

Contribution ID: 29

Type: Oral

## Probing nature of heavy neutrinos at future lepton colliders

Tuesday, 16 May 2023 11:06 (15 minutes)

Neutrinos are the most elusive particles known. Heavier sterile neutrinos mixing with the Standard Model partners might solve the mystery of the baryon asymmetry of the universe and take part in the mass generation mechanism for the light neutrinos. From this perspective, if the heavy neutrinos are detected, it is crucial to determine their coupling structure. Future lepton colliders would not only offer excellent discovery reach but also allow for distinguishing between the Dirac and Majorana natures of these particles. In the talk, we will present a method to efficiently discriminate between the two neutrino species, based on the kinematics of their decays.

**Primary authors:** MEKALA, Krzysztof (University of Warsaw / DESY); REUTER, Juergen (Deutsches Elektron-Synchrotron DESY); ZARNECKI, Aleksander Filip (Faculty of Physics, University of Warsaw)

Presenter: MEKALA, Krzysztof (University of Warsaw / DESY)

Session Classification: Physics and Detectors: Track 1

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