

Abstract Submitted
for the APR17 Meeting of
The American Physical Society

The KATRIN Neutrino Mass Experiment¹ DIANA PARNO,
Carnegie Mellon University, KATRIN COLLABORATION — While neutrino oscillation experiments have demonstrated that the particles have non-zero mass, the absolute neutrino mass scale is still unknown. The Karlsruhe Tritium Neutrino experiment (KATRIN) is designed to improve on previous laboratory limits by an order of magnitude, probing the effective neutrino mass with a sensitivity approaching 0.2 eV at 90% confidence via the kinematics of tritium beta decay. At the same time, KATRIN has the potential to scan for sterile neutrinos at eV and keV scales. After years of preparation, all major components are now on site and commissioning is underway. I will report on the current status of the experiment, including recent results and preparations for the introduction of tritium later this year.

¹US participation in KATRIN is supported by the U.S. Department of Energy Office of Science, Office of Nuclear Physics under Award Number DE-FG02-97ER41020.

Diana Parno
Carnegie Mellon University

Date submitted: 30 Sep 2016

Electronic form version 1.4