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### **Neutron Science at J-PARC**

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A pulsed cold neutron beamline for the study of neutron optics and fundamental physics (NOP beamline) is under development at the beam port BL05 of the spallation neutron source in the Materials and Life Science Facility (MLF) of the Japan Proton Accelerator Research Complex (J-PARC). The J-PARC spallation neutron source is a short pulse machine with the repetition rate of 25 Hz, which is expected to deliver pulsed cold neutrons with the highest instantaneous intensity when the machine power reaches the designed value. Physics measurements in the neutron decay, neutron scattering and neutron interferometry are scheduled at the NOP beamline by taking the advantage of the timing structure of the intense pulsed neutrons. Currently, optical components and detectors for precision measurements are under development. The physics program is being started with the in-flight neutron lifetime measurement. In this paper, we report the present status of the NOP beamline construction and planned measurement. Further extensions to utilize wider wavelength regions to very cold and ultracold regions are also discussed.