

Abstract Submitted
for the APR20 Meeting of
The American Physical Society

Inclusive Electron Scattering in the Resonance Region at CLAS12¹ KENNETH HICKS, Ohio Univ, CLAS COLLABORATION — Inclusive electron scattering yields from a hydrogen target at a beam energy of 10.6 GeV have been measured with the CLAS12 spectrometer at Jefferson Laboratory. These data cover a wide kinematic area in invariant mass of the final hadrons W up to 3 GeV and four- momentum transfer Q^2 from 1 to 10 GeV². These will be used to measure inclusive cross sections in the range of $W < 3.0$ GeV in Q^2 bins of < 0.3 GeV². Knowledge on the W -evolution of the inclusive cross sections is of particular importance in order to gain insight into the parton distributions in the resonance region and their evolution over a wide range of Q^2 . The CLAS results on nucleon resonance electrocouplings for the first time allow us to evaluate the s-channel resonance contributions in inclusive electron scattering observables for $Q^2 < 6.0$ GeV², offering new prospects for the exploration of the parton distributions in the resonance region and for studies of quark-hadron duality. The current status of this analysis will be shown and the longer-term plans will be discussed.

¹supported by grants from the NSF and DOE

Kenneth Hicks
Ohio Univ

Date submitted: 10 Jan 2020

Electronic form version 1.4