Contribution ID: **21** Type: **Talk**

High-energy neutrino measurements with FASERnu at the LHC

Friday, 28 October 2022 16:20 (20 minutes)

FASERν at the LHC is designed to directly detect collider neutrinos of all three flavors and provide new measurements of their cross-sections at energies higher than those detected from any previous artificial sources. In the pilot run data taken in 2018, we observed the first neutrino interaction candidates at the LHC, paving the way for studying neutrinos from high-energy colliders. In 2022-2025, during LHC Run 3, we expect to collect $\sim$2,000 ν_e, $\sim$6,000 ν_μ, and $\sim$40 ν_τ charged-current interactions in FASERν, along with neutral-current interactions. We installed the first physics run module into the tunnel in March 2022 and conducted the first exchange of the modules in July 2022. Here we present the latest results from FASERν.

Primary author: ARIGA, Tomoko (Kyushu University (JP))

Presenter: Dr HAYAKAWA, Daiki (Chiba University (JP))

Session Classification: Future Experiments 2