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## TAGGED NEUTRONS AS A TOOL FOR STUDYING INELASTIC SCATTERING OF NEUTRONS ON NUCLEI

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Investigation of neutron-induced nuclear reactions is very important for fundamental and applied nuclear physics. In particular, the reaction of inelastic scattering of 14 MeV neutrons on nuclei is used for detection of illegal and dangerous substances with the help of the tagged neutron method. Accurate data on the cross sections and angular distributions of the reaction products are needed both, for improvement of the accuracy of the method, and for developing the comprehensive theoretical model of the inelastic scattering process. In the framework of the "TANGRA" (Tagged Neutrons & Gamma Rays) project inelastic scattering of 14.1 MeV neutrons is explored using the tagged neutrons method, which helps to reduce the background and increase the accuracy of experimental data. Recently the "TANGRA" setup was upgraded and new data on the distribution of the gamma-radiation emitted by the inelastic scattering of 14.1 MeV neutrons on a number of light nuclei was obtained.

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