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Perspective of muon production target at J-PARC MLF MUSE

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A pulsed muon beam with unprecedented intensity will be generated by a 3-GeV 333-microA proton beam on a muon target made of 20-mm thick isotropic graphite at J-PARC MLF MUSE (Muon Science Establishment). The muon rotating target was newly installed in September of 2014, and it was confirmed that the rotating target could stand up to 500-kW proton beam operation. Subsequently, continuous and stable operation has been successfully performed for three years and four months. Further upgrade of beam power up to 1 MW is expected. We must prepare for the high power operation. Recently, new developments of muon target for further higher power operation are in progress. The investigation or the developments of SiC coated graphite, SiC composite material, and ductile tungsten as a new target material is in progress.
The perspective of the muon production target at J-PARC MLF MUSE will be introduced in this presentation.

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