Abstract Submitted
for the APR18 Meeting of
The American Physical Society

Status of DUNE experiment LUKE CORWIN, South Dakota School of Mines and Technology, JAROSLAW NOWAK, Lancaster University, DUNE COLLABORATION — The Deep Underground Neutrino Experiment (DUNE) provides a rich science program with the focus on the neutrino oscillation physics and proton decay studies. The high-intensity wide-band neutrino beam will be produced at Fermilab and will be directed to the 40 kt Liquid Argon far detector at the Sanford Underground Research Facility (SURF), 1300 km from Fermilab. One of the most important goals of the experiment is to determine the neutrino mass ordering and the measurement of the CP violating phase. The underground location of the large DUNE far detector and its excellent energy and spatial resolution will allow also conducting non-accelerator physics programs predicted by GUT models, such as nucleon decay or n-nbar oscillations. Moreover, it will be sensitive to measure of the electron neutrino flux from a core-collapse supernova providing valuable information on the mechanism of a supernova. This ambitious project involves worldwide contribution and extensive prototyping and testing program to guarantee that all parts of the technology are fully understood and well tested. Two such prototypes, in both single phase (ProtoDUNE-SP) and dual phase (ProtoDUNE-DP) technologies, are under construction and will be operated at the CERN Neutrino Platform (NP) starting in 2018.

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Date submitted: 22 Feb 2018 Electronic form version 1.4