



Poster session 2 – Tuesday 5 July

P2.034 Neutron run in Mini-CAPTAIN

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Mini-CAPTAIN is a liquid argon TPC detector that is studying neutron interactions at the WNR facility at Los Alamos. Neutrons are by-products by inelastic neutrino interactions. In order to understand the incoming neutrinos, we must precisely reconstruct the event. Many products in the interactions are either charged particles which can be tracked in a LArTPC precisely or produce light which can be measured using PMTs. On the other hand, neutrons emerge from the nucleus, travel some distance and interact stochastically. Making a detailed measurement of neutron interactions in a liquid argon TPC is important for future neutrino experiments including DUNE. It mainly impacts two areas: low-energy neutrino detection, important for supernova neutrino studies, and neutrino oscillation studies with medium-energy neutrinos. Our measurements are detailed because the energy of the incoming neutrons are known. This poster will describe the current status of the Mini-CAPTAIN detector and the analysis of neutron and cosmic-ray data taken in February 2016.