Contribution ID: **365** Type: **Poster direct neutrino mass**

Results from the First Tritium campaign of KATRIN

The Karlsruhe Tritium Neutrino Experiment (KATRIN) will perform a direct, kine\-matics-based measurement of the
neutrino mass with a sensitivity of 200\,meV (90\,\%\,C.L.). The neutrino
mass is obtained by investigating the shape of the spectrum of tritium \textbeta-decay electrons close to the endpoint at
18.6\,keV with a spectrometer of MAC-E filter type. To achieve the targeted sensitivity, the systematic uncertainties
have to be carefully controlled. The main systematic effects are linked to the source and transport section of KATRIN.

The first tritium \textbeta-spectra obtained with KATRIN in May 2018 allow to investigate these source related effects, in particular in comparison with extensive model computations of the gas dynamics. Furthermore, these initial data permit to study the homogeneity and stability of the source.

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Authorship annotation

for the KATRIN collaboration

Session and Location

Monday Session, Poster Wall #17 (Robert-Schumann-Room)

Poster included in proceedings:

yes

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Track Classification: Poster (not participating in poster prize competition)