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J-PARC Future Plans

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J-PARC is a high-intensity accelerator-based research facility for particle and nuclear physics, materials and life sciences, and nuclear transmutation technology. It is featured by terms of "multi-purpose" and "intensity frontier accelerator." Maximum proton power of 1MW is a current goal to provide a various secondary particles, e.g., neutron and muon in Materials& Life Facility (MLF), kaon in Hadron Facility (HD) and neutrino for cutting edge science quest. So far, J-PARC has opened a firm user operation, and we confirm the initial scientific goal of MW regime will be realized. In this talk, summarizing the current status of J-PARC operation along with highlight of some scientific results in user the program, direction is addressed on J-PARC future plans, which have been under extensive discussion by user communities of all related research fields. For examples the particle-nuclear physics is requesting higher intensity of FX beam under a multi-MW power regime for further neutrino oscillation experiment. The SX beam more than 100 kW is desired for hadron-nuclear physics rare kaon decays, as well as muon to electron conversion experiment. In addition, there is a new approach in MLF to perform precision measurement of muon anomalous magnetic moment, g-2, as well as electric dipole moment A second neutron target station could be a consequence of request by neutron user community in the future to realize new neutron and muon micro-scopes, which might bring a breakthrough in the soft-matter science such as slow dynamics of materials.