

Abstract Submitted
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Progress With the Double Chooz Time Projection Chamber (DCTPC) Neutron Detector ALLIE HEXLEY, Massachusetts Institute of Technology — DCTPC detects fast neutron events at the Double Chooz reactor-based neutrino oscillation experiment in France. Understanding neutron background as a function of energy and depth is relevant for multiple experiments around the world, including those trying to measure dark matter, low energy neutrino, and neutrinoless double beta decay. DCTPC allows us to produce a three dimensional image of a neutron-induced nuclear recoil with calorimetric and directional information. I will discuss how DCTPC works, why DCTPC is useful, and moving DCTPC to Fermilab this summer. I will also present results from the DCTPC Double Chooz near and far hall physics runs.

Allie Hexley
Massachusetts Institute of Technology

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