

Abstract Submitted
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Direct neutrino mass measurements in the KATRIN experiment¹

MENGLEI SUN, University of Washington, KATRIN COLLABORATION — The absolute neutrino mass scale plays an important role in cosmology, particle physics and astrophysics. The Karlsruhe Tritium Neutrino (KATRIN) experiment aims at a direct and model-independent determination of the neutrino mass with 0.2 eV (90% C.L.) sensitivity via ultrahigh precision measurements of the kinematics of tritium beta decay. It combines an ultra-luminous molecular windowless tritium source with a high resolution MAC-E-filter based spectrometer. After many years of construction and commissioning runs, KATRIN has started long-term scans of the tritium spectrum close to the endpoint. This talk will give an overview of the experiment and its current status, as well as a summary of recent results.

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