

# *Colloquium*

**Department of Physics**

**Proton remains puzzling**

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## **Abstract**

Major progress has been made in the last two decades in understanding the proton spin puzzle discovered in late 1980s by the European Muon Collaboration. While the proton spin is becoming perhaps less puzzling, another new proton puzzle developed in the last several years concerning the charge weighted size of the proton. The ultrahigh precise value of the proton charge radius determined from muonic hydrogen Lamb shift measurements is 7-8 sigma smaller than values determined from electron-proton scattering experiments and hydrogen Lamb shift measurements. In this talk I will review the latest situation concerning the proton charge radius and spin and discuss upcoming new experiments addressing these puzzles.

**Monday, November 16, 2015 at 3:00pm**  
**SERC, Room 110B**  
**Refreshments served at 2:45pm**