

Abstract Submitted
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KATRIN: Measuring the Mass Scale of Neutrinos NOAH OBLATH,
MIT, KATRIN COLLABORATION — Over the past decade, experiments studying
neutrinos from atmospheric, solar, and reactor sources have shown conclusively that
neutrinos change flavor and, as a consequence, have a small but finite mass. However,
the scale of neutrino masses remains an open question that is of great importance
for many areas of physics. The most direct method to measure the neutrino mass
scale is still via beta decay. The talk will focus primarily on the status of the
KARlsruhe TRItium Neutrino experiment (KATRIN), currently under construction.
KATRIN combines an ultra-luminous molecular windowless gaseous tritium source
with a high-resolution integrating spectrometer to gain sensitivity to the absolute
mass scale of neutrinos. The projected sensitivity of the experiment on the neutrino
mass is 0.2 eV at 90% C.L. In this talk I will discuss the status of the KATRIN
experiment.

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