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Overview and status update on the UCNtau experiment CHRIS CUDE[1], Indiana University, UCNTAU COLLABORATION — Recent measurements of the free neutron beta-decay lifetime using trapped Ultra-Cold Neutrons (UCN) have yielded results with high precision ($\sim$ 1 s), but with significantly varying central values. To resolve this discrepancy, we've initiated an effort to measure the beta-decay lifetime using UCN in a magneto-gravitational trap at the Los Alamos Neutron Science Center. A permanent magnet Halbach array traps polarized neutrons, eliminating material interactions which can reduce the UCN storage time. The experiment will also employ a vanadium activation measurement using a beta-gamma coincidence technique to count the surviving UCN in the trap independently of neutron phase space distribution. We will present an overview of the experiment and a status update.

[1]for the UCNtau collaboration.

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