

A Conceptual Design of the Proton Storage Ring for the Neutron Science Project at JAERI,
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F. NODA, JAERI - Japan Atomic Energy Research Institute (JAERI) has been proposing the Neutron Science Project (NSP) which is composed of research facilities based on a proton linac and a proton storage ring with an energy of 1.5 GeV. In the proton storage ring, the pulsed beam from the linac is accumulated, and high intensity pulsed beam is produced for the neutron scattering experiment. The goal of the proton storage ring is to provide a short pulsed proton beam of less than 1 ms with an average beam power of 5 MW with two rings. To achieve such purpose, a proton storage ring operated at 50 Hz with 2.08×10^{14} protons per pulse at 1.5 GeV is required. The conceptual design study of the ring which satisfies specification of the NSP has been performed. Preliminary study results of the ring are reported in this conference.