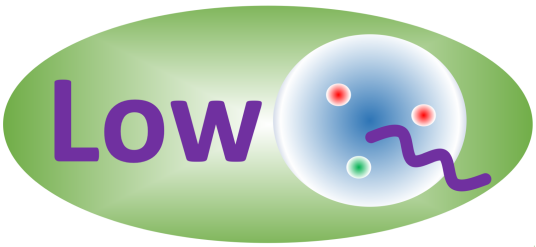

Contribution ID: **84** Type: **not specified**

Partity-violating muon scattering

Friday 19 May 2023 17:00 (30 minutes)

A measurement of parity-violating muon scattering would provide a novel test of lepton universality in an observable determined by the weak interaction, with the potential for relatively larger contributions from beyond standard model physics. Electron parity violation experiments have developed advanced technologies to measure small asymmetries often at multi-MHz rates. A muon parity violation measurement presents challenges due to numerous factors, including lower beam fluxes, muon decays in flight, beam contamination by other particle species, and limitations in spin control. We will describe a possible low energy parity violating muon scattering experiment at the Paul Scherrer Institute, taking into account ongoing developments towards higher flux muon beams.

Presenter: GILMAN, Ronald (Rutgers University)

Session Classification: New ideas