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Commissioning of the upgraded ultracold neutron source at Los Alamos Neutron Science Center ROBERT PATTIE, Los Alamos National Lab, LANL-UCN TEAM TEAM — The spallation-driven solid-deuterium ultracold neutron (UCN) source at Los Alamos Neutron Science Center (LANSCE) has provided a facility for precision measurements of fundamental symmetries via the decay observables from neutron beta decay for nearly a decade. In preparation for a new room temperature neutron electric dipole moment (nEDM) experiment and to increase the statistical sensitivity of all experiments using the source an effort to upgrade the existing source has been carried out during 2016. This upgrade includes installing a redesigned cold neutron moderator and with optimized UCN converter geometries, improved coupling and nickel-phosphorus coating of the UCN transport system through the biological shielding, optimization of beam timing structure, and increase of the proton beam current. We will present the result of the commissioning run of the new source.

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