

Study on the Various Energy Neutron Scattering Cross-Sections by Using Nuclear Code

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Abstract

Using Nuclear model codes, SCAT2 on PC, neutron total scattering cross sections are calculated and investigated. The variations of cross-sections with neutron incident energy and target mass are studied. In this work, Total cross-sections of neutrons of different energy (1-25 MeV) using Statistical Optical Model code "SCAT2" were calculated. The results will be useful for Neutron Activation Analysis, nuclear reactor and nuclear moderator material.

Key words: Neutron Cross-Sections, Optical Model, Nuclear Code, SCAT2

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