Contribution ID: **64**   Type: **Oral presentation (in person)**

Investigating hidden sectors at future e+e- colliders through two-particle angular correlations

Tuesday 9 July 2024 14:00 (20 minutes)

Exploring long-range angular correlations among emitted particles in high-energy collisions provides an opportunity to uncover physics beyond the Standard Model like Hidden Valley (HV) models.
We focus on a hidden QCD-like sector, where the interplay between HV matter and QCD partonic cascades could enhance azimuthal correlations between final-state particles. Our investigation, performed at detector level, specifically targets the detectability of these phenomena at future e+e- colliders, yielding a cleaner experimental signature as compared to the Large Hadron Collider (LHC). Remarkably, the observation of ridge structures in the two-particle correlation function may suggest the existence of New physics.

Apply for poster award

Primary authors: IRLES, Adrian (IFIC (CSIC/UV) Valencia);   SARKISYAN-GRINBAUM, Edward (CERN and Texas U., Arlington);   MUSUMECI, Emanuela (Univ. of Valencia and CSIC (ES));   CORREDOIRA, Imanol (Universidade de Santiago de Compostela (ES));   SANCHIS-LOZANO, Miguel-Angel (IFIC-University of Valencia);   Dr PÉREZ-RAMOS, Redamy (IPSA/LPTHE);   MITSOU, Vasiliki (Univ. of Valencia and CSIC (ES))

Presenter: MUSUMECI, Emanuela (Univ. of Valencia and CSIC (ES))

Session Classification: BSM, Global Interpretations

Track Classification: Physics and Detector: BSM, Global Interpretations