

Abstract Submitted
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Independent Benchmarking of a Hybrid Monte Carlo Cross Section Code NATHAN DELAUDER, LAWRENCE TOWNSEND, The University of Tennessee — Understanding the effects of high-energy neutron interactions with certain materials is of considerable interest to the field of space radiation protection. Due to the expected radiation environment, neutron production and interactions with spacecraft materials will result in neutrons that can cause significant biological risk to crewmembers. For investigating incident particle interactions with target materials, an existing statistical model code (ALICE2008) was used for determining the particle spectra from a hybrid Monte Carlo simulation (HMS) of pre-compound nuclear decay. Presented is a comparison of neutron reaction cross-section results from ALICE2008 to reported values from widely accepted sources to benchmark the code for this specialized use with targets of interest.

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