

The Soft γ -Radiation Emitted By Nuclei at the Capturing of Thermal Neutrons. 56-5-7/55

The second chapter of the paper under review deals with the methods applied in the measurements of the γ -spectra. The spectrum of the impulses (as observed in presence of a target in the neutron bundle), was measured at open neutron bundle (N_0) and also at a bundle which was screened by a B_4C -layer of a thickness of 0.3 g/cm^2 at the exit of the neutron collimator (N_1). For practical purposes, the existence of the target did not affect N_1 .

The third chapter of the paper under review contains a detailed discussion of the results of the measurement for different nuclei. With regard to cobalt, one notices in the impulse spectrum for a Co_2O_3 target two not completely dissolved peaks with the energies of 226 ± 4 and $276 \pm 4 \text{ keV}$. They probably are photopeaks caused by γ -quanta of the same energies. For the intensity of the γ -lines, the following values were obtained:
 $n_{226} = (23 \pm 4) \%$ and $n_{276} = (23 \pm 4) \%$. The energies of the γ -transitions obtained for Co in this context coincide with the results of other investigations. Finally, the paper under review

The Soft γ -Radiation Emitted By Nuclei at the Capturing of
Thermal Neutrons. 56-5-7/55

discussed in detail the results of the measurements with regard
to the following nuclei: rhodium, iodine, samarium, gold, mercury.
The results of the measurements are compiled in a chart at the
end of the paper under review.
(12 reproductions and 2 charts)

ASSOCIATION: Moscow State University.
PRESENTED BY: -
SUBMITTED: 26.12. 1956
AVAILABLE: Library of Congress.

CARD 3/3

21(0), 24(5)

AUTHORS:

Kalinkin, L. F., Melioranskiy, A. S.,
Estulin, I. V.

307/56-35-3-4/77

TITLE:

γ -Radiation of the Radiation Capture of Thermal Neutrons
by Mo⁹⁵, Ag¹⁰⁷, Te¹²³ and Cs¹³³ (γ -izlucheniye radiatsionno go
zakhyata teplovykh neytronov yadrami Mo⁹⁵, Ag¹⁰⁷, Te¹²³ i
Cs¹³³)

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958,
Vol 35, Nr 3, pp 592 - 598 (USSR)

ABSTRACT:

The present paper is a continuation of an earlier one
(Ref 1) dealing with investigations of γ -radiation
emitted by nuclei during the radiation capture of
thermal neutrons. Measurements were carried out within
the range of γ -energies of 20 \div 1000 keV. The
modernized reactor TBP of the AS USSR (flux $\sim 10^8$
neutrons /sec.cm²) served as a neutron source. As
detector for γ -radiation a single-crystal luminescence
spectrometer (NaJ-crystal, 30 mm diameter, 19,7 mm height)
was used: a pulse amplifier FEU-11, and a single-

Card 1/4

γ -Radiation of the Radiation Capture of Thermal Neutrons SOV/56-35-3-6/61
by Mo⁹⁵, Ag¹⁰⁷, Te¹²³ and Cs¹³³

channel analyzer operated at a counting rate of $\sim 10^5$ pulses /sec. Investigations were carried out of (n, γ) reactions on Ag, Sn, Te, Cs, W, Tl (X-ray-K-emission at the corresponding energies of 22, 25, 27, 31, 59, 72 keV), and further Te¹²³ (159 keV), Hg²⁰³ (279 keV), Cr⁵¹ (323 keV), the γ -radiation of the reaction B¹⁰(n, α)Li⁷ (480 keV), Cs¹³⁷ (662 keV), Nb⁹⁵ (762 keV) and Zn⁶⁵ (γ -energy: 1120 keV). The resolving power η of the spectroscope in the range $E_\gamma = 279-1120$ keV obeys the formula $\eta = (240/\overline{E}_\gamma) + 0,2 [\%]$. Figure 1, in a diagram for 2 NaJ-crystals of different size, shows the dependence of spectrometer efficiency at the photopeaks of E_γ in the energy interval investigated. In conclusion, the results obtained by measurements are discussed separately for the nuclei investigated of molybdenum, silver, tellurium, and cesium. In a table the values obtained are shown clearly and partly compared with the results obtained by other authors (Refs 10, 11, 15).

Card 2/4

γ -Radiation of the Radiation Capture of Thermal Neutrons SOV/56-35-3-6,
by Mo⁹⁵, Ag¹⁰⁷, Te¹²³ and Cs¹³³

The energy E_γ [keV] of the respective element is in each case compared with the number [%] of the γ -quanta emitted per captured neutron. The following are some of the results obtained:

Mo⁹⁶: $E_\gamma = 770 \pm 10$: (91 \pm 14)%; 840 \pm 10: (43 \pm 8)%; Ag¹⁰⁸:
22 \pm 2: (X-ray emission) (10 \pm 6)%; 117 \pm 3: (9 \pm 2)%; Te¹²⁴:
605 \pm 10: (58 \pm 9)%; 725 \pm 10: (17 \pm 4)%; Cs¹³⁴: 120 \pm 3: (20 \pm 3)%;
184 \pm 3: (9 \pm 2)%. Finally, the authors thank I.S. Shapiro for the interest he displayed in the work and for discussing results; they further express their gratitude to S.A. Gavrillov, A.P. Shilov, and his collaborators, attendants of the physical reactor, as well as to Ya.A. Kleyman, A.M. Safronov, and V.F. Tsarakayev for assisting in carrying out the experiments. There are 6 figures, 1 table, and 15 references, 8 of which are Soviet.

Card 3/4

γ -Radiation of the Radiation Capture of Thermal Neutrons SOV/56-35-3-4/89
by Mo⁹⁵, Ag¹⁰⁷, Te¹²³ and Cs¹³³

ASSOCIATION: Nauchno-issledovatel'skiy institut yadernoy fiziki MGU
(Scientific Research Institute for Nuclear Physics,
Moscow State University)

SUBMITTED: April 5, 1958

Card 4/4

SOV/120-59-1-18/50

AUTHORS: Melioranskiy, A. S., Ostanevich, Yu. M.

TITLE: Non-Overloading Linear Amplifier for High Counting Rates
(Neperegruzhayemyy lineynyy usilitel' na bol'shiye skorosti scheta)

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 1; pp 73-76
(USSR)

ABSTRACT: The amplifier has an overall gain of 750, a rise time of 0.15 μ s and produces pulses having a duration of 1.5 μ s. The device was designed specifically for the operation with a photomultiplier and an NaJ(Tl) crystal. The amplifier consists of a phase inverter with a pulse-forming network, 3 amplifying stages and an output cathode follower (see Fig 1). The pulse-forming is done in the anode of the phase inverter tube by means of an artificial line having a delay of 0.5 μ s and a characteristic impedance of 1 k Ω . The first amplifying stage consists of 3 tubes which are provided with a feedback network. The second amplifying stage consists of 2 tubes and receives the pulses from the cathode resistance of the fourth tube. The third stage employs two tubes and permits the linear amplification of the pulses up to 110 V. The overshoots in the pulses, due to the imperfections of the delay line, are suppressed by providing a strong negative feedback

Card 1/3

SOV/120-59-1-18/50

Non-Overloading Linear Amplifier for High Counting Rates

in the eighth tube by means of two crystal diodes. The output pulses are then fed to the ninth tube which operates as a cathode follower. The amplifier can also be furnished with a d.c. restorer circuit if it has to operate at high counting rates (of the order of 10^5 pulses/sec). The practical applications of the amplifier are illustrated by the experimental curves of Figs 4, 5 and 6. Fig 5 shows the γ -spectrum of Co^{60} at a counting rate of 1.2×10^5 pulses/sec; the curves of Fig 6 illustrate X-ray radiation of Cs^{137} at a counting rate of 1.2×10^4 pulses/sec and at 1.3×10^5 pulses/sec. The authors express their gratitude to I. V. Estulin, A. A. Sanin and L. F. Kalinkin for discussing the results and interest in

Card 2/3

SOV/120-59-1-18/50

Non-Overloading Linear Amplifier for High Counting Rates

this work; they also thank A. P. Dolgov for his help in the construction of the equipment. The paper contains 6 figures and 5 English references.

