

# Exploring the Hidden Sector with two-particle angular correlations at future $e^+e^-$ colliders

*Wednesday 27 September 2023 12:45 (5 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.

**Author:** MUSUMECCI, Emanuela (IFIC - Univ. of Valencia and CSIC (ES))

**Presenter:** MUSUMECCI, Emanuela (IFIC - Univ. of Valencia and CSIC (ES))

**Session Classification:** Lunch including poster session