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**Calibration Study and Preliminary Results of PRad Experiment**

MAXIME LEVILLAIN, North Carolina AT State Univ, PRAD COLLABORATION  
— The latest measurements of the proton radius through muonic hydrogen Lamb shift show a discrepancy of  $7\sigma$  from a global analysis of standard hydrogen Lamb shift and elastic  $ep$ -scattering. In order to understand this *proton radius puzzle*, the PRad experiment<sup>1</sup> successfully took in last June some elastic  $ep$ -scattering data at very low  $Q^2$  ( $2 \cdot 10^{-4}$  to  $10^{-1}$  GeV<sup>2</sup>) with very accurate angle and energy measurements to minimize the systematic uncertainties. Before measuring the cross-sections that will be used to extract the electromagnetic form factor  $G_E(Q^2)$  and the proton radius, a very careful calibration of the electromagnetic calorimeter (*HyCal*) must be performed to get a good energy resolution and separate  $ep$ -events from Møller events especially at low angle. We will present an extended study of the electromagnetic calorimeter calibration of this experiment as well as some preliminary results on  $ep$ - and  $ee$ -scattering processes extracted from the data<sup>2</sup>.

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Maxime Levillain  
North Carolina A  
T State Univ