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MEASUREMENT OF THE NEUTRON RADIATIVE CAPTURE CROSS-SECTION FOR ^{236}U IN THE NEUTRON ENERGY RANGE FROM 0,1 TO 50 keV. The neutron radiative capture cross-section for ^{236}U in the neutron energy range 0,1-50 keV have been obtained. The neutron slowing down spectrometer was used. The cross-section are normalized using the well thermalized neutron spectrum. The full error of the cross-section is equal 1,5-3,4%.

DIFFERENTIAL CROSS-SECTION FOR ELASTIC AND INELASTIC SCATTERING OF NEUTRON ^6Li and ^7Li FROM 7 to 10 MeV ENERGY. Differential cross-sections are reported for elastic and inelastic scattering of neutrons from ^6Li and ^7Li . The neutrons source provided by the $\text{D}(d, n)^3\text{He}$ reaction at energies from 7 to 10 MeV. Scattered neutrons were observed over

a flight path of 3 m at angles ranging from 20 to 160 deg in 20 deg increments. The results are compared to predictions of previous works.

REVISED SCATTERING AND CAPTURE CROSS-SECTIONS OF SULPHUR FOR 0,024-2 eV NEUTRON ENERGY. In connection with the problem of precise determination of ν for ^{252}Cf total (σ_t) and scattering (σ_s) neutrons cross-section³ of Sulphur for 0,024-2 eV neutron energy were measured. Such values were obtained: $\sigma_s = (0,960 \pm 0,005)\text{b}$ and $\sigma_t = (0,9646 \pm 0,0026) + (0,0863 \pm 0,0008)E^{-1/2}\text{b}$. from this expressions the absorption cross-section can be obtained: $\sigma_a = (0,0863 + 0,0008)E^{-1/2}\text{b}$.

AN ERRORS OF COLLISION DENSITY CONSTANCY APPROXIMATION IN MULTI-GROUP CROSS-SECTIONS. In this article investigation of accuracy group and multi-group system of constants are obtained with the use of the collision density constancy approximation.

Estimations of the constant error of the K_{ef} and reaction rates are obtained. Group intervals of BNAB, JAERI, $\Delta u \cong 0,06$ and $\Delta u \cong 0,02$ are examined.

CALCULATION OF THE INFLUENCE OF P-WAVE RESONANCES IN EXPERIMENTAL

NEUTRON TRANSMISSION ANALYSIS THROUGH IRON SAMPLES. The energy averaged transmission of resonance neutrons through iron samples, is investigated as a function of sample thickness. Parameters of our theoretical model for the p-wave transmissions analysis have been found to be in agreement with corresponding evaluated values. With the help of s- and p-wave parameters obtained the transmission can be calculated for every sample thickness.

OPTICAL POTENTIAL FOR HEAVY NUCLEUS. A unique set of generalized optical potential parameters is obtained on a base of coupled-channel calculations which gives the possibility to describe the experimental information available for ^{235}U , ^{238}U ^{239}Pu ^{240}Pu .

EVALUATION OF THE $^{238}\text{U}(n, 2n)$ - REACTION CROSS-SECTION IN THE NEUTRON ENERGY RANGE FROM THE THRESHOLD UP TO 19 MeV. Experimental

data for $^{238}\text{U}(n, 2n)$ -reaction cross-section are compiled. New data on the γ -rays intensities, cross-sections of standard reactions and so on taken into account to normalize the original data. The evaluated curve was obtained by Pade-approximation. The evaluated cross-section was averaged over the fission neutron spectra of ^{232}U and ^{252}Cr .