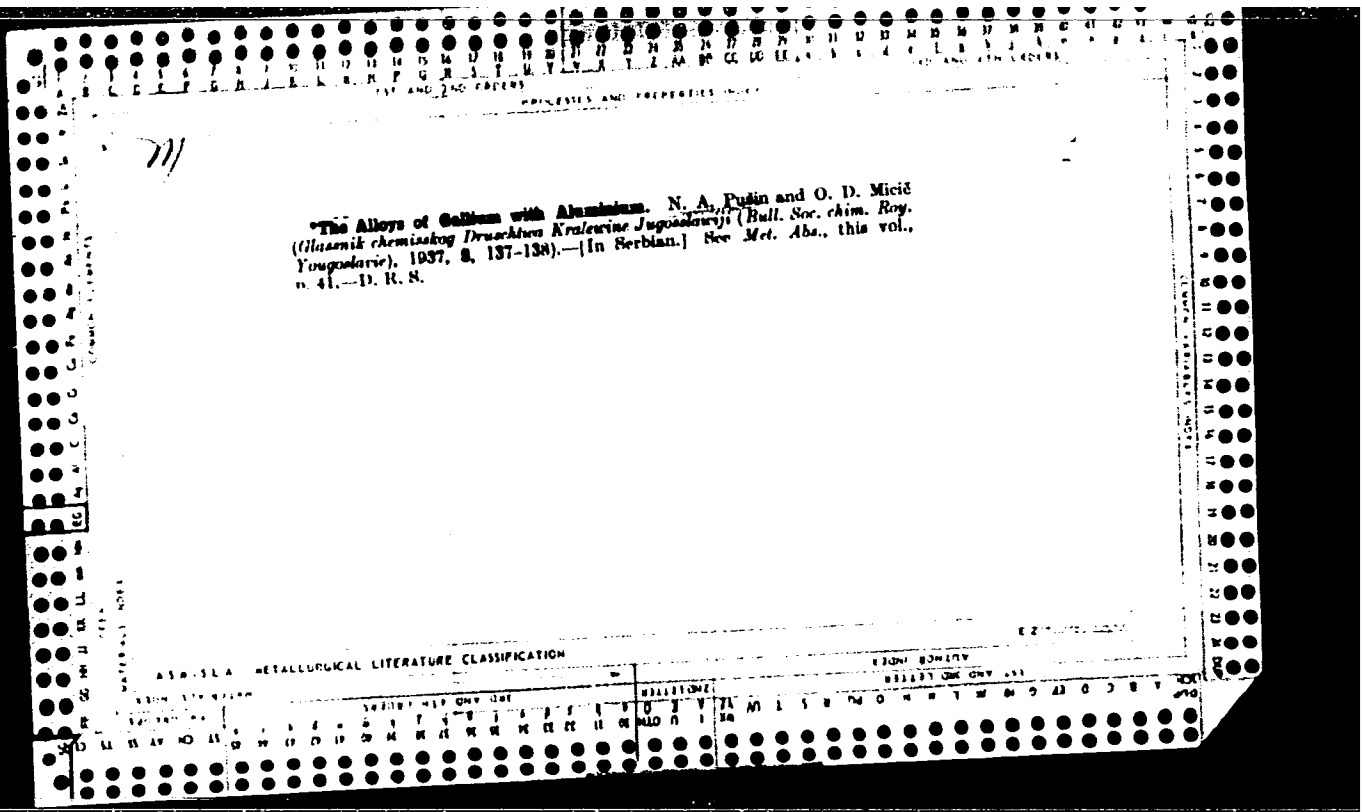
711

PROCESSING AND PREPARATION

**The Alloys of Gallium with Magnesium.** N. A. Rušin and O. D. Micič  
(*Glasnik hemijskog Društva Kraljevine Jugoslavije (Bull. Soc. chim. Roy. Yougoslavie)*, 1937, 8, 131-135).—[In Serbian.] *See Met. Abs.*, this vol., p. 41. D. R. S.

