

Operation Experiences of the Japan Proton Accelerator Research Complex (J-Parc)

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Japan Proton Accelerator Research Complex, J-PARC, is an international user facility consisting of high intensity three proton accelerators, namely a linac, a 3-GeV synchrotron, and a 50-GeV synchrotron, and three experimental facilities, Materials and life science experimental facility with neutron and muon, Hadron experimental facility with kaon, and Neutrino experimental facility with neutrino, where cutting-edge researches encompassing from academic use to industrial applications. J-PARC is now operated by jointly two organizations, High Energy Accelerator Research Organization (KEK) and Japan Atomic Energy Agency (JAEA).

J-PARC construction had started in April 2001 and had finished in the end of 2008 as the Phase-I with a budget of more than 150 billion yen. Since 2009, all three experimental facilities had been operated currently with a proton beam power of around 300 kW. (1MW is the design goal.) It has passed around six years in which included about one year shut down due to the Great East Japan earthquake occurred in March 2011.

Conquering difficulties, exciting scientific results have been produced such as physics finding of new results for electron neutrino appearance in T2K collaborative experiment. This paper is to overview the J-PARC and to report six-year operation experiences including management experiences for recovery from the earthquake damage along with other incidents, which have impacted to the facility management.

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