

# High Power Targets at J-PARC (part 1)

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Japan Proton Accelerator Research Complex, J-PARC consists of a series of world-class proton accelerators and the experimental facilities. J-PARC is a multi-purpose facility where the variety of secondary-particle beams are produced and are used in a wide range of scientific fields, such as fundamental nuclear and particle physics, materials and life science, and nuclear technology. Neutron, pion, muon, kaon and neutrino beams are produced through collisions between the high-power proton beams and target materials. Requirement to increase the intensity of the proton beam is getting higher and higher for further advanced researches. Consequently, the thermal load and the irradiation effect to the target materials are also getting severer. Simultaneously, cooling methods to remove the thermal load are restricted by requirements from physics experiment. In this presentation, present status and future prospect of the high-power targets at J-PARC, especially muon target and neutron target at Materials and Life Science Experimental Facility, COMET target at Hadron Experimental Facility, and ADS target at Transmutation Experimental Facility will be introduced.

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