ASSOCIATION: Nauchno-issledovatel'skiy institut yadernoy fiziki MGU
(Scientific Research Institute for Nuclear Physics of Moscow State University)

SUBMITTED: October 23, 1957.

Card 3/3

21(1), 21(7)

AUTHORS:

Kalinkin, L. F., Melioranskiy, A. S., SOV/56-36-5-75/76
Estulin, I. V.

TITLE:

Some γ -Transitions in J^{128} and in Neodymium Isotopes
(Nekotoryye γ -perekhody v J^{128} i izotopakh neodima)

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959,
Vol 36, Nr 5, pp 1613-1614 (USSR)

ABSTRACT:

By means of a single crystal spectrometer (NaJ(Tl)) the authors of the present "Letter to the Editor" investigated the γ -radiation occurring during the radiation capture of thermal neutrons in iodine and neodymium isotopes. A report concerning the measuring method has already been published (Refs 1, 2). Results: J^{128} (investigations within the range of 20 - 400 keV): 28 ± 2 keV line, intensity $(23 \pm 6)\%$; a characteristic K-emission caused by internal γ -conversion on electrons of the K-shell. 135 ± 3 keV line, intensity $(20 \pm 4)\%$, very probably an E2-transition. 158 ± 4 keV line, $(7.5 \pm 1.5)\%$, very probably a M2-transition. The high intensities (the data given in % refer to the captured

Card 1/3

Some γ -Transitions in J^{128} and in Neodymium Isotopes SOV/56-36-5-75/76

neutron) indicate that, in the case of the transitions, such occurring among lower excited levels must be concerned. Neodymium isotopes: Investigations on Nd_2O_3 -target;

identification of γ -lines by means of neodymium target (natural mixture of isotopes with impurities of other rare earths with large neutron capture cross section), comparison between results obtained and those of other publications, e. g. by Sklyarevskiy et al. (Ref 6).

The following was found:

Line [keV]	γ -intensity (natural mixture)	identification (of γ -line)	γ -intensity (isotope)
182 \pm 3	2.1 \pm 0.4	Sm 150	67
330 \pm 10	23 \pm 4	Sm 150	40
445 \pm 10	25 \pm 5	{ Sm 146 Nd 150	>40
610 \pm 10	20 \pm 4	{ Sm 146 Nd	16 ~100

Card 2/3

Some γ -Transitions in J^{128} and in Neodymium Isotopes SOV/56-36-5-75/76

695 \pm 10	63 \pm 10	Nd ¹⁴⁴	85 \pm 13
840 \pm 10	15 \pm 3	Nd ¹⁴⁴	20 \pm 4

There follows a number of further data concerning the lines found, as e. g. that the 695- and the 445 kev line originate from a transition from the first excited to the ground state of Nd¹⁴⁴ and Nd¹⁴⁶ respectively, and that for the 840- and the 610 kev line the energy ratio between these states and the first levels amounts to $E_2/E_1 = 2.2 \div 2.4$, which is characteristic of the oscillation levels of spherical even-even nuclei. The data were obtained from a number of publications referred to. There are 1 table and 8 references, 6 of which are Soviet.

ASSOCIATION: Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta (Institute of Nuclear Physics of Moscow State University)

SUBMITTED: March 15, 1959
Card 3/3 .

MELIORANSKIY, A.S.

pa

81985
S/120/60/000/03/012/055
E032/E514

24.6200

AUTHORS: Melioranskiy, A.S., Estulin, I.V. and Kalinkin, L.F.

TITLE: Stability of Spectrometric Photomultipliers at High Counting Rates

PERIODICAL: Pribory i tekhnika eksperimenta, 1960, No 3, pp 45-47

ABSTRACT: Fast and non-overloading single channel analyser and amplifier (Melioranskiy and Ostanevich, Ref 2) were used to study the overloading properties of Soviet spectrometric photomultipliers FEU-29, FEU-S and FEU-11. A sodium iodide crystal was used as the scintillator and the dead time of the electronics was 3 μ sec. The determination of the change in the characteristics of the spectrometer (stability, resolving power, calibration, etc.) was carried out under two conditions. In the first (linear) case the amplitude of pulses due to gamma rays from Co^{60} , Zn^{65} and Cs^{137} was kept within the linear calibration. The spectrometer was then overloaded by increasing the counting rate. In the second (nonlinear) Card 1/3 case a determination was made of the spectrometer

44

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E032/E514

Stability of Spectrometric Photomultipliers at High Counting Rates

characteristics for the Ba K-radiation photopeak emitted by Cs137. The intensity of this photopeak was ten times smaller than the intensity of the 0.66 MeV line and the pulses due to this line were well beyond the linear characteristics of the instrument. In this way the lower energy pulses were looked at while the spectrometer was being amplitude overloaded by the 0.661 MeV line. The results obtained are shown in Fig 1. The continuous curves represent the energy calibration, and the dotted curves the resolution. Curves are marked as follows:
FEU-29: 1,2 - linear conditions; 3,4 - nonlinear conditions;
FEU-S: 5,6 - nonlinear conditions;
FEU-11: 7,8 - nonlinear conditions. The vertical axis is in relative units and the horizontal axis is in pulses/sec x 10³. The best results were obtained for the FEU-11 photomultiplier which is of the venetian blind type. This photomultiplier will tolerate a maximum

Card 2/3 counting rate of 10⁵ pulses/sec.

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E032/E514

Stability of Spectrometric Photomultipliers at High Counting Rates
There are 1 figure and 3 Soviet references.

ASSOCIATION: Nauchno-issledovatel'skiy institut yadernoy fiziki
MGU (Scientific-Research Institute for Nuclear Physics
of the Moscow State University)

SUBMITTED: April 16, 1959

LX

Card 3/3

82411

S/056/60/038/03/12/033
B006/B014

24.6600
AUTHORS:

Melioranskiy, A. S., Estulin, I. V., Kalinkin, L. F.,
Kudinov, B. S.

TITLE:

Excited States of Cs 134

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960,
Vol. 38, No. 3, pp. 758-764

TEXT: In the article under review, the authors used a coincidence-luminescence spectrometer to study the cascade γ -transitions induced in cesium nuclei by thermal neutron capture. Fig. 1 shows a block diagram of the spectrometer, which uses photomultipliers of the types FEU-13 and FEU-11 with NaI(Tl) crystals. The neutrons with which the 20 mm thick CsF target (0.25 g) was bombarded stemmed from the TVR reactor of the AS USSR. Fig. 4 represents the pulse spectra (number of pulses per minute as a function of energy) and the energy distributions of the number of coincidences per minute. Besides the γ -peaks, the coincidence spectra exhibited also a peak with (31 ± 2) kev, which corresponds to an X-ray emission of the Cs atom. This emission is ascribed primarily to an internal conversion of the γ -quanta on the K-shell

Card 1/3

82411:

Excited States of Cs¹³⁴S/056/60/038/03/12/033
B006/B014

and partly to the photoeffect of the γ -quanta in eigenabsorption in the target. To verify the measured internal conversion coefficient α_K a control experiment with Cs^{134m} ($T_{1/2} = 3.1$ hours) was made. A comparison of the peak areas at 127 and 31 keV showed that $\alpha_K = 2.8 \pm 0.3$, which is fairly consistent with the theoretical value 2.82 obtained for an E3 transition. For the purpose of studying the cascade γ -transitions four series of experiments were carried out, the results of which are listed in Table 1. The following lines were found in addition to that with 31 ± 2 keV mentioned above: 63 ± 2 , 75 ± 5 , 120 ± 3 , 138 ± 4 , 184 ± 4 , 195 ± 260 , 215 ± 4 , 258 ± 4 , and 310 ± 5 . These results are discussed in great detail, and some data concerning the probable polarities are given. The 75-keV transition, for instance, may be a transition of the type E2 or M1+E2. Also, the intensities of the individual transitions are indicated. The 63-keV and 120-keV transitions are compared with theory in Table 2. Fig. 4 illustrates the nuclear level scheme, which is fully explained. The following spins and parities of the levels are given: 0 (4^+), 63 keV (2^+), 137 keV (8^-), 184 keV (3^+), 258 keV (4^+), and 320 keV (3^+ , 4^+). There are 4 figures, 2 tables, and 11 references, 6 of which are Soviet.

