

The current status KEK and J-PARC accelerators for neutrino experiments

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This presents the current status of the J-PARC main ring synchrotron (MR) beam operation and upgrade plans for neutrino experiments. The MR provides 30 GeV protons with two extraction modes; fast extraction (FX) for the long baseline neutrino oscillation experiment, T2K, and slow extraction (SX) for experiments in the hadron experimental facility. At present, achieved beam intensities are 2.6×10^{14} protons per pulse (ppp) with cycle time 2.48 s (500 kW) in the FX mode. In order to increase the beam power, an upgrade plan of replacing the magnet power supplies is in progress. After the replacement, the cycle time will be shortened about a half and increase the beam power two times larger for the FX. Further upgrades, mainly for the rf system, are also in schedule to increase number of protons per pulse. The goal of these upgrades is to reach 1.3 MW beam power for the neutrino experiments. We present future plans for Muti-MW at KEK and J-PARC.

Working Group

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