

School of Physics and Astronomy

HEP SEMINAR

Muon acceleration and the muon $g-2$ /EDM experiment at J-PARC



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The muon anomalous magnetic moment ($g-2$) and electric dipole moment (EDM) are one of the effective paths to beyond Standard Model. The J-PARC E34 experiment aims to measure $g-2$ 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 linac. One of challenges for the E34 experiment is muon acceleration by radio-frequency (RF) accelerator, which has not been demonstrated. Recently we succeeded in the first demonstration of muon RF acceleration. In this talk, the muon RF acceleration result and other experimental developments will be reported.

Date:	Thursday 23 May
Time:	11am
Venue:	L1, Large Seminar Room, 10 College Walk, Clayton

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