

Prospects for KeV sterile neutrinos in β decay with KATRIN and in neutrinoless double beta decay

Motivated by the capability of the KATRIN experiment to explore the existence of KeV neutrinos in the [1-18.5] KeV mass range, we explore the viability of minimal extensions of the Standard Model involving sterile neutrinos (namely the 3+1 and 3+2 frameworks) and study their possible impact in both the beta decay and the neutrinoless double-beta decay effective mass, for the two possible ordering of the light neutrino spectrum. We also explore how both observables can discriminate between motivated low-scale seesaw realizations involving KeV sterile neutrinos.

Session and Location

Monday Session, Poster Wall #136 (Hölderlin-Room)

Poster included in proceedings:

yes

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Track Classification: Poster (participating in poster prize competition)