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THE DECAY CONSTANT VARIATIONS OF 26-MINUTE ISOMER 235U AND SOME MATHEMATICAL PROBLEMS OF RADIOACTIVE CURVE PROCESSIHG. The component separation method of the complex radioactive decay carve that represents sum of two curves with similar decay constants were developed. The evaluation displacement of decay constant when determining JI. with the direct nonlinear method of least squares on original curve logarithm were determined. The displacement of this direct nonlinear method is low. The half-life difference of isomer 235U introduced in $UO_2$ and $UO_3$ were determined.

A MOMTE-CARLO ANALYSIS OF INTEGRAL EXPERIMENTS ON NEUTRON YIELD UNDER HIGH-ENERGY PROTONS. Monte-Carlo computations of the neutron yield obtained by a bombardment of uranium targets with, high energy protons were described. The MARS-4- code was used to simulate the secondary particle cascade. The low-energy neutron transport
was calculated by the MMK22 code.

ESTIMATED VALUES OF TOTAL AND DIFFERENTIAL CROSS-SECTIONS OF PROTON INTERACTIONS WITH NUCLEI 6L1 AND 7Li. The compilation and evaluation of cross-sections of proton interactions.of 6Li and 7Li was executed. The results of compilation and the evaluations of the total cross-sections 6Li(p,α)3He, 7Li(p,α)4He, 7Li(p,n)7Be, 6Li(p,n)6Be are given in state of graphs and tables. The angular distributions were analyzed for first three reactions and recommended values were obtained for coefficients with Legendre polynomials in wide energy range.

THE CALIBRATION CONSTANTS OF ISOMER SHIFTS OF MOSSBAUER NUCLEI, The calibration results of isomer shifts of Mossbauer spectra practically for all Mossbauer nuclei obtained in one approach according to widened method of isomer shift ratios, taking into account the effects of solids and of covalents are presented. Reliability and stability of the used approach are shown.

NUCLEAR - SPECTROSCOPIC COTSTANTS OF THE 171Lu to 171Yb DECAY. The data available on the energies and intensities of γ-transitions and internal conversion electrons observed in the decay of 171Lu to 171Yb have been revised and some corrections have been introduced. For the first time relative intensities $I_k$ for six γ-transitions have been determined and the upper limits for twenty γ-transitions have been indicated.

THE VALUES OF THE NUCLEAR - SPECTROSCOPIC DECAY CONSTANTS OF 172Lu to 172Yb. Improved data on the energy values as compared to [*2*] are presented for 211 transitions, relative γ-radiation intensities (for 170 γ-lines) and internal conversion electrons (for 178 K-lines). Internal conversion coefficients for K-atomic shell have been determined for 138 transitions; 16 of them are new values the rest are revised ones.

THE MASS-SPECTROGRAPHICAL MEASUREMENTS OP ISOTOPE MASSES FROM RHODIUM UP TO XENON. The 49 stable isotope masses were measured with mass-spectrographical double method. The various organic compositions and fragments of them

were used as standards. The mass of every isotope was measured on 4-15 doublets with various compositions and origin. In work 412 fundamental doublets were used. The relative accuracy of measured values is $1.10^{-7}$.