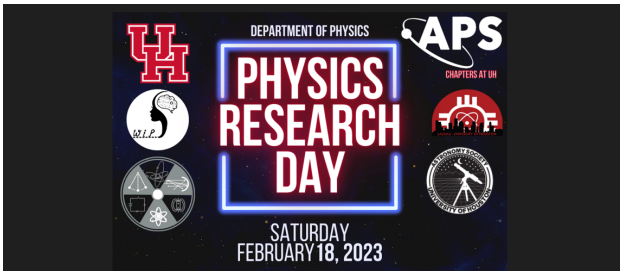

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Muyuan He Atmospheric neutrino abstract

Saturday 18 February 2023 14:30 (20 minutes)

Atmospheric neutrinos are typically formed 15 km above earth's surface, they form when cosmic ray strike atomic nucleus in Earth's atmosphere. By studying atmospheric neutrinos, we can learn neutrino oscillations and non-standard neutrino interactions. DUNE and NOvA are two neutrino experiments that observe neutrinos produced in Fermilab and atmospheric neutrinos. The main objectives of these two experiments are to investigate in neutrino oscillation and to help determine neutrino mass ordering to test cp violation in lepton sector, which help us understand matter-antimatter asymmetry in our universe. In this poster, I will present the reconstruction performance for atmospheric neutrinos in DUNE, as well as a sensitivity study for detecting non-standard neutrino interactions in atmospheric neutrinos in NOvA.

Academic year

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