Natural Ag Transmission Data Analysis Using the SAMMY Code (0 eV -100 eV)

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Abstract

Ag Transmission data measured at the Time-Of-Flight facility in the Pohang Accelerator Laboratory in 2002 was analyzed in the energy range from 0 eV to 100 eV by the SAMMY-M2a code. Resonance parameters within the above energy range are evaluated and external parameters below zero are also evaluated. Those values within the energy range from 0 eV to 100 eV are compared with ENDF/B-VI release 8 values.

Total and Capture Cross Section for Pd-107, I-129 and Cs-135

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Abstract

The neutron induced nuclear data for Pd-107, I-129 and Cs-135 were calculated and evaluated from 10 keV to 20 MeV for nuclear waste transmutation, using a modular type Empire code package. The energy dependent optical model potential was investigated and applied up to 20 MeV. The optical model, the full feature Hauser-Feshbach model, the multistep direct and multistep compound model were used in the calculation. The direct and semi-direct (DSD) capture model was applied for fast neutron capture in the pre-equilibrium energy region. The theoretically calculated cross sections were compared with the experimental data and the evaluated files. With the experimental data, the calculated total and capture cross section was in good agreement.