AS 514 METALLOGICAL LITERATURE CLASSIFICATION

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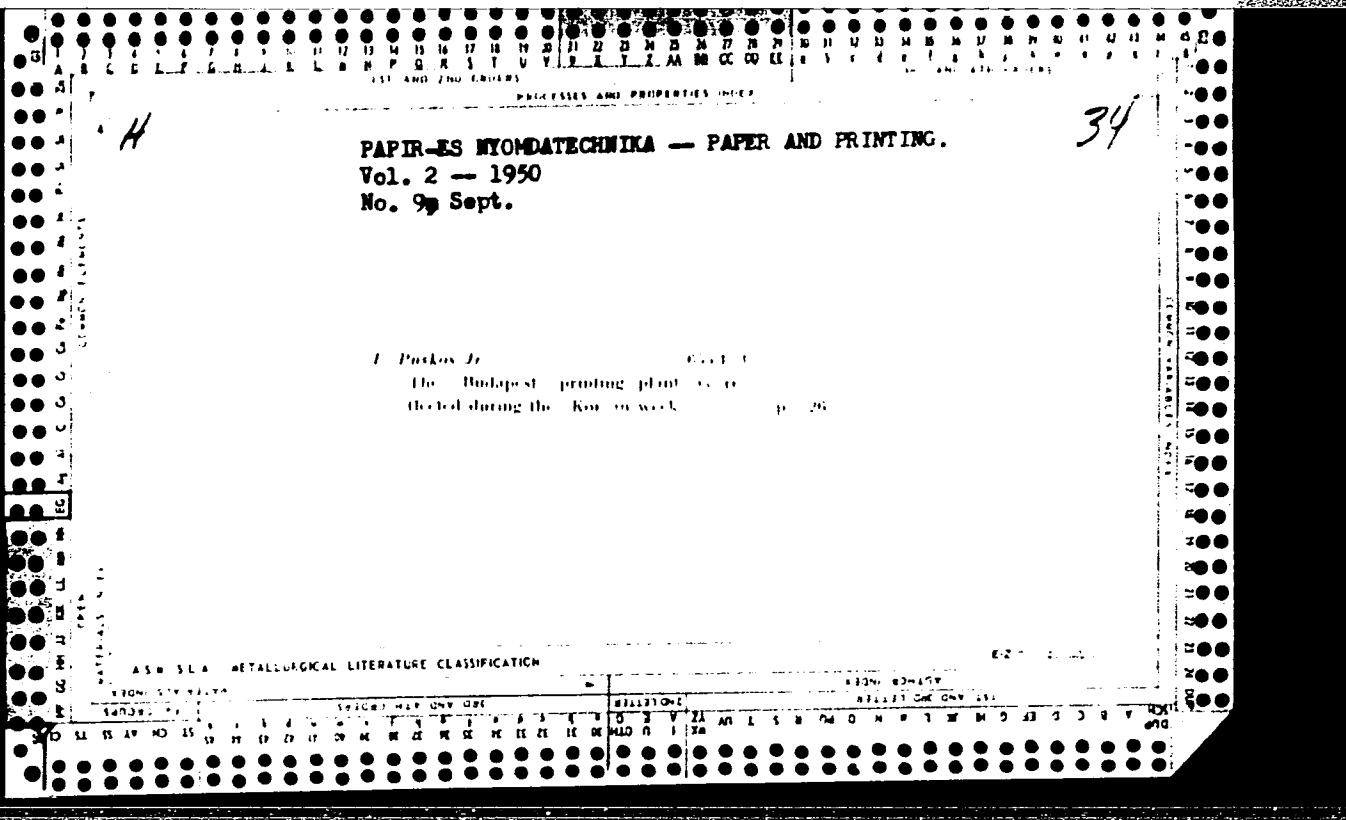




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"The hygienic evaluation of food products treated with hexachlorane and DDT."

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Induction of experimental pulmonary hemorrhage in rabbits.  
Gyermekgyogyaszat 7 no.2:57-62 Feb 56.

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Intez. közl. igaz. Baló József dr. egyetemi tanár.

(LUNGS, hemorrh.

exper., induction by epidural blood inject. & pathol.  
in rabbits (Hun))

(HEMORRHAGE, exper.

lungs, induction by epidural blood inject. & pathol. in  
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(COUGH, therapy,  
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(BRONCHOSCOPY, in various diseases,  
cough, ther. use (Cz))

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Development of the High Tatra is secured. p. 161. KRASY SLOVENSKY.  
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SOURCE: East European Accessions List. (EEAL) Library of Congress.  
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Vol. 5, No. 8, August 1956.

PUSKAR, A.

New ascents in the High Tatra, summer 1954. p. 351

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CZECHOSLOVAKIA

Source: EAST EUROPEAN ACCESSIONS LISTS VOL. 5, no. 7, July 1956

L 10320-66 EWT(i) LJP(c) WW/GG

ACC NR: AP5024307

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AUTHOR: Lipmaa, E.; Puskar, J.; Alla, M.

D

TITLE: Investigation of nuclear Overhauser effect by the method of internuclear double magnetic resonance

21,44,55

SOURCE: AN EstSSR. Izvestiya. Seriya fiziko-matamaticeskikh i tekhnicheskikh nauk, no.3, 1965, 487-489

TOPIC TAGS: nuclear magnetic resonance, nuclear spectrometry

21,44,55

ABSTRACT: THE INTERNUCLEAR double resonance variant (INDOR) of the Overhauser effect was used for the determination of INDOR magnetic resonance spectra of ethyl cinnamate. The equipment included a spectrometer incorporating a two-sample fast stabilizing spin generator and a drift eliminator. All lines of the AB system investigated, including those having no energy levels in common with the perturbed line, were strongly affected by the perturbing field and showed the Overhauser effect. Thus it appears that in this case the utilization of the INDOR methodology of the Overhauser effect study proposed by Kaiser (J.Chem. Phys. v.42, 1965, p.1838) for the elucidation of the mutual arrangements of spin-system energy levels does not always lead to a definite, single valued answer. Other advantages of the INDOR approach to the Over-

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ACC NR: AP5024307

hauser effect utilization in magnetic resonance spectra studies are noted. These include its high selectivity, enabling the investigation of closely situated lines, possibilities of getting information on the structure of molecules and solutions, and its value in sensitive spectrometry of carbon -13 nuclei. The orig. art. has: 1 figure. 3

ASSOCIATION: Institut Kibernetiki ANEstSSR. (Cybernetics Institute of the EstSSR).

SUBMITTED: 12May65

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SUB CODE: 18

NO REF SOV: 002

OTHER: 008

(18)

Card 2/2

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