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CALCULATIONS OF THERMAL NEUTRON SCATTERING CROSS SECTIONS FOR BISMUTH AND SAPPHIRE CRYSTALS

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This research presents the calculated results of the thermal neutron inelastic scattering cross sections of Bismuth and Sapphire crystals. In this calculations, the effects of thermal neutron scattering on crystal's phonon vibration and lattice parameters were taken into account by using the NJOY code. This calculated results were updated into the related ACE format data file for MCNP simulation of thermal neutron beams filtered at the Dalat research reactor.

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