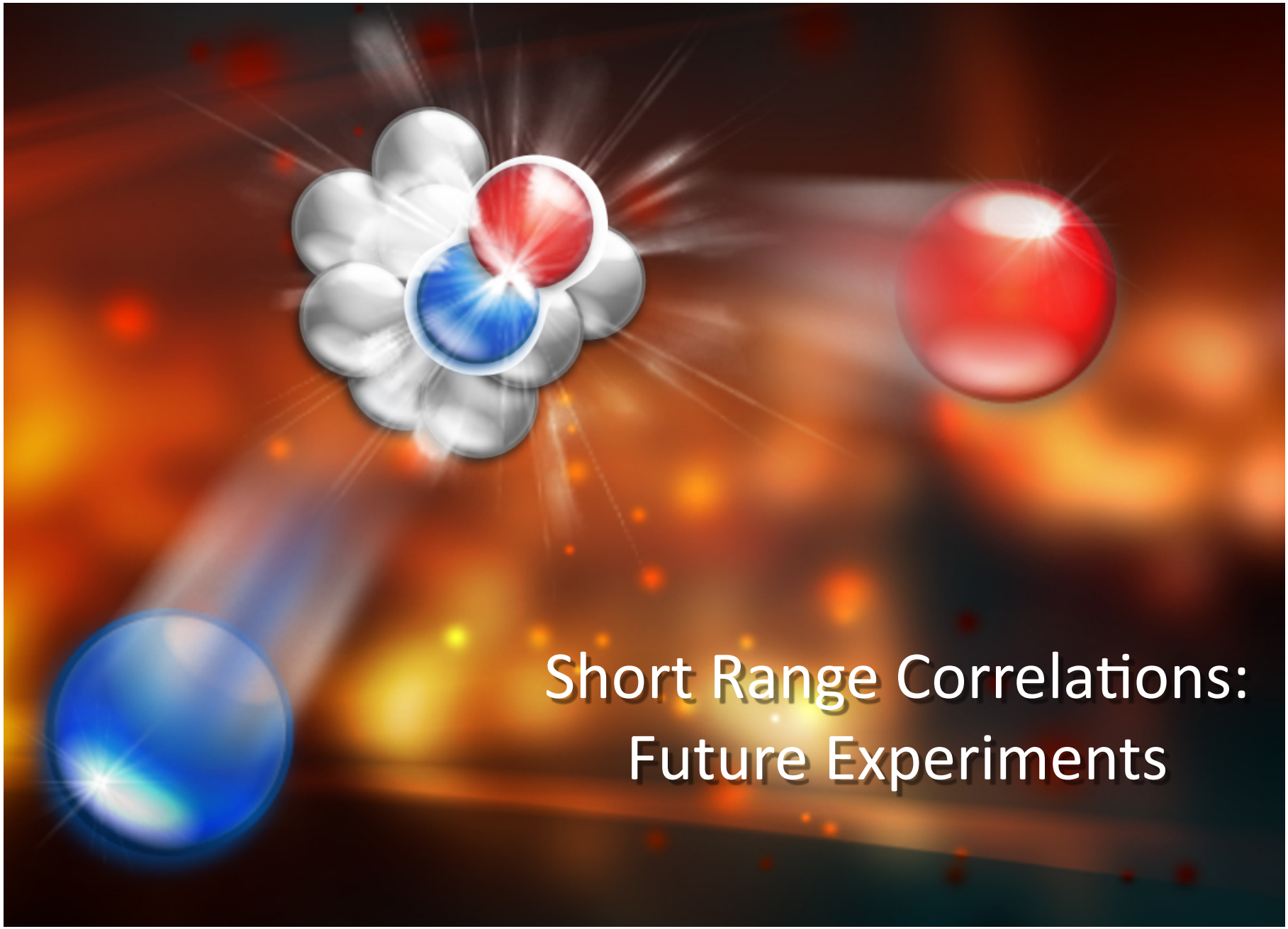
