ID contributo: **645** Tipo: **Plenary talk**

DUNE

martedì 18 giugno 2024 09:30 (20 minuti)

The Deep Underground Neutrino Experiment (DUNE) is a next-generation long-baseline neutrino oscillation experiment and underground neutrino observatory using liquid argon time projection chamber technology. DUNE will definitively resolve the neutrino mass ordering, and measure the mixing matrix parameters including the CP violating phase, with sensitivity to CP violation over a broad range of possible values. DUNE is also sensitive to MeV-scale neutrinos, with unique sensitivity to electron neutrinos from the neutronization burst of a supernova, and complementary to other experiments that are predominantly sensitive to electron antineutrinos. DUNE will search for a broad range of new physics signals, including direct detection as well as oscillation signatures beyond the three-flavor model. The excavation project of the far detector site at SURF was recently completed, and DUNE is on schedule for first physics results in this decade. The P5 report released in December in the United States strongly endorses the completion of DUNE with construction in two phases, together with critical international contributions and collaboration. This talk will cover the science and status of DUNE, including updated sensitivities with the most recent schedule, as well as results and progress from DUNE prototype detectors.

Poster prize

Given name

Surname

First affiliation

Second affiliation

Institutional email

Gender

Collaboration (if any)

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Classifica Sessioni: S4: 3 flavour neutrino oscillations 2