

Analysis Strategies for the KATRIN Experiment

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.

Authorship annotation

for the KATRIN Collaboration

Session and Location

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

Poster included in proceedings:

yes

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Track Classification: Poster (participating in poster prize competition)