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A New Ultra-Cold Neutron Source Available at Los Alamos ALEXANDER SAUNDERS, Los Alamos National Lab, UCNA COLLABORATION — A new source of ultra-cold neutrons (UCNs) has been constructed at Los Alamos National Lab and is now in operation. Although the primary purpose of the source is to supply UCNs to the UCNA experiment, a second test beam port is also available and can be used to supply UCNs to another experiment simultaneously. During source operation, the neutron density at the test port has been estimated to be approximately 5 UCN/cc. During UCNA data acquisition, the UCN beam is available at the test port with a duty factor of about 1/6; that is, 10 minutes out of each hour, with the balance being delivered to UCNA. Experiments that have used and/or intend to use the test port beam include nEDM engineering tests, guide tests for UCN transport and depolarization, and a new measurement of the neutron lifetime using magnetically trapped UCNs. Measurements of the density, flux, and velocity distribution of the neutrons at the test port will be presented.

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