

Abstract Submitted
for the DNP20 Meeting of
The American Physical Society

F_2^p and F_2^d extractions at large Bjorken X from $h(e, e')$ and $d(e, e')$ cross sections measured during E12-10-002 in Hall C at Jefferson Lab¹
DEBADITYA BISWAS, Hampton University — Extractions of the F_2 structure functions from inclusive $h(e, e')$ and $d(e, e')$ reactions are important for the study of nucleon structure. Such extractions help with constraining the PDF (specially at large Bjorken X), facilitate the studies of Quark Hadron Duality and are important for non-singlet moments calculation as a test of LQCD.

Experiment E12-10-002 ran in Hall C at JLab in spring 2018 with a focus on measuring the precession cross sections on h and d for F_2 structure functions extraction. Our measurements cover a large kinematic range in X from 0.2 to 1.0, and in Q^2 from 4 to 16 GeV².

I will show the preliminary results of $h(e, e')$, $d(e, e')$ cross sections, d/h cross section ratios and F_2 structure functions. I will also discuss the comparison between our data and models such as Christy's f1f220 , CTEQ-JLAB (CJ) and Kulagin (DIS and hybrid) .

¹This work is supported by National Science Foundation grant PHY- 1914034

Debaditya Biswas
Hampton Univ

Date submitted: 26 Jun 2020

Electronic form version 1.4