Low-energy lepton-proton scattering of μ^- , μ^+ , e^- and e^+ with the MUSE experiment at PSI

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Inspired by the proton radius puzzle, the MUon Scattering Experiment (MUSE) at Paul Scherrer Institute (PSI) in Villigen, Switzerland, was introduced to provide new information by simultaneously measuring elastic scattering of positrons, electrons and muons of either charge polarity from a liquid hydrogen target. MUSE aims to provide precise cross sections with form factor and radius extraction, while addressing the issues of two-photon exchange and lepton universality. An overview of this experiment and current status will be presented.

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