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Calibration of the PrimEx Experimental Setup via a Precision Measurement of the Compton Cross Section[1] JING FENG[2], University of North Carolina Wilmington/China Atomic Institute, PRIMEX COLLABORATION — Chiral symmetry and the chiral anomaly are fundamental in QCD. The PrimEx collaboration recently carried out a new measurement on the neutral pion lifetime to test chiral perturbation theory prediction at a few percentage accuracy. The major challenge of this experiment is to achieve the high precision projected. In order to calibrate the overall systematic error, we carried out a measurement on a well-known atomic electron Compton cross section using the PrimEx experimental setup. This is the first precision measurement on this fundamental QED process in the few GeV energy range, and will shed light on the higher order corrections to the Klein-Nishina formula. A preliminary result will be presented in this talk.

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[2]I would appreciate if this talk is scheduled after the invited talk by Dr. Ashot Gasparian

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