ID contributo: **54** Tipo: **Oral**

EXOTIC SEARCHES AT THE NA62 EXPERIMENT AT CERN

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The features of the NA62 experiment at the CERN SPS –high-intensity setup, trigger-system flexibility, high-frequency tracking of beam particles, redundant particle identification, and ultra-high-efficiency photon vetoes –make NA62 particularly suitable to search for long-lived, weakly-coupled particles within Beyond the Standard Model physics.
Searches for Heavy Neutral Lepton (HNL) production in charged kaon decays using the data collected by the NA62 experiment are reported. Upper limits are established on the elements of the extended neutrino mixing matrix for HNL masses in the range 130-450 MeV, improving on the results from previous HNL production searches.
Latest results on production searches of Dark Photons in neutral pion decays at NA62 are also presented, together with sensitivity results for production and decay searches of Axion-Like Particles, and prospects for future data taking at the NA62 experiment.

Collaboration name

NA62 Collaboration

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Classifica Sessioni: Electroweak Interactions and Higgs physics

Classificazione della track: Electroweak interactions and Higgs physics