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LEvEL: Low-Energy Neutrino Experiment at the LHC

Friday, 28 May 2021 17:45 (15 minutes)

The Large Hadron Collider Beam Dump, where an enormous number of 7 TeV protons are brought to rest twice a day, is an intense source of neutrinos. In this talk, I will discuss a proposed experimental program, LEvEL, the Low-Energy Neutrino Experiment at the LHC, which can measure several interesting neutrino-interaction cross sections near the LHC Beam Dump. These interaction processes may help us unlock even more understanding of coherent neutrino-nucleus interactions as well as enabling us to extract fundamental physics from the observation of supernova neutrinos in the coming decades. This setup is highly complementary to measurements of neutrinos in the Forward Physics Facility.

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