Card 2/3

Excited States of Cs¹³⁴

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B006/B014

ASSOCIATION: Institut yadernoy fiziki Moskovskogo gosudarstvennogo universi-
teta (Institute of Nuclear Physics of Moscow State University)

SUBMITTED: September 19, 1959

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Card 3/3

6.7210

20694
S/120/61/000/001/032/062
E192/E382

AUTHORS: Melioranskiy, A.S. and Petushkov, A.A.

TITLE: ^{Circuit} Coincidence/for Simultaneous Measurement of the Actual and Random Coincidences

PERIODICAL: Pribory i tekhnika eksperimenta, 1961, No. 1, pp. 104 - 105

TEXT: The circuit proposed is based on the idea of Spivak (Ref. 1). The principle of this circuit is as follows. The pulses applied to the input II of the circuit are doubled (two pulses for each input pulse) and are then applied to a coincidence system which also receives pulses from input I. Therefore, the coincidence ^{Circuit} I records the actual and the random coincidences of the first of the doubled pulses and only the random coincidences from the second pulses; if both the pulses are identical the resolving time τ is equal for both. The pulses from the coincidence system I are recorded by a counter and are also applied to the second coincidence circuit II which thus receives their coincidences with the second of the doubled pulses. It is seen that the

Card 1/4

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20694

Coincidence Circuit for ...

S/120/61/000/001/032/062
E192/E382

second coincidence circuit records the coincidences of the second of the doubled pulses with itself and the number of the coincidences in this case is equal to the number of the random coincidences which are determined by the resolving time of the first coincidence circuit. By subtracting twice the number of the random coincidences from the total number of the coincidences recorded by the first coincidence circuit the actual number of coincidences is obtained. This is true, however, only in the case of perfect identity of the doubled pulses, since otherwise the resolving time of the first coincidence circuit is different for each of the doubled pulses. A detailed description of the coincidence circuit is given and its detailed diagram is shown. The first input of the circuit receives the pulses from a scintillation β -spectrometer, while input II receives standard pulses from a slot analyser. The doubling of a pulse is effected by means of a $1 \mu\text{s}$ line, which is connected into the anode of a vacuum tube. The two pulses are delayed by 8×10^{-7} sec with respect

Card 2/4

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Coincidence Circuit for ...

²⁰⁶⁹⁴
S/120/61/000/001/032/062
E192/E382

to each other and are then shaped by means of two univibrators. They are then applied to a tube which determines their coincidences with the pulses applied to input II (which are also shaped by a univibrator). The coincidence circuit is the known Garwin circuit (Ref. 3). The pulses from the coincidence tube trigger a univibrator, one of whose anodes is coupled with a counter by means of a cathode follower; the second anode is coupled with a similar coincidence circuit which records the coincidences with the second doubled pulse. The pulses from the second coincidence circuits are applied to a univibrator and then to a counter through a cathode follower. The resolving time of the instrument is 3.2×10^{-8} sec. The doubled pulses are identical with an error of less than 0.5%, so that the resolving time for the random and actual coincidences is practically the same. There are 2 figures and 3 references: 2 Soviet and 1 non-Soviet.

Card 3/4

4X

20694

Coincidence Circuit for ...

S/120/61/000/001/032/062
E192/E382

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

SUBMITTED: February 25, 1960

LX

Card 4/4

S/120/61/000/003/004/041
E202/E135

AUTHOR: Melioranskiy, A.S.

TITLE: Scintillation gamma spectrometer for the coincidence measurements

PERIODICAL: Pribory i tekhnika eksperimenta, 1961, No.3, pp.44-49

TEXT: The author describes a scintillation type gamma spectrometer working on the basis of fast-slow coincidences. A single channel analyser is used with a continuous window width adjustment from 0 - 25 v, and a dead time of 1.5 μ sec. The coincidence circuit employed has a time resolution of $5 - 8 \times 10^{-8}$ sec at 100% efficiency. In this arrangement impulses in the first channel pass through the single channel analyser, while in the second channel they are passed directly into the coincidence circuit, the output of the latter controlling the admittance to the multi-channel analyser of the second channel. This particular arrangement is well known, for instance G.S. Stanford and G.F. Pieper (Ref.1: Rev. Scient. Instrum., 1955, Vol.26, 847) and P. Weinzierl (Ref.2: Rev. Scient. Instrum., 1956, Vol.27, 226). The main advantage of this type of

Card 1/2

Scintillation gamma spectrometer ...

S/120/61/000/003/004/041
E202/E135

design lies in its relatively wide field of application, viz. in the region of pair formation, Compton scattering, or $\gamma - \gamma$. The maximum counting rate is claimed to be up to 10^5 impulses per second. Detailed description of all the circuits and values and types of all the components is given. This spectrometer has been used by the author in its $\gamma - \gamma$ form for the investigation of gamma radiation in the (n, γ) reaction and the results were published in a previous paper (Ref.7: A.S. Melioranskiy, I.V. Estulin, L.F. Kalinkin, B.S. Kudinov. Zh. Eksperim. i teor. fiz., 1960, Vol.38, 758). Acknowledgments are expressed to I.V. Estulin and L.F. Kalinkin, and also to A.A. Sanin. There are 4 figures and 7 references; 4 Soviet and 3 non-Soviet. The two English language references are Refs. 1 and 2, quoted in the text above.

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

SUBMITTED: August 20, 1960

Card 2/2

MELIORANSKIY, A.S.; PETUSHKOV, A.A.

Coincidence measuring the number of true and random coincidences simultaneously. Prib. i tekhn. eksp. 6 no.1:104-105 Ja-F '61.
(MIRA 1449)

1. Nauchno-issledovatel'skiy institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta.
(Nuclear counters)

KALINKIN, L.F.; MELIORANSKIY, A.S.; ESTULIN, I.V.

Remarks on excited energy states of Ho¹⁶⁶ and Cs¹³⁴ odd-odd nuclei. Izv. AN SSSR. Ser. fiz. 25 no.9:1124-1126 '61. (MIRA 14:8)

1. Nauchno-issledovatel'skiy institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova.
(Holmium—Isotopes)
(Cesium—Isotopes)
(Nuclear reactions)

MELIORANSKIY, A.S.; ESTULIN, I.V.; KALINKIN, L.F.

Studying the lower excited states of Mn^{56} and Ho^{166} by measuring the coincidences of cascade γ -quanta. Zhur. eksp. i teor. fiz. (MIRA 14:6)
40 no.1:64-71 Ja '61.

1. Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta.
(Manganese--Spectra) (Holmium--Spectra) (Nuclei, Atomic)

S/056/62/042/005/002/050
B125/B108

AUTHORS: Kalinkin, L. F., Melioranskiy, A. S., Estulin, I. V.

TITLE: Cascade γ -quanta in the reaction $Rh^{103}(n,\gamma)Rh^{104}$

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42, no. 5, 1962, 1149 - 1157

TEXT: A two-crystal luminescence $\gamma\gamma$ -coincidence spectrometer was used to study γ -quantum cascades in the reaction $Rh^{103}(n,\gamma)Rh^{104}$ with thermal neutrons. Coarse rhodium wrapped in aluminum foil served as a target. Results are shown in Table 1. Fig. 1 shows typical spectra of γ -quanta from $Rh^{103}(n,\gamma)Rh^{104}$. The multipole types were determined for the following transitions: 35 keV(M1+E2), 51 keV(M1), 88 keV(M1+E2 or E2), 98 keV(M1), 99 keV(E2), 133 keV(M1 or E2), 135 keV (M1 or E2). The coincidences detected are indicative of the existence of two new Rh^{104} levels with the excitation energies 184 and 272 keV with transitions to and from these levels. Direct transitions from the initial state (i.e. when a neutron is captured) go to levels with energies of 440, 580, 760 and 900 keV arise. The chain of transitions detected in the coincidences

Card 1/2

Cascade γ -quanta in the...

