

Abstract Submitted  
for the APR17 Meeting of  
The American Physical Society

**Fermilabs Proton Accelerator Complex : World Record Performance and Upgrade Plans** VLADIMIR SHILTSEV, Fermilab — The flagship of Fermilab's long term research program is the Deep Underground Neutrino Experiment (DUNE), located Sanford Underground Research Facility (SURF) in Lead, South Dakota, which will study neutrino oscillations with a baseline of 1300 km. The neutrinos will be produced in the Long Baseline Neutrino Facility (LBNF), a proposed new beam line from Fermilab's Main Injector. The physics goals of the DUNE require a proton beam with a power of some 2.4 MW at 120 GeV, which is roughly four times the current maximum power. Here I discuss current performance of the Fermilab proton accelerator complex, our plans for construction of the SRF proton linac as key part of the Proton Improvement Plan-II (PIP-II), outline the main challenges toward multi-MW beam power operation of the Fermilab accelerator complex and the staged plan to achieve the required performance over the next 15 years.

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Date submitted: 26 Sep 2016

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