

Cosmogenic Neutron Production at the Daya Bay Reactor Neutrino Experiment

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(On behalf of the Daya Bay Collaboration)

Neutrons are an important background for underground experiments studying neutrino oscillations, searching neutrinoless double beta decay, dark matter, and other rare-event signals. This poster presents a study of neutron production by cosmogenic muons at the Daya Bay Reactor Neutrino Experiment, and gives the measurements of neutron yield for different values of average muon energy at different experimental sites of Daya Bay. The comparisons between the measurements and predictions from Geant4 and Fluka are performed, showing some discrepancies between data and MC. A power-law fit of the dependence of the neutron yield on average muon energy is obtained by including the Daya Bay measurements with those from other experiments.

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