APR21-2021-020050

Abstract for an Invited Paper
for the APR21 Meeting of
the American Physical Society

Advanced Technologies for New Discoveries in the Deep Underground Neutrino Experiment[1]

JINGBO WANG, South Dakota School of Mines Technology

In the last decades, significant advances in experimental neutrino physics have been tightly related to the development of new detector technologies. The Deep Underground Neutrino Experiment (DUNE) is the future leading-edge, international experiment for neutrino science and discoveries of physics beyond the Standard Model. DUNE will consist of the world's most intense neutrino beam, a near detector complex at Fermilab, and a 40-kton fiducial mass far detector deep-underground in South Dakota. A broad range of new detector technologies is being explored in DUNE, aiming at unprecedented precision and sensitivity, which could open ways toward new discoveries. This talk will review the advanced technologies being recently developed for DUNE, followed by a discussion on new ideas related to DUNE and other possible future neutrino experiments.

[1]for the DUNE Collaboration