Contribution ID: **97** Type: **Oral**

Light mesons from light heavy neutrinos at the LHC

Tuesday 22 August 2023 17:18 (24 minutes)

In the context of the Phenomenological Type I Seesaw, we investigate the LHC's sensitivity to exclusive, mesonic decay modes of long-lived, light (Dirac and Majorana) heavy neutrinos N when they are produced in the decays of $W^{\pm}$ bosons. We present a new framework that combines massless QCD to describe N's production up to NLO in QCD via weak bosons with a low-energy effective field theory to describe N's decays to mesons. We provide a prescription for fast, numerical determination of N's partial and total widths for any mass and accounts for mesonic decay modes.

Author: RUIZ, Richard (Institute of Nuclear Physics (IFJ) PAN)

Presenter: RUIZ, Richard (Institute of Nuclear Physics (IFJ) PAN)

Session Classification: parallel (room#302)

Track Classification: WG5: Neutrinos Beyond PMNS