

First Muon RF Acceleration for the Muon g-2 Experiment at J-PARC

Thursday, 5 July 2018 16:54 (24 minutes)

The J-PARC E34 experiment aims to measure muon g-2 with a precision of 0.1 ppm and search for EDM with a sensitivity to 10^{-21} e*cm with a low emittance muon beam. The low emittance muon beam is generated from surface muon beam after thermal muonium production, dissociation of electron by laser, and acceleration by a radio-frequency (RF) linac. One of challenges for the E34 experiment is muon RF acceleration, which has not been demonstrated. Recently we succeeded in demonstrating muon acceleration using a radio-frequency quadrupole linac (RFQ). This talk will describe results of the muon acceleration experiment.

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Session Classification: Accelerators: Physics, Performance, and R&D for Future Facilities

Track Classification: Accelerator: Physics, Performance, and R&D for Future Facilities