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Sterile Neutrino Searches at Future 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 protective symmetry, they can have masses around the electroweak scale and potentially large neutrino Yukawa couplings, which makes them testable at planned future particle colliders.

In this talk I discuss the production and decay channels at electron-positron, proton-proton and electron-proton colliders and provide a complete list of the leading order signatures for sterile neutrino searches.
Among other things, I also discuss several novel and exotic search channels, such as displaced vertex searches and heavy neutrino-antineutrino oscillation.
The possible sensitivities for the active-sterile mixings and the heavy neutrino masses at the future circular colliders, as studied at CERN within the FCC study, will be presented.

Authors: FISCHER, Oliver (Karsruhe Institute of Technology); ANTUSCH, Stefan (University of Basel); CAZZATO, Eros (University of Basel)

Presenter: FISCHER, Oliver (Karsruhe Institute of Technology)

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