

Leptophilic Z' at the FCC-ee

Thursday 14 November 2024 12:10 (20 minutes)

We present the detection prospects of new Standard Model (SM)-neutral vector bosons (Z_i) that couple exclusively to leptons at the Future Circular Collider in the electron-positron stage (FCC-ee). We focus our search on Z' production with a radiated photon, and show that FCC-ee can significantly extend the unprobed parameter space for this class of models in the kinematically allowed mass range and outdo other proposed future lepton colliders. Furthermore, we look at the possibility of improving our bounds by studying the sensitivity dependence on detector parameters.

Primary author: PATTNAIK, Baibhab (IFIC (CSIC-University of Valencia) and LPC)

Presenter: PATTNAIK, Baibhab (IFIC (CSIC-University of Valencia) and LPC)

Session Classification: BSM

Track Classification: BSM