

Analysis Strategies for the KATRIN Experiment

Authorship annotation

for the KATRIN Collaboration

Session and Location

Monday Session, Poster Wall #3 (Robert-Schumann-Room)

Abstract content

The Karlsruhe Tritium Neutrino (KATRIN) experiment is designed to determine the effective electron anti-neutrino mass in a model-independent way by investigating the energy spectrum of tritium beta-decay electrons near the endpoint with a sensitivity of $m_\nu = 0.2 \text{ eV}/c^2$ (90% C.L.).

The detector of the KATRIN experiment is segmented into 148 pixels, each measuring an independent β -spectrum. Additionally the spectrum will be measured several thousands of times. The data of each pixel and each measurement must be combined to retrieve the effective electron anti-neutrino mass.

This poster will present strategies for the high-level analysis of the KATRIN experiment including a proposal of how to combine the different data sets and presumably the results of the analysis of first KATRIN data.

Poster included in proceedings:

yes

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