

## First commissioning data from the upgraded T2K beamline

*Tuesday 22 August 2023 14:00 (20 minutes)*

The J-PARC accelerator, serving the long-baseline neutrino oscillation program in Japan, is engaged in a long-term effort to increase the proton beam power from 500kW to 750kW during T2K data-taking, and ultimately more than 1.3 MW for Hyper-Kamiokande.

The T2K beamline underwent major upgrades in view of the increased beam power, and a successful first run was performed in April 2023.

T2K is instrumented with a series of proton beam monitors upstream of the production target, as well as a muon monitor downstream of the decay volume, which measures muons coming from the hadron decays producing neutrinos.

It also has the INGRID on-axis near detector, which monitors the direction and position of the neutrino beam. These detectors can be used together to ensure the correct alignment and the correct operation of the components in the upgraded T2K beamline.

Results of the first commissioning run of the upgraded T2K beamline using these beam monitoring detectors will be presented.

**Primary author:** SATO, Yukine (Tokyo University of Science)

**Presenter:** SATO, Yukine (Tokyo University of Science)

**Session Classification:** parallel (room#103)

**Track Classification:** WG3: Accelerator Physics