

Abstract Submitted
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Cryogenic testing of the PULSTAR UCN Source CHRISTIAN WHITE, AYMAN HAWARI, PAUL HUFFMAN, EKATERINA KOROBKINA, KENT LEUNG, GRAHAM MEDLIN, BERNARD WEHRING, ALBERT YOUNG, North Carolina State Univ — article An ultracold neutron (UCN) source is being constructed at the NC State University 1 MW PULSTAR reactor facility. UCN will be utilized for multiple experiments, including an investigation of systematic effects relevant to the Spallation Neutron Source (SNS)-based neutron electric dipole moment (nEDM) experiment. The UCN source consist of 1 L of solid deuterium that will reside in the thermal column of the reactor, surrounded by heavy water and methane moderators. Construction of the source is complete and cryogenic testing is in progress to fully characterize growth of the solid deuterium crystal under various pressures and heat loads. Results of this testing program will be presented.

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