Canadian Association of Physicists

Association canadienne des physiciens et physiciennes

Contribution ID: **12** Type: **Invited Speaker / Conférencier(ère) invité(e)**

The Deep Underground Neutrino Experiment

Monday, 8 June 2020 12:40 (20 minutes)

The Deep Underground Neutrino Experiment (DUNE) represents a bold step forward with a new detector technology and the ability to measure neutrinos over an extremely broad energy range. DUNE will consist of two massive detectors: one located at Fermilab in Illinois, and one located 1300 km away in South Dakota. DUNE will use neutrino beams with energy spectra broader than any other experiment. This spectrum offers a unique opportunity to measure the nature of the neutrino masses, to quantify the matter-antimatter symmetry violation, and to potentially discover additional neutrinos. This talk gives an overview of the LBNF-DUNE facility with an emphasis on sensitivity to exotic signatures such as sterile neutrinos and non-standard interactions. The talk also gives an overview of planned Canadian contributions including the data acquisition system, the calibration system and beam line monitor.

Primary author: ILIC, Nikolina (Nikhef National institute for subatomic physics (NL))

Presenter: ILIC, Nikolina (Nikhef National institute for subatomic physics (NL))

Session Classification: PPD-1 : Neutrino Physics | La physique de neutrinos

Track Classification: Particle Physics / Physique des particules (PPD)