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KATRIN neutrino mass analysis - Insights into the neural network approach

venerdì 21 giugno 2024 17:30 (2 ore)

The Karlsruhe Tritium Neutrino (KATRIN) experiment probes the effective electron anti-neutrino mass by a precision measurement of the tritium beta-decay spectrum near the endpoint.
A world-leading upper limit of $0.8\,\mathrm{eV\,c^{-2}}$ (90 % CL) has been set with the first two measurement campaigns. New operational conditions for an improved signal-to-background ratio, the steady reduction of systematic uncertainties and a substantial increase in statistics allow us to expand this reach.
This poster displays the latest KATRIN results and provides insight into the neural network approach used to perform the computationally challenging analysis.

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Poster prize

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