S/056/62/042/005/002/050
B125/B108

with 98 keV γ -quanta is related to the ground state and not to the isomeric state. The transition belonging to the newly discovered peak with 230 keV does not conform with the other levels. For this reason a 500 keV level is introduced conditionally. A 35 keV γ -line was detected in the spectral regions V and VI which is indicative of a ~ 183 keV transition. Direct transitions of comparable intensities must be of the type E1. The interpretation of the excited levels of Rh^{104} is difficult because of the large number of neutrons and protons in vacant nuclear shells. There are 2 figures and 2 tables. The most important English-language reference is: Nuclear Data Sheets, National Academy of Sciences-National Research Council 1960 (US Government Printing Office, Washington D.C.).

ASSOCIATION: Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta (Institute of Nuclear Physics of Moscow State University)

SUBMITTED: November 5, 1961

Card 2/2

3/056/62/043/004/035/061
B102/B102

AUTHORS: Estulin, I. V., Kalinkin, L. P., Melioranskiy, A. S.

TITLE: Measurement of $\gamma\gamma$ -coincidences in the reaction $Ag^{107}(n,\gamma)Ag^{108}$

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43,
no. 4(10), 1962, 1378-1384

TEXT: $\gamma\gamma$ -coincidences were measured with a two-crystal (NaI(Tl)) spectrometer according to a method described earlier (A. S. Melioranskiy et al., ZhETF, 38, 755, 1960; 40, 64, 1961; L. P. Kalinkin et al., ZhETF, 42, 1149, 1962). The energies and intensities of the gamma lines observed by the authors are given in Table 2. The measurements of coincidences were used to determine the energy level diagram of Ag^{108} (Fig. 3). There are 3 figures and 2 tables.

ASSOCIATION: Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta (Institute of Nuclear Physics of Moscow State University)

Card ~~112~~

ESTULIN, I.V.; KALINKIN, L.F.; MELIORANSKIY, A.S.

Decay of Rh^{104*} ($T_{1/2} = 4.4$ min.). Izv. AN SSSR. Ser. fiz. 28
no.1:93-97 Ja '64. (MIRA 17:1)

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

ACCESSION NR: AP4024040

S/0048/64/028/002/0227/0228

AUTHOR: Kalinkin, L.F.; Estulin, I.V.; Melioranskiy, A.S.

TITLE: Gamma radiation emitted in the $Ag^{109}(n,\gamma)Ag^{110}$ reaction /Report, Fourteenth Annual Conference on Nuclear Spectroscopy held in Tbilisi 14 to 22 Feb 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.2, 1964, 227-228

TOPIC TAGS: neutron capture γ -ray, neutron capture reaction Ag^{109} , Ag^{110}

ABSTRACT: Hitherto there has been only one study of the neutron capture γ -radiation from Ag^{109} (V.V.Sklyarevskiy, E.P.Stepanov and B.A.Obinyakov, Atomnaya energiya 5, 454, 1958). The purpose of the present work was to check and amplify the earlier data. In the present work the γ -radiation from the $Ag^{109}(n,\gamma)Ag^{110}$ reaction was recorded by means of a scintillation spectrometer in which there were used 10, 20 and 40 mm thick NaI(Tl) crystals coupled to a louver type photomultiplier. The target was metallic silver enriched to 98.8% Ag^{109} . The silver in the amount of 45.7 mg was deposited electrolytically onto a thin aluminum backing in the form of a 20 mm diameter disc. The spectra were recorded using different Pb + Sn + Zn absorbers; one typical singles spectrum is reproduced. The 16 γ -lines (including 22 keV K x-

Card 1/2

ACCESSION NR: AP4024040

rays) observed in the single crystal measurement are tabulated. Analysis of the results of γ - γ coincidence measurements did not reveal any γ -cascades including gammas with the intensities indicated in the table. Hence apparently most of the tabulated lines are actually groups of lines with close energies not resolved by the scintillation spectrometer. The present data are not sufficient for constructing a level diagram for Ag^{110} . Orig.art.has; 1 figure and 1 table.

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

SUBMITTED: 23Sep63

DATE ACQ: 08Apr64

ENCL: 00

SUB CODE: NS

NR REF SOV: 010

OTHER: 002

Card^{2/2}

ACCESSION NR: AP4019251

S/0056/64/046/002/0807/0809

AUTHORS: Estulin, I. V.; Kalinkin, L. F.; Melioranskiy, A. S.

TITLE: Energy levels of the Rh-104 nucleus

SOURCE: Zhurnal eksper. i teor. fiz., v. 46, no. 2, 1964, 807-809

TOPIC TAGS: rhodium-104, level scheme, transition between levels, $\gamma\gamma$ coincidence, isomer decay, γ line intensity, Ritz combination rule

ABSTRACT: Additional data on the energy levels of Rh¹⁰⁴ were obtained from recent published results on γ rays from Rh¹⁰³ bombarded by neutrons and on the decay of the Rh^{104m} isomer. The level scheme and the transitions between levels were obtained by combined analysis of the results of the quantitative processing of measurements of coincidences between γ rays in defined energy regions (scintillation spectrometers) and the values of the γ -line energies in these regions (diffraction spectrometers). The γ -line intensities were

Card 1/3 ✓

ACCESSION NR: AP4019251

used to relate the γ transitions detected by using the different methods. The Ritz combination rule was used as a necessary condition. A more complete report is being prepared for publication. It is shown that in spite of the complexity of the level system, brought about by the pn interaction, many levels can be interpreted within the limits of the existing theories on the nature of the excited states and deformed nuclei.

ASSOCIATION: Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta (Nuclear Physics Institute, Moscow State University)

SUBMITTED: 17Jul63

DATE ACQ: 27Mar64

ENCL: 01

SUB CODE: PH

NO REF SOV: 005

OTHER: 008

Card

2/3

ACC NR: AP7000520

SOURCE CODE: UR/0048/66/030/011/1765/1767

AUTHOR: Grigorov, N. L.; Kalinkin, L. F.; ~~Melioranskiy, A. S.;~~
Nesterov, V. Ye.; Pryakhin, Ye. A.; Savenko, I. A.; Estulin, I. V.

ORG: none

TITLE: A study of high-energy γ -quanta at the upper limits of the atmosphere [Paper presented at the All-Union Conference on Physics of Cosmic Rays held in Moscow from 15 to 20 November 1965]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 11, 1966, 1765-1767

TOPIC TAGS: gamma radiation, gamma counter, gamma detection, *meteorologic satellite, cosmic ray telescope, scintillator, Cherenkov counter*ABSTRACT: The satellites Proton-1 and Proton-2 carried equipment designed to detect gamma rays with energies above 50 Mev and to measure their spectrum. The equipment (see Fig. 1) comprised a telescope formed by a γ -quanta converter consisting of a sandwiched plastic scintillator, and a Cherenkov counter with a radiator made from lead-containing glass which detected the energy and direction of gamma rays. The telescope detectors were placed inside a cover made of a scintillator plastic which protected the telescope from the noise of charged particles in selecting of anticoincidences. In addition to gamma radiation, the equipment was capable of registering pulses from other

Card 1/3

ACC NR: AP7000520

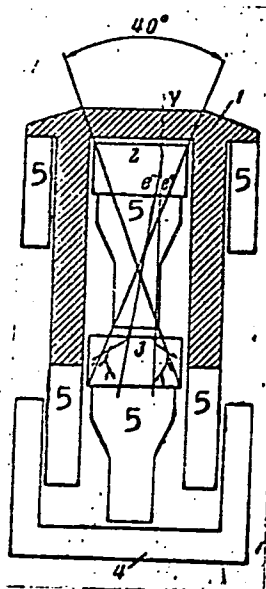


Fig. 1. Block diagram of the equipment

- 1 - Plastic scintillator;
- 2 - sandwich crystal;
- 3 - lead-containing glass;
- 4 - electronic circuits;
- 5 - photomultipliers.

