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How to resolve the proton radius puzzle? (15' + 5')

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In 2010 the first measurement of the proton charge radius from spectroscopy of muonic hydrogen was found to be five standard deviations away from the regular hydrogen value. Almost six years later, this "proton radius puzzle" is still unresolved. One of the most promising avenues to test the muonic hydrogen result is a new muon-proton scattering experiment called MUSE. We describe how effective field theory methods will allow to connect muonic hydrogen spectroscopy to muon-proton scattering in a model-independent way.

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