

An example of synergy in BSM physics: right-handed neutrinos

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Right-handed or, equivalently, sterile neutrinos are among the most attractive extensions of the SM to generate the light neutrino masses observed in neutrino oscillation experiments.

When the right-handed 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 searches for right-handed neutrinos at the FCC in its electron-positron, proton-proton, or electron-proton configuration.

I provide a systematic assessment of the different 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.

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