ACC NR: AP7000520

electrically neutral particles (neutrons for example), as well as the flow of charged particles with energies that exceeded the luminescence threshold of the Cherenkov counter radiator. The flow of γ -quanta with energies exceeding 5 Mev was approximately $2 \times 10^{-3} \text{ cm}^{-2} \text{ sterad}^{-1} \text{ sec}^{-1}$; this value is in good agreement with the values obtained by other researchers. Orig. art. has: 3 figures. [WA-75]
[IV]

SUB CODE: 04, 1820/
OTH REF: 006

SUBM DATE: none/

ORIG REF: 004/

Card 3/3

MELIORANSKIY, A.S.; KALINKIN, L.F.; ESTULIN, I.V.

Excited states of Rh^{104} . Izv. AN SSSR. Ser. fiz. 28 no.7:
1110-1117 J1 '64 (MIRA 17:8)

MELIS, Lubomir, inz.

New hydraulic arm. Siln doprava 11 no.6:23-24 Je '63.

1. Dopravostroj, n.p., Bratislava.

MELIS, M.

The decomposition of corn caused by Nigrospora. p. 8. (Magyar Mezőgazdaság, Vol. 11, no. 5, Mar. 1956 Budapest)

SO: Monthly List of East European Accession (EEAL) LC, Vol. 6, no. 7, July 1957. Uncl.

MELISEK, J.; DREOHLAV, J.

Automatization of hydroelectric-power plants. p.385

ENERGET.KA. (Ministerstvo energetiky a Ceskoslovenska vedecka technicka spolecnost pro energetiku pri Ceskoslovenske adaemii ved) Praha, Czechoslovakia.
Vol.5, no.10, Oct. 1955

Monthly List of EastEuropean Accessions (EEAI) LC, Vol.8, no.11
Nov. 1959
Uncl.

MELISEK, J.

Measuring the water level in hydro-electric power stations. p. 250.
(Energetika, Vol. 6, no. 6, June 1956. Praha, Czechoslovakia)

SO: Monthly List of East European Accessions. (EEAL) LC. Vol. 6, No. 6,
June 1957. Uncl.

MELISEK, J.

"The Lipno II Automatic Hydroelectric Power Plant."

p. 249 (Energetika, Vol. 8, No. 6, June 1958, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 9, September 1958.

MELISEK, Jiri, inz.

Water power plant as an emergency power source. Energetika Cz 11
no.10:507-509 0 '61.

MELISEK, Jiri, inz.; SIKL, Jan, inz.

Some observations on automation of water-power electric plant Orlik.
Energetika Cz 11 no.11:557-559 N '61.

(Water-power electric plants)

MELISENKO, T.G. pressovshchitsa.

Simultaneous operation of six GMP-1R macaroni presses. Khleb.i kond.
prom. 1 no.8:35-37 Ag '57. (MLRA 10:8)

1. Makaronnaya fabrika (Rostov-na-Donu)
(Food industry--Equipment and supplies)
(Macaroni)

ALEKSEYEVA, G. Ye.; MELISHKINA, L.P.

Using the Hall effect in converting direct current into alternating current. Prib. i tekhn. eksp. no.2:100-101 Mr-Apr '58. (MIRA 11:6)

1. Moskovskiy energeticheskiy institut.
(Electric current converters)

CZECHOSLOVAKIA
12 Jun 66

MELISKA, Ondrej

Secretary, Slovak Trade Union Council, interviewed by Praca
about the need to improve labor safety and hygiene
in plants, Bratislava, 12 June.

Praca, Bratislava, 12 Jun 66, p 1.

(1)

CZECHOSLOVAKIA
22 Jun 66

MELISKA, Ondrej

Engr, Secretary of the Slovak Trade Union Council,
addressed a trade union aktiv in Humenne, 22 June.

Praca, Bratislava, 23 Jun 66, p 1.

(1)

MELISKA, Ondrej, Engr, secretary, Slovak Trade Union
Council

DAUBNER, Vojtech, chairman, Slovak Trade Union Council

The above trade union leaders addressed a plenary
meeting of the Slovak Trade Union Council on its
first day, Bratislava, 28 June.

Praca, Bratislava, 29 Jun 66, p 1.

(2)

MELISSIN, V.

Operation of grain warehouses equipped for mechanical ventilation
of grain. Muk.-elev.prom. 21 no.3:7-8 Nr '55. (MLRA 8:5)

1. Moskovskaya oblastnaya kontora Zagotzerno.
(Grain--Storage)

MELITURI, G.N.

Session devoted to the 300th anniversary of the foundation of
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0 '65. (MIRA 18:12)

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Cand Arch Sci, Georgian Order of Labor Red Banner Polytechnical
Inst imeni S. M. Kirov, Min Higher Education USSR, Tbilisi, 1955.
(KL, No 9. Feb 55)

SO: Sum. No. 631, 26 Aug 55-Survey of Scientific and Technical
Dissertations Defended at USSR Higher Educational Institu-
tions (14)

Melitauri
DZHAMBURIYA, G.D.; MELITAUURI, K.H.; KHANTADZE, Sh.A.; SHOSHIASHVILI, N.F.;
BARNAVELI, T.V. [translator]; BERIDZE, V.V., red.; BAKRADZE, D.S.,
red.izd-va; DZHAPARIDZE, N.A., tekhn.red.

[Vardzia; guidebook] Vardzia; putevoditel'. Tbilisi, Izd-vo Akad.
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(Georgia--Description and travel--Guidebooks)
(Kura Valley--Monasteries)

MELITESCU-ZIGULESCU, Luminita

Bibliography of methods of teaching mathematics in Rumania,
1944-1964. Gaz mat fiz 70 no.3:111-115 Mr '65.

MELITESCU-ZIGULESCU, Luminita

Bibliography of methods of teaching mathematics in Rumania,
1944-1964. Gaz mat fiz 70 no.4:150-154 Ap '65.

MELITSKIY, L.V.

3) 807/2713

PLAZA . BOOK INFORMATION

International Conference on the Peaceful Uses of Atomic Energy. 2nd, Geneva, 1958

Radzelya sovetskaya vobnyayki: volucheniye i primeneniye izotopov (Reports of Soviet Scientific Production and Application of Isotopes) Moscow, Atomizdat, 1959. 368 p. (Series: Izv. Trudy, vol. 6) 5,000 copies printed.

Eds. (Title page): G.V. Kuryumov, Academician, and I.L. Serikoy, Corresponding Member, USSR Academy of Sciences; Ed. (Inside book): Z.S. Andreyenko; Tech. Ed.: I.D. Andreyenko.

REMARKS: This book is intended for scientists, engineers, physicists, and biologists engaged in the production and application of atomic energy to peaceful uses; for professors and graduate and undergraduate students of higher technical schools where nuclear science is taught; and for the general public interested in atomic science and technology.

CONTENTS: This is volume 6 of a 6-volume set of reports delivered by Soviet scientists at the Second International Conference on the Peaceful Uses of Atomic Energy held in Geneva from September 1 to 13, 1958. Volume 6 contains 32 reports on: 1) chemical methods for the production of stable radioactive isotopes and their labeled compounds; 2) research results obtained with the aid of isotopes in the field of chemistry, metallurgy, machine building and agriculture; and 3) dosimetry of ionizing radiation. Volume 6 was edited by S.V. Levinshy, Candidate of Medical Sciences; V.S. Prasadov, Candidate of Chemical Sciences; and V.V. Sedov, Candidate of Medical Sciences. See 807/231 for titles of volumes of the set. References appear at the end of the articles.

2. Zashita, V.I., S.I. Emertson, and S.V. Timofeyev-Schansky. Radiostative Isotopes for Solving Problems in Hygiene (Report No. 2317)

3. Astner, G.L. Radioisotopye Yavleniya v Lestnom Zhivot (Report No. 2320)

4. Priznaki, I.A. (Deceased). Vlyaniye Yazyka Primeneniya of the Skin, Its Pathology in the Albumen of the Wool, and Its Description from the Organism of the Animal (Report No. 2318)

5. Arifov, G.A., I.D. Arfomaliev, V.A. Muratov, G.A. Guseynov, G.A. Elayev, S.S. Fakhriyev, L.M. Tshalidze, T.V. Tshalidze, S.S. Chabaidze, and S.S. Makhomov. Radiation Killing of Cocoon of the Mulberry-Rearing Silkworm (Report No. 2321)

6. Bekin, S.A., and L.V. Melitskiy. Studying the Effect of Ionizing Radiation on the Protoplasm of Potato Tubers With Respect to Yearlong Storage (Report No. 2311)

373

347

54

52

573

VARENTSOV, I.I.; MILITSKIY, L.V.; ANTONOVA, L.P.

