

FAST-NEUTRON SCATTERING FROM ELEMENTAL CADMIUM

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ABSTRACT

Neutron differential-elastic-scattering cross sections of elemental cadmium are measured from ≈ 1.5 to 4.0 MeV at incident-neutron energy intervals of 50 to 200 keV and at 10 to 20 scattering angles distributed between ≈ 20 and 160 degrees. Concurrently, lumped-level neutron inelastic-excitation cross sections are measured. The experimental results are used to deduce parameters of an optical-statistical model that is descriptive of the observables and are compared with corresponding quantities given in ENDF/B-V.