

# Achievement in Beam Power Records for the NOvA Target System

*Friday 19 July 2024 20:40 (20 minutes)*

The Fermilab accelerator complex has been optimized to deliver a 1-Mega Watt proton beam for the NOvA experiment. The primary challenges involve maintaining the target system and stabilizing the proton beam operation to serve high-quality neutrino beams to the neutrino detectors. The beam transport lattice was re-optimized for sending the fine-tuned proton beam to the target. The proton beam monitoring algorithm has been developed utilizing the muon monitors. As a result, we achieved the world record 960-kW beam for accelerator neutrino experiments in Spring 2023, with ongoing challenge the beam power to reach 1-MW in 2024. This is a significant milestone in advancing the future US neutrino facility, which includes the PIP-II proton Linac and the LBNF-DUNE experiment.

## Alternate track

### I read the instructions above

Yes

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