Factors determining the transportability of tomatoes. Trudy VNIIECF
no.11:102-112 '62. (MIRA 17:9)

1. MELIVA, A. M.
2. USSR (600)
4. Borzhomi - Springs
7. Intermittent eruptions of the Borzhomi mineral springs. Trudy Lab.gidrogeol. probl. 10, 1951.

9. Monthly List of Russian Accessions, Library of Congress, March 1953, Unclassified.

MELIVA, F. S., Cand Geol-Min Sci -- (diss) "Hydrogeological conditions of deposits of mineral waters of the Sukhuma -- New Afon." Baku, 1960. 19 pp; (Committee of Higher and Secondary Specialist Education of the Council of Ministers Azerbaydzhan SSR, Azerbaydzhan State Univ im S. M. Kirov); 150 copies; price not given; (KL, 28-60, 158)

MELIYA, A.A.

MELIYA, A.A., laureat Stalinskoy premii

PM type clay slabs for wall facings. Bats. i izobr.predl. v
stroj. no.108:26-27 '55. (Walls) (MLBA 8:10)

L 8142-66

ACC NR: AP5025731

SOURCE CODE: UR/0286/65/000/018/0082/0083

AUTHOR: Meliya, A. L.

ORG: none

TITLE: A device for measuring the tractive force and performance of a tractor-mounted agricultural tool. Class 42, No. 174816 [announced by Georgian Scientific Research Institute of Mechanization and Electrification of Agriculture (Gruzinskiy nauchno-issledovatel'skiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 18, 1965, 82-83

TOPIC TAGS: agriculture, tractor, measuring apparatus

ABSTRACT: This Author Certificate presents a device for measuring the tractive force and performance produced by a tractor-mounted agricultural tool (see Fig. 1). The device contains strain gauges fastened to the measuring elements of the tractor-mounted system, a tractor generator with a rectifier and a regulator, a magnetic amplifier-adder, continuous-voltage-to-discrete voltage converters, a relay, and electric pulse counters of the forces and operating time of the tractor assembly.

Card 1/3

UDC: 531.781.002.56

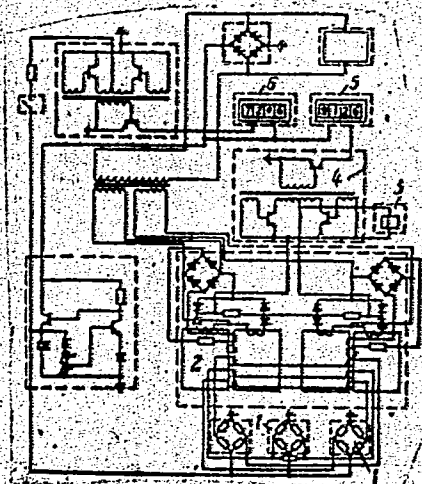
13
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L 8142-66

ACC NR: AP5025731

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Fig. 1. 1- tractive force monitors; 2- magnetic amplifiers; 3- relay; 4- converter; 5 and 6- counters



The device is designed to add and integrate automatically the voltage magnitude. The tractive force strain gauge output at each point of the tractor mounting is connected to the adding windings of the magnetic amplifier control. The relay is connected to the output of the magnetic amplifier. This relay feeds the regulated

Card 2/3

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ACC NR: AP5025731

voltage to the input of the converter of the continuous value to the discrete value only when the tractive force is operating. An electric pulse counter is connected to the output circuit of the converter. The number of pulses of the counter represents the time integral of the tractive force of the tractor-mounted tool. Orig. art. has: 1 figure.

SUB CODE: GO/ SUBM DATE: 13Jun64

Card 3/3 *pu*

MELIYA, A.S.

The reciprocal effect of work of one hand on work of the other.
[with summary in English]. Fiziol.zhur. 44 no.12:1119-1125 D'58
(MIRA 12:1)

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(HAND,

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MELIYa, A. S., Cand Bio Sci -- (diss) "Mutual effect of the upper extremities during the muscular action of man," Tbilisi, 1960, 15 pp (Institute of Higher Nervous Activity, AS USSR) (KL, 36-60, 114)

MELIYA, A.S.

Physiological mechanism of Sechenov's phenomenon. Scob. AN Gruz. SSR
24 no.5:595-600 Ky '60. (MIRA 13:8)

1. Gruzinskiy Gosudarstvennyy Institut fizicheskoy kul'tury, Tbilisi.
Predstavleno chlenom-korrespondentom Akademii A.N. Bakuradze.
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MELIYA, G. T.

Science

Logarithmic calculating instrument for drafting measurements and the automatic multiplication or division of these measurements by a given figure. Moskva, Gos. izd. arkhitektury i gradostroytel'stva, 1951

Monthly List of Russian Accessions, Library of Congress, October 1952.

UNCLASSIFIED.

MELIYA, G.T.

Evaluation of the quantity of scattered solar radiation falling
on an inclined solar water heater during cloudless conditions
and sun height at 65°. Trudy Inst.energ.AN Gruz.SSR:181-182 '62.
(MIRA 16:4)

(Solar energy)

(Solar heating)

PHASE I BOOK EXPLOITATION

SOV/4619

Meliya, G.T.

Gelioenergeticheskiye resursy Gruzinskoy SSR (Solar Power Resources of the Gruzinskaya SSR) Tbilisi, Izd-vo AN Gruzinskoy SSR, 1959. 125 p. Errata slip inserted. 1,000 copies printed.

Sponsoring Agency: Akademiya nauk Gruzinskoy SSR. Sovet po izucheniyu proizvoditel'nykh sil.

Ed.: P.G. Shengeliya; Ed. of Publishing House: Ye. A. Kadzhaya; Tech. Ed.: A.R. Todua

PURPOSE: The book is intended for solar power engineers and officials in the power industry.

COVERAGE: This book provides information on the solar energy resources of the Gruzinskaya SSR. Data on the amount of solar radiation received at 21 geographical points in the Republic are presented in tabular form. The principles of selection and design of various installations used to convert solar radiation into mechanical and electric power are described. The book contains a map showing the regionalization of the Gruzinskaya SSR according to the amount of solar energy received.

Card 1/5

MELIYA, G.T.

Absorption of solar radiation and self-radiation of materials used in solar energy technology; glass and enamel with a film of tin dioxide and white tin with a lead sulfide film. Trudy Inst. energ. AN Gruz. SSR 17:169-176 '63. (MIRA 17:7)

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Def. at
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191. **ბიოლოგიის მეცნიერებათა დოქტორი** მეცნიერებათა დოქტორი, ბიოლოგიის მეცნიერებათა დარგის კანდიდატი. 1942. [17].
200 წ. [5] 1. 8. წ. წ. წ.
წიგნი 1942, 66.
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1942, 66.
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1942, 66.
198. **ბიოლოგიის მეცნიერებათა დოქტორი** მეცნიერებათა დოქტორი, ბიოლოგიის მეცნიერებათა დარგის კანდიდატი. 1942. [17]. 200 წ. [5] მან. 4. მან.
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1942, 66.

712
Dissertation for degree of
Candidate Biological Sciences

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2. USSR (600)
7. "Unknown Representatives of the Genus Phyllosticta in the Microflora of the Georgian SSR", Trudy In-ta Zashchity Rasteniy AN Gruz. SSR (Works of the Institute of Plant Protection of the Acad Sci Georgia SSR), Vol 7, 1950, pp 233-242.

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

MELIYA, M.S.

