Abstract Submitted
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Application of the Latest Nuclear Data Bases to Reactor Antineutrino Research[1] R.J. LOREK, A. MATTERA, E.A. MCCUTCHAN, A.A. SONZOGNI, Brookhaven National Laboratory, NATIONAL NUCLEAR DATA CENTER TEAM — Nuclear databases continue to play an important role in understanding the production of electron antineutrinos in nuclear reactors, which is currently of importance for refining our understanding of neutrino oscillations, reactor monitoring, and non-proliferation. In order to provide more reliable results, the ENDF/B decay data sub-library continues to be updated to include the latest available β-decay results from various neutron rich nuclides that utilize TAGS and high-resolution gamma spectroscopy techniques. Additionally, we have added half-lives and delayed neutron probabilities from the recent IAEA Coordinated Research Project on the subject. Here the latest version of the ENDF/B decay data sub-library is applied to calculate a summation Inverse Beta Decay antineutrino spectra as a function of prompt energy, and draw comparisons to the recently published Daya Bay results.

[1]Department of Energy Office of Science

Ryan Lorek
Brookhaven National Laboratory

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