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Initial Development of a 3He Neutron Flux Detector for SuperCDMS ALYA SHARBAUGH, ANTHONY VILLANO, University of Colorado, Denver — One of the greatest challenges facing the dark matter community is the presence of a low-energy neutron-induced background. This background makes it difficult to distinguish the similar signals which could indicate dark matter detection. By developing a cryogenic liquid Helium-3 detector, we hope to reliably measure the neutron flux near the Super Cryogenic Dark Matter Search (SuperCDMS) cryostat and be able to model the background with greater efficiency. The scope of this poster includes preliminary research and theoretical modelling for the Helium-3 detector.

Alya Sharbaugh
University of Colorado, Denver

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