Materials on the mycoflora of the Erysiphaceae in the Georgian
S.S.R. [in Georgian with summary in Russian]. Trudy Inst.
zashch.rast. AN Gruz. SSR 9:289-297 '53. (MIRA 8:2)
(Georgia--Fungi)

MELIYECHEVSKIY P

PARNAS, Yu.; MELIYECHEVSKIY, P.

Biochemical studies of Brucella, Pasteurella, and Pasteurella
tularensis. Zhur.mikrobiol.epid. i immun. no.1:106-107 Ja '58.
(MIRA 11:4)

1. Iz kafedry mikrobiologii Meditsinskoy akademii i otdela antropo-
zoonozov Instituta gigiyeny sela v Lyubline.

(BRUCELLA, metabolism,

(Rus)

(PASTEURELLA, metabolism,

(Rus)

(PASTEURELLA TULARENSIS, metabolism,

(Rus)

KONIG, J.; KUNC, Z.; SVEHLA, C.; PAIA, F.; SPANKOVA, H.; MELJNKOVA, M.

Changes in leukocyte count during ganglionic blocking. Cas. lek. cesk. 98
no.3:65-71 16 Jan 59.

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MUDr. O. Smahel. Neurochirurgicke oddeleni a ustredni laboratore Ustredni
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(LEUKOCYTE COUNT, effo of drugs on

pentamethonium ganglionic block (Cz))

(METHONIUM COMPOUNDS, eff.

pentamethonium ganglionic block on leukocyte count (Cz))

(ANESTHESIA, REGIONAL, eff.

same)

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Oxyhemometric observations in epidemic hepatitis (Botkin's disease).
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Oxygen therapy in epidemic hepatitis (Botkin's disease). Ibid.:168-176

Vitamin B₁ content in the blood in epidemic hepatitis (Botkin's
disease). Ibid.:237-243

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importance. Ibid.:244-249 (MIRA 18:3)

1. Kafedra infektsionnykh bolezney (zav. prof. Ye.S.Gurevich)
Leningradskogo pediatricheskogo meditsinskogo instituta (rektor
dotsent Ye.P.Semenova).

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Leningradskogo pediatricheskogo meditsinskogo instituta (rektor
dotsent Ye.P.Semenova).

MELKA, J.

"Our Railroad Transportation Is Secure", P. 9, (TECHNICKE NOVINY, Vol. 2, No. 9, May 1954, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

MELKA, J.

More electric power, p. 2. (Technicke Noviny. Praha, Vol 2, No. 16, August 1954)

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

MELKA, J.

To be thrifty with electric power, p.1. (Technicke Noviny, Praha, Vol. 2, No. 20, Oct 1954)

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

MELKA, J.

Perfect competition ensures more energy. p.5.
(vc). Protection of three phase motors. p.5. (Technicke Noviny, Praha, Vol. 2, no. 23,
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CZECHOSLOVAKIA

SIMEK, J.; MELKA, J.; PAZDERKA, J.; MACEK, V.; PCSPISIL, M.; Chair of Physiology, Chair of Pathological Physiology, and Chair of Anatomy, Medical Faculty, Charles University (Katedra Fysiologie, Katedra Patologicke Fysiologie, a Katedra Anatomie, Lek. Fak. KU), Hradec Kralove.

"Changes in Liver Tissue and Its Mitotic Activity After Insulin Administration to Rats that Underwent Partial Hepatectomy."

Prague, Ceskoslovenska Fysiologie, Vol 15, No 5, Sep 66, pp 421-422

Abstract: The role of hypoglycemia which develops regularly after partial hepatectomy during the regulation of the development of the changes in the regenerated liver tissue was investigated. Administration of insulin increased the total content of lipids, protein nitrogen, ribonucleic and desoxyribonucleid acids. The mitotic index of rats who received insulin was 100% higher than in those who did not receive it. 5 Western, 2 Czech references. Submitted at the Plenary Meeting of the Physiological Section of the J. Ev. Purkyne Medical Society at Hradec Kralove, 2 Feb 66.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

1ST AND 2ND CODES

PROCESSING AND PROPERTIES INDEX

2ND AND 4TH CODES

MELKA, J.
CA

17

Differentiation of common alkalis by the behavior of their reaction products with phosphotungstic acid. J. MELKA AND L. MELKOVA. *Chemis. Zvestov. Lhkovna* 11, 267-70(1931).—A new procedure is described for qual. analysis of the common alkalis, based on the use of phosphotungstic acid. WILLIAM J. HUNTA

COMMON ELEMENTS

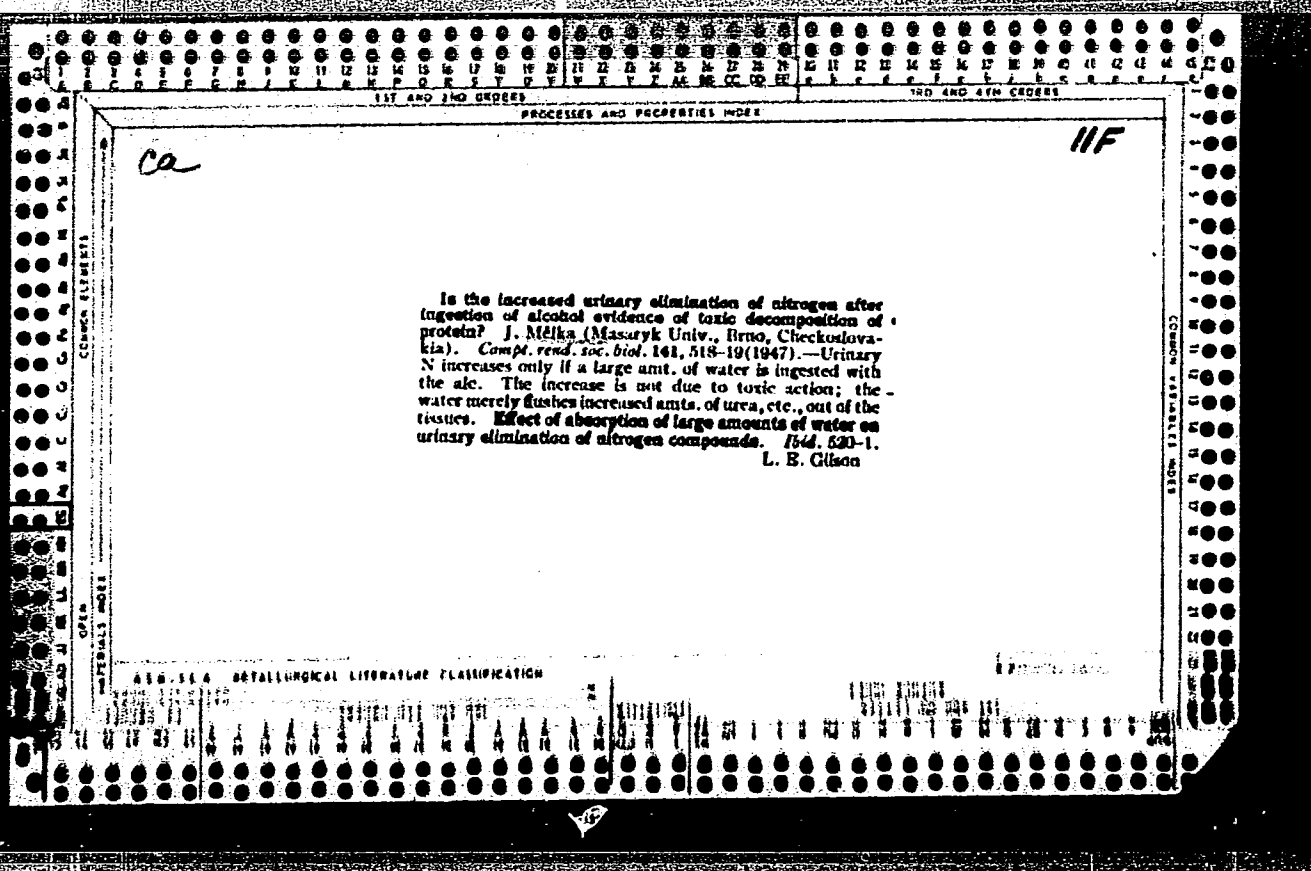
MATERIALS INDEX

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

REGIONAL NOMENCLATURE

REGIONAL NOMENCLATURE

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50



MELKA J., RAPANT V. and ZAPLETAL B.

