



Contribution ID: 144

Type: Oral Presentations

Sterile Neutrino Dark Matter Searches with the KATRIN Experiment

Thursday, 7 September 2023 12:20 (20 minutes)

Sterile neutrinos are a natural extension of the Standard Model of particle physics. If their mass is in the keV range, they are a viable dark matter candidate. One way to search for sterile neutrinos in a laboratory-based experiment is via tritium beta decay. A sterile neutrino with a mass up to 18.6 keV would manifest itself in the decay spectrum as a kink-like distortion. The objective of the TRISTAN project is to extend the Karlsruhe Tritium Neutrino Experiment (KATRIN) with a novel multi-pixel silicon drift detector and readout system to search for a keV-scale sterile neutrino signal. This talk will give an overview on the current status of the project.

This work is supported by BMBF (05A17PM3, 05A17PX3, 05A17VK2, 05A17WO3), KSETA, the Max Planck society, and the Helmholtz Association. Moreover, this project has received funding from the European Research Council (ERC) under the European Union Horizon 2020 research and innovation program (grant agreement no. 852845).

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Session Classification: F3