

Status of the The Muon Scattering Experiment (MUSE) at PSI

Thursday, 6 June 2024 16:00 (30 minutes)

The MUon proton Scattering Experiment (MUSE) simultaneously measures elastic electron-proton and muon-proton scattering using the PiM1 beam line at Paul Scherrer Institute in Villigen, Switzerland. Using both positive and negative beam polarities, MUSE will extract the proton charge radius by scattering off a liquid hydrogen target and contribute precise data to the investigation of the proton radius puzzle. MUSE also aims to test lepton universality, radiative corrections, and two-photon exchange effects for electrons and muons by comparing the scattering cross sections for electrons and muons at both polarities. This presentation will give an update on the current status and plans for MUSE.

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