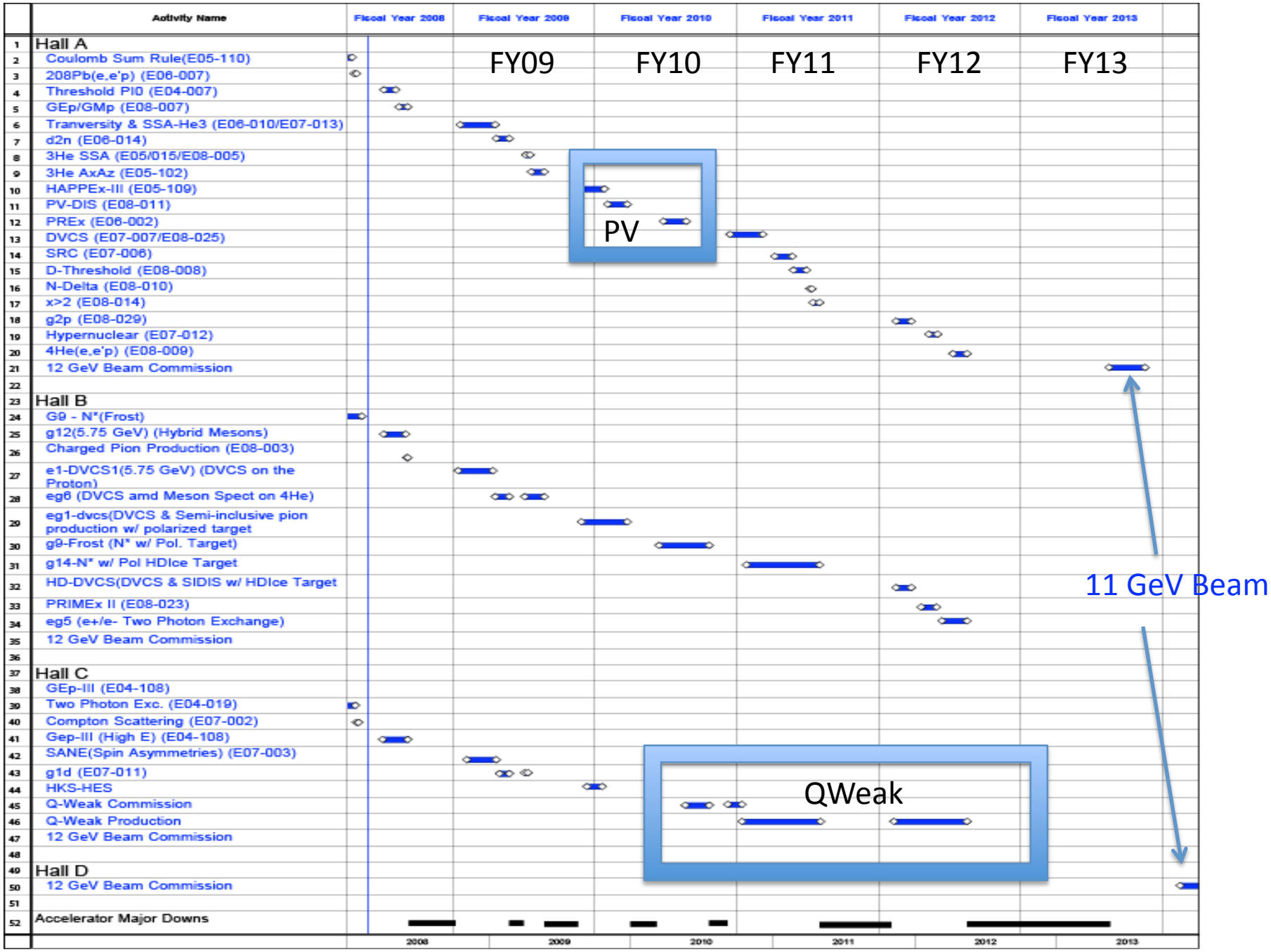


