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LANL UCN source status and upgrade plans MARK MAKELA, Los Alamos Natl Lab, LANL UCN SOURCE COLLABORATION — The Ultracold Neutron (UCN) source at the Los Alamos Neutron Science Center (LANSCE) took commissioning beam in 2004 and has produced UCN each beam cycle since. The UCN production medium is solid deuterium with neutrons derived from proton driven spallation. Although the UCN source has had several changes over the past ten years the cold moderator and deuterium volume have remained unchanged. During the past year a new UCN source has been designed with a new cold moderator and deuterium volume based on lessons learned and new Monte Carlo work (this work is discussed by T. Ito in the talk "Modeling the LANL ultracold neutron source"). The design goal for this UCN source is a factor of 2 increase in a UCN production with other gains in UCN density from changes in proton beam structure, increased proton current and improved UCN transport. This talk will cover the current status of the running UCN source with increased beam during the 2013 accelerator cycle and planned upgrades for the 2015 cycle.

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