

SUSY 2024

Theory meets Experiment

Madrid

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ALPs or HNLs? Pick two!

Friday 14 June 2024 12:00 (20 minutes)

Axion-like particles (ALPs) are expected to arise in a wide variety of models, whenever a global symmetry is spontaneously broken. Although they can produce a rich phenomenology, they typically need to be supplemented by extra new physics in order to explain neutrino masses. In this talk, we will discuss the interplay of axion-like particles and heavy neutral leptons in a collider setting, considering various ALP couplings and type-I see-saw realisations. We will show that the unique processes that arise in the presence of *both* particles can lead to strong *joint constraints* at the LHC and a future muon collider.

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