Short Range Correlations: Future Experiments

Outline of SRC Talks

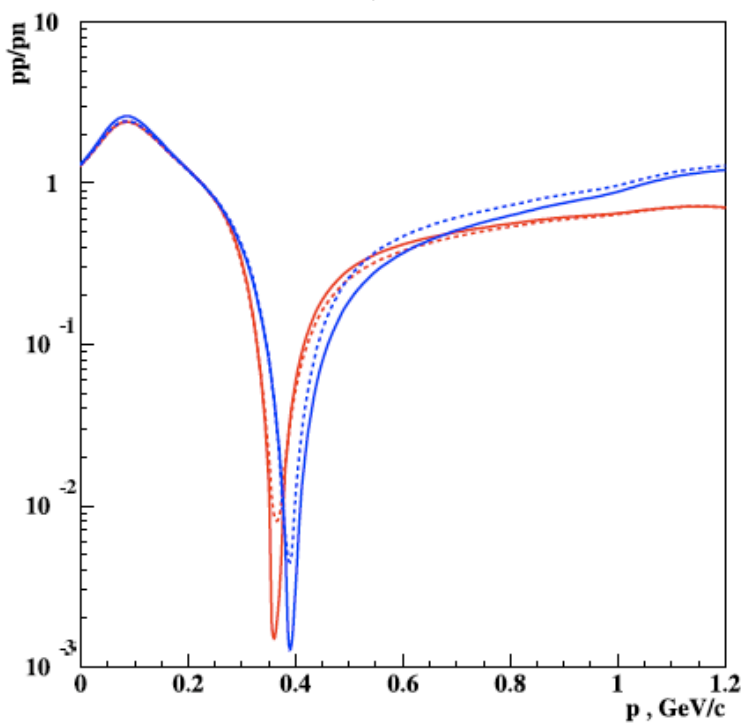
- Monday Morning: History & Kinematics
- Monday Afternoon: Jefferson Lab Equipment (Tour after talk!) & Life Of An Experiment
- Tuesday Morning: Recent (e,e') &(e,e'p) Results
- Tuesday Afternoon: Recent (e,e'pN) Results
- Wednesday: Future SRC Experiments

