

Recent results from the SND@LHC experiment

Friday 19 July 2024 15:45 (15 minutes)

SND@LHC is a stand-alone experiment to measure neutrinos produced at the LHC in an unexplored pseudo-rapidity region ($7.2 < \eta < 8.6$). It is located at 480m from IP1 in the TI18 tunnel. Its hybrid detector is composed of 800kg tungsten target-plates, interleaved with emulsion and electronic trackers, followed by a calorimeter and a muon system. This allows to identify all three neutrino flavours, opening a unique opportunity to probe heavy flavour production at the LHC in a pseudorapidity region not accessible to ATLAS, CMS and LHCb. This region is of particular interest also for future circular colliders and for studies of very high-energy atmospheric neutrinos. The detector is also well suited to search for Feebly Interacting Particles in scattering signatures. The experiment has been running successfully during 2022 and 2023 and has published several results. This talk will focus on the experience gained from the first measurements and on the overall physics goals of SND@LHC.

Alternate track

1. Neutrino Physics

I read the instructions above

Yes

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