

Abstract Submitted
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Progress on Magnetic Trap Neutron Lifetime Experiment at Los Alamos¹ ALEXANDER SAUNDERS, Los Alamos National Lab, LANL NEUTRON LIFETIME COLLABORATION — A new neutron lifetime experiment has been designed and is now under construction at Los Alamos. This experiment eliminates material interactions of the neutrons by holding ultra-cold neutrons in a magnetic trap. The trap is closed on the bottom and sides by a high order multipole magnetic field produced by a Halbach array of permanent magnets and is closed on the top by gravity. The ultra-cold neutrons will be supplied by the source now operating at Los Alamos. Neutrons in quasi-bound orbits will be eliminated by the asymmetric shape of the trap. Approximately 10^6 neutrons will be stored per fill. First measurements of stored neutrons are expected in 2008. The design and construction status will be presented.

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