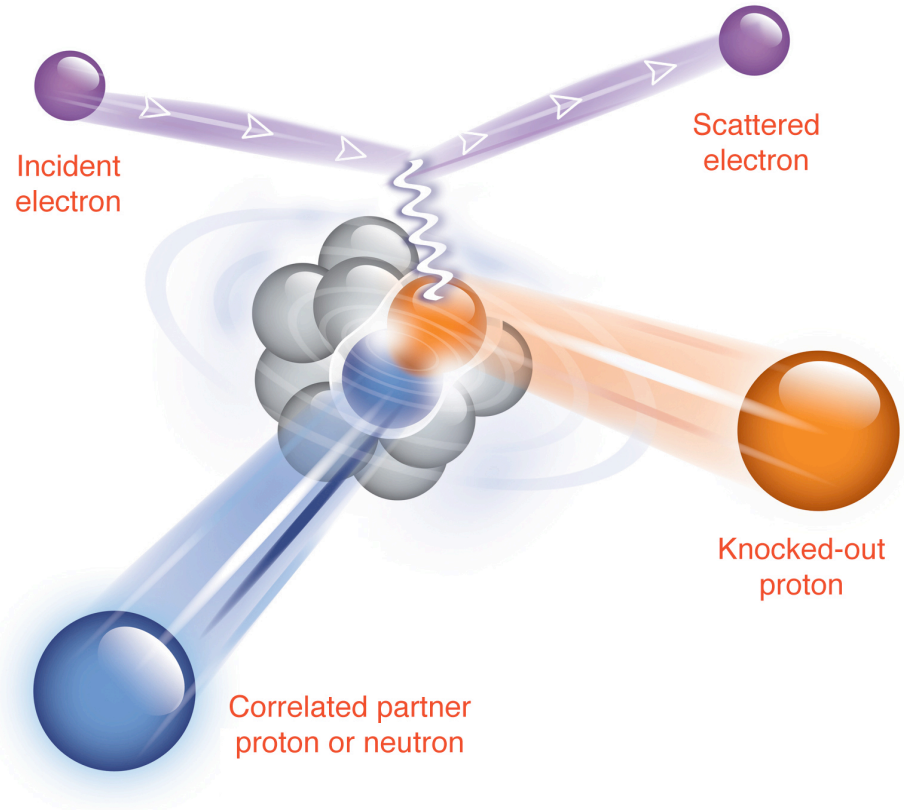


Jefferson Lab

E07-006: ^{4}He(e,e'pN)pn SRC

- ^{4}He Target
  - Dense Nuclear Matter
  - *MF & Exact* Calculations
- P_m from 400 – 800 MeV
- 25 PAC Days