ZFysiologického Ústavu a z Chirurgické Kliniky Palackého University v Olomouci.
Denaturovaná telecí plasma jako náhrada lidské krve a plasmy pro trasfusní účely
Denaturated calf plasma as a trasfusion substitute for human blood and plasma
Časopis Lékařů Českých 1947, 86/2 (33-36)

4237 To replace human plasma by animal plasma it must be deprived of its antigenic qualities. The authors use calf plasma prepared by Masson's method. The blood is centrifuged at the slaughter-houses after admixture with an isotonic solution of 3.8 per cent sodium citrate (seven parts to one). To this is added 3.5 ml formol diluted with 200 ml of saline, stirring continuously. After five minutes 0.1 ml of concentrated solution of ammonia is added. The mixed plasma is heated up to 100° C. The plasma shows opalescence against a dark background when denaturated. Cooled to 50° C it is filtered into glass jars with rubber caps and stored at a temperature of 4° C. It can be used for about ten months. By longer storage fibrin floccules will be formed but these can be eliminated by filtration before use.

Laboratory experiments have proved that calf plasma prepared by this method does not contain any agglutinins against human red blood cells nor does it haemolyse them. The authors have shown that it does not cause the formation of precipitins even against native calf serum. It can thus be called 'denaturated plasma'. It has been ascertained that in clinical use this plasma is quite innocuous to the patient, and its colloidal osmotic pressure is not changed by the process of denaturation, that it is not excreted by the kidneys and that it is efficacious in all main indications for the use of human plasma. Signs of incompatibility are rare. Its main effect is a prolonged regulation of the blood pressure. The chief advantage is that it is cheap, thus there is no need for strict economy as with human blood or plasma.

Niederle - Prague (Sec. IV)

SO: Section II Vol. 12 No. 7-12

MELKA, J.

(2)

Reflex influence in specific dynamic action of proteins. J. Melka (Palacky Univ., Olomouc, Czech.). *Biol. Listy* 36:100-2(1949).--The subjects chewed protein food like meat and eggs without swallowing it. After 15 min. about a 10% increase in O_2 consumption was observed with the max. effect after about 1 hr. Max. was higher in summer months than in winter. Persons with no reaction showed lowered specific dynamic action after protein consumption. Sucrose under similar conditions did not produce a similar effect. If oral mucosa was anesthetized by 3% procaine, the reaction was not observed. Evidently the reaction is caused by reflexes originating in chemoreceptors of taste cells and transmitted to liver. B. J.

MELKA, J.

MELKA, J.

Isolation of nitrogen substances in urine following intake of alcohol
proof increase of protein disintegration. Biol.listy 31 no.1:23-30
27 May 50. (CML 19:4)

1. Of the Physiological Institute of the Medical Faculty of Palackeho
University in Olomouc.

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An increase of antiscorbutic resistance in the guinea pig.
1. Melka (Palacky Univ., Olomouc): *Biol. Listy* 31,
20-21 (1941).—Guinea pigs were maintained upon an inter-
mittently ascorbic acid-free diet. When scurvy developed,
the symptoms were counteracted by the addn. of ascorbic
acid to the diet. With continuous repetition of this regimen,
the time before the appearance of scurvy constantly in-
creased. It is speculated that the animal synthesized its
own ascorbic acid, but the amt. did not suffice to prevent the
avitaminosis from reappearing. Oldrich Sebez

MELKA, J.; ZIZKA, M.

Conditioned specific dynamic action of energy producing substance
with special reference to proteins. Cesk. fysiол. 1 no.2:76-87 1952.
(CML 23:4)

1. Of the Institute of Physiology of Palacky University, Olomouc.

MELKA, J.; ZISEKA, M.

Conditioned specific-dynamic reaction to energy food, mainly proteins [with summary in German]. Chekh. fiziol. 1 no.2:101-115 '52. (MLBA 6:12)

1. Fisiologicheskiy institut meditsinskogo fakul'teta universitete im. Palatskogo, Olomouc.

Melka, J

Serological investigation of the specificity of proteins of the adenocarcinoma of rat. J. Melka (Palacky Univ., Olomouc, Czech). *Právní listy* 7: 231-3 (1952). -- Prepn. of an adenocarcinoma antigen failed because of the insolubility of the tumor proteins in normal saline. Attempts at obtaining these proteins in 0.5% KOH solution did not produce antigen of acceptable specificity. Serum of rats immunized against tumor proteins of the rat did not show regular results with the serum of rats with implanted adenocarcinoma. L. J. Urdánek

MELKA, J.

Physiological mechanism of Filatov's biogenic stimulator therapy.
Cas.lek.cesk. 91 no.43:1220-1222 24 Oct 52.

1. Z fysiologickeho ustavu lekarske fakulty PU v Olomouci.
(TISSUE THERAPY,
mechanism of action)

NEELKA, J.

"Varying effect of the cerebral cortex upon man's consumption of oxygen during summer and winter."

Chekhoslovatskaia Fiziologiya, Praha, Vol 2, No 2, 1950, p. 131-139

SO: Eastern European Accessions List, Vol 3, No 10, Oct 1954, Lib. of Congress

MELKA, J.;BATEK, F.

"Conditionally Induced Fatigue and Recovery from Muscular Fatigue in Man." p. 24,
(CESKOSLOVENSKA FYSIOLOGIE, Vol. 3, No. 1, Jan. 1954, Praha, Czechoslovakia)

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No. 5, May 1955, Uncl.

MELKA, J.; BATEK, F.

Conditioned production of fatigue and restoration of working capacity following muscular fatigue in man. *Chekh. fiziol.* 3 no.1: 29-37 1954.

1. Institut fiziologii BMA v Gradets Kralove i institut fiziologii meditsinskogo fakul'teta v Olomoutse.

(REFLEX, CONDITIONED,

prod. of fatigue & restoration of working capacity after musc. fatigue in man)

(MUSCLES, physiology,

conditioned prod. of fatigue & restoration of working capacity after musc. fatigue in man)

(FATIGUE, physiology,

conditioned prod. of fatigue & restoration of working capacity after musc. fatigue in man)

MELKA, J

U S S R .

✓ Effect of bicarbonate baths, according to Lepeshinskaya. J. Melka, Ya. Peregrin, O. Shkrants (Physiol. Inst., Mill. Acad., Graders Kralova, Czech.). *Klin. Med. (U.S.S.R.)* 32, No. 11, 72-3 (1954); cf. *ibid.* 31, No. 1, 20 (1953).--Expts. were carried out to test the contention of Lepeshinskaya that NaHCO_3 baths cause a heightened metabolism. It was found that serum Na is not increased after a bath, the alk. reserve of the plasma is not decreased during bathing, the pH of the urine and the basal metabolism rate remains unchanged and the body weight remains either unchanged or undergoes slight upward or downward changes. Only ingestion of bicarbonate affords a possibility to study its action upon metabolism. A. S. Mirkin

MELKA, J.

Significance of specific dynamic action of proteins during the
summer and winter seasons. Cas lek cs 93 no.17:463-467 Ap '54
(REAL 3:7)

1. Z fysiologickeho ustavu VLA v Hradci Kralove.
(PROTEINS, metabolism, (CLIMATE,
*seasonal factors) *seasonal factors in protein metab.)

MELKA, JAROSLAV

Changes in the blood serum of rats during the growth of tumors. Vladimír Morávek and Jaroslav Mělka. *Publ. fac. sci. univ. Masaryk 362, No. 1, 1-10(1955)*.—Brdička's polarographic reactions were studied in rats after transplantations of carcinomas. After two days these reactions were pos., and remained at equal intensity as time progressed until metastasis set in. This was not specific for malignant growth since any other injury similar to a transplantation trauma also gave a pos. reaction. It was due to increased decompr. of cellular protoplasm. The turbidity test using sulfosalicylic acid, as well as the sedimentation of charcoal. (CA: 50, 4282c) is equally nonspecific for tumor growths. O. E. Lobstein