

Abstract Submitted  
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**Progress toward a new measurement of the neutron lifetime** KYLE GRAMMER, The University of Tennessee — Free neutron decay is the simplest nuclear beta decay. A precise value for the neutron lifetime is valuable for standard model consistency tests and Big Bang Nucleosynthesis models. There is a disagreement between the measured neutron lifetime from cold neutron beam experiments and ultracold neutron storage experiments. A new measurement of the neutron lifetime using the beam method is planned at the National Institute of Standards and Technology Center for Neutron Research. Experimental improvements should result in a 1s uncertainty measurement of the neutron lifetime. The technical improvements, recent apparatus tests, and the path towards the new measurement will be discussed. This work is supported by DOE Office of Science, NIST, and NSF.

Kyle Grammer  
The University of Tennessee

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