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Probing right-handed neutrinos dipole operators

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We consider the minimal see-saw extension of the Standard Model with two right-handed singlet fermions with mass at the GeV scale, augmented by an effective dipole operator between the sterile states. We firstly review current bounds on this effective interaction from fixed-target and collider experiments as well as from astrophysical and cosmological observations. We then highlight the prospects for testing the radiative decay of the heaviest neutrino induced by the dipole at facilities targeting long-lived particles such as FASER and SHiP.

Submitted on behalf of a Collaboration?

No

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