Contribution ID: **703** Type: **Plenary talk**

Direct neutrino-mass measurement based on 259 days of KATRIN data

Wednesday, 19 June 2024 11:05 (25 minutes)

The KArlsruhe TRItium Neutrino experiment (KATRIN) is searching for the signature of the neutrino mass in the endpoint region of the tritium beta-decay spectrum. KATRIN combines a high-intensity gaseous molecular tritium source with a high-resolution electrostatic spectrometer with magnetic adiabatic collimation which allowed KATRIN to reach a sub-eV sensitivity to the neutrino mass and to set an upper limit of 0.8 eV/c^2 (90% CL) already with the first 5% of the total expected data.

This talk discusses the analysis of a larger dataset with 25% of the KATRIN data and improvements in terms of signal-to-background ratio and systematics, and gives an outlook on the future prospects of KATRIN.

Poster prize

Given name

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First affiliation

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Gender

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