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The search for sterile neutrinos at Future Circular Colliders

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Sterile neutrinos are among the most attractive extensions of the SM to generate the light neutrino masses observed in neutrino oscillation experiments.

When the sterile neutrinos are subject to a “lepton number”-like symmetry they can have masses around the electroweak scale and potentially large Yukawa couplings, which makes them testable at the planned Future Circular Colliders (FCC).

In this talk I present an overview of the sterile neutrino searches at the FCC in its electron-positron, proton-proton, or electron-proton configuration.

Therefore I provide a systematic assessment of the search channels, give the state of the art sensitivities for the most promising signatures and discuss the synergy and complementarity of the different FCC configurations.

Experimental Collaboration

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