



Contribution ID: 37

Type: **Oral**

## Exploring hidden sectors at future $e^+e^-$ colliders with particle correlations

*Thursday, 18 May 2023 13:50 (15 minutes)*

The analysis of the long-range particle correlations can yield valuable insights into the initial state of matter and potentially reveal the existence of Beyond the Standard Model scenarios, such as the “Hidden Valley”(HV) one. In this work, we are interested in QCD-like hidden sectors in which the production of HV matter would enhance and enlarge azimuthal correlations of final-state particles. We study the observability of the latter at future  $e^+e^-$  collider, which provide a much cleaner environment with respect to the LHC one. Specifically, the presence of ridge structures could indicate a possible presence of new physics signals.

**Primary authors:** IRLES, Adrian (IFIC (CSIC/UV)); MUSUMECI, Emanuela (Instituto de Física Corpuscular (IFIC), Valencia); Mr CORREDOIRA, Imanol (Universidad de Santiago de Compostela); SANCHIS LOZANO, Miguel Ángel (IFIC, Valencia); PEREZ-RAMOS, Redamy (IPSA and LPTHE, Paris); MITSOU, Vasiliki (IFIC - CSIC and Univ. of Valencia (ES))

**Presenter:** MUSUMECI, Emanuela (Instituto de Física Corpuscular (IFIC), Valencia)

**Session Classification:** Physics and Detectors: Track 1

**Track Classification:** Physics and Detectors: Track 1: Physics at  $e^+e^-$  colliders