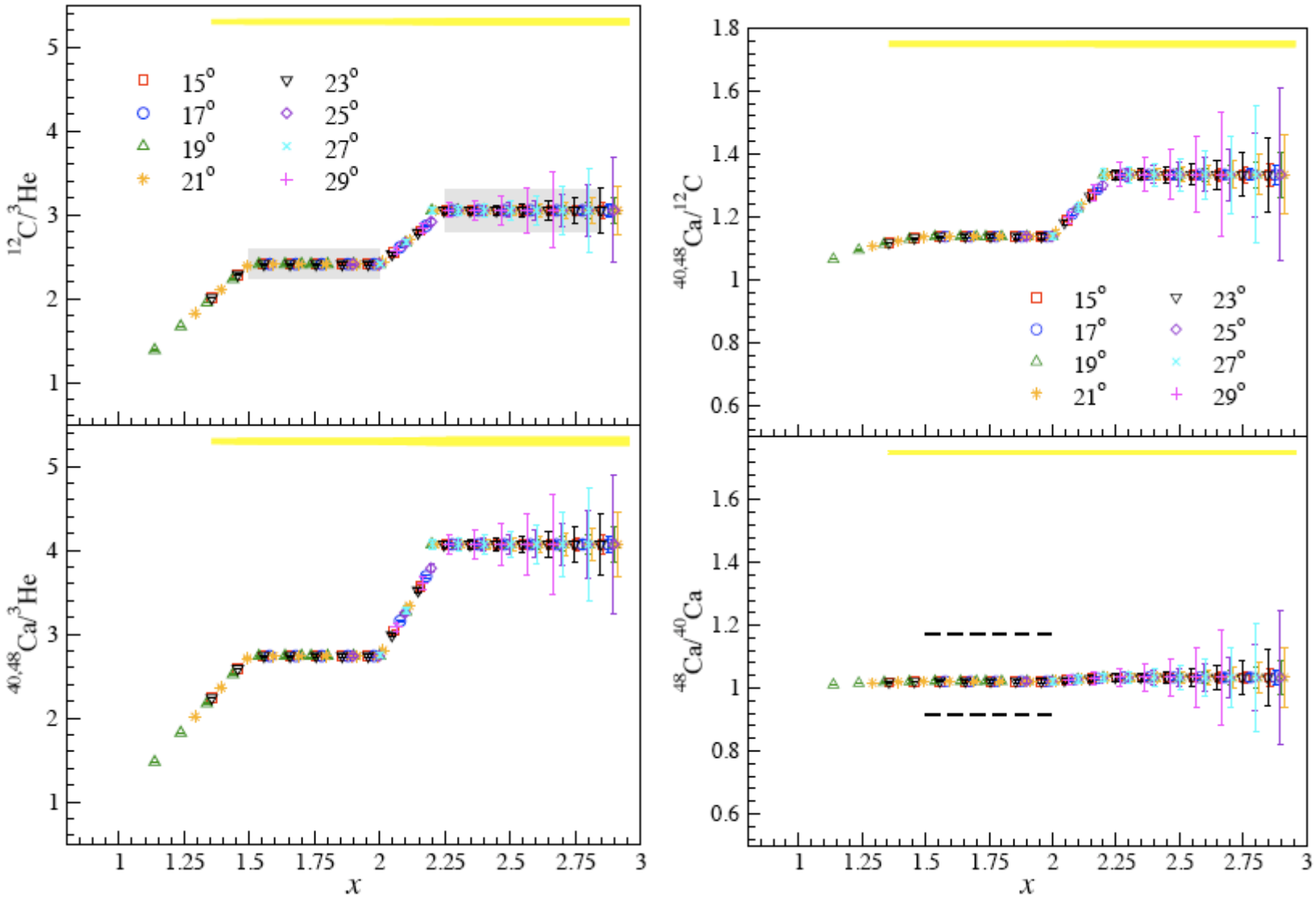




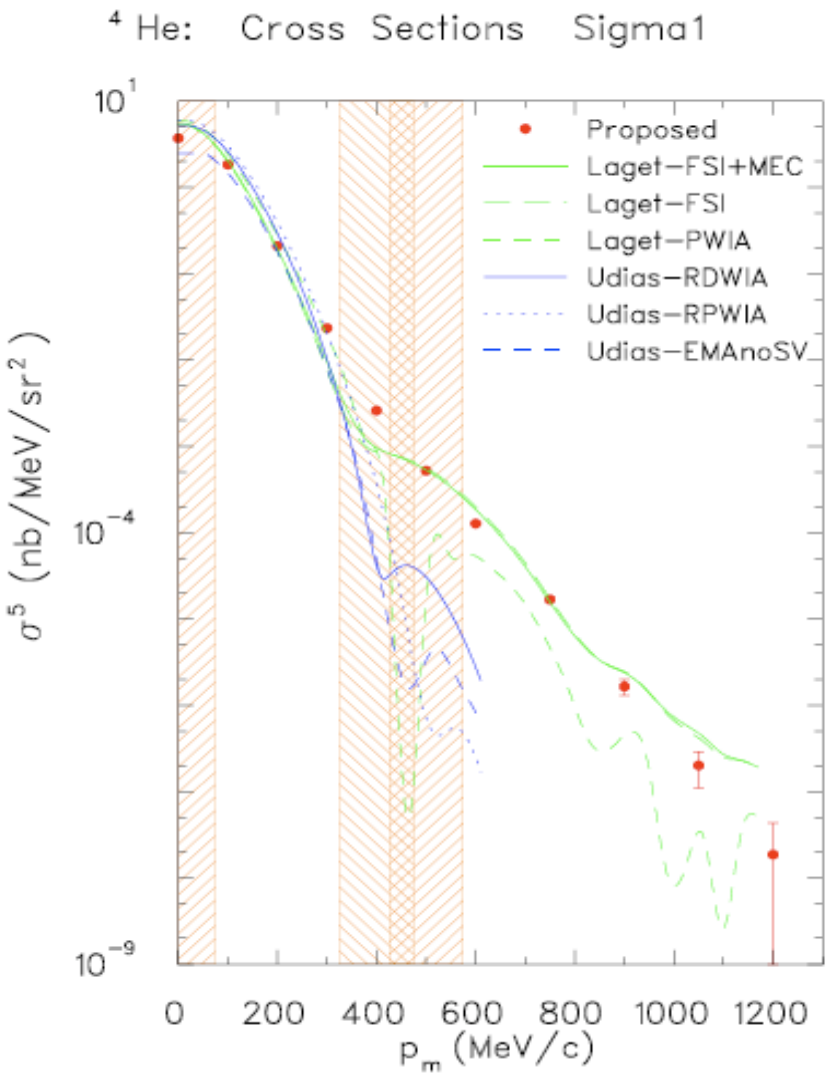
- Pushing Limits of NN Potential
  - Long range attraction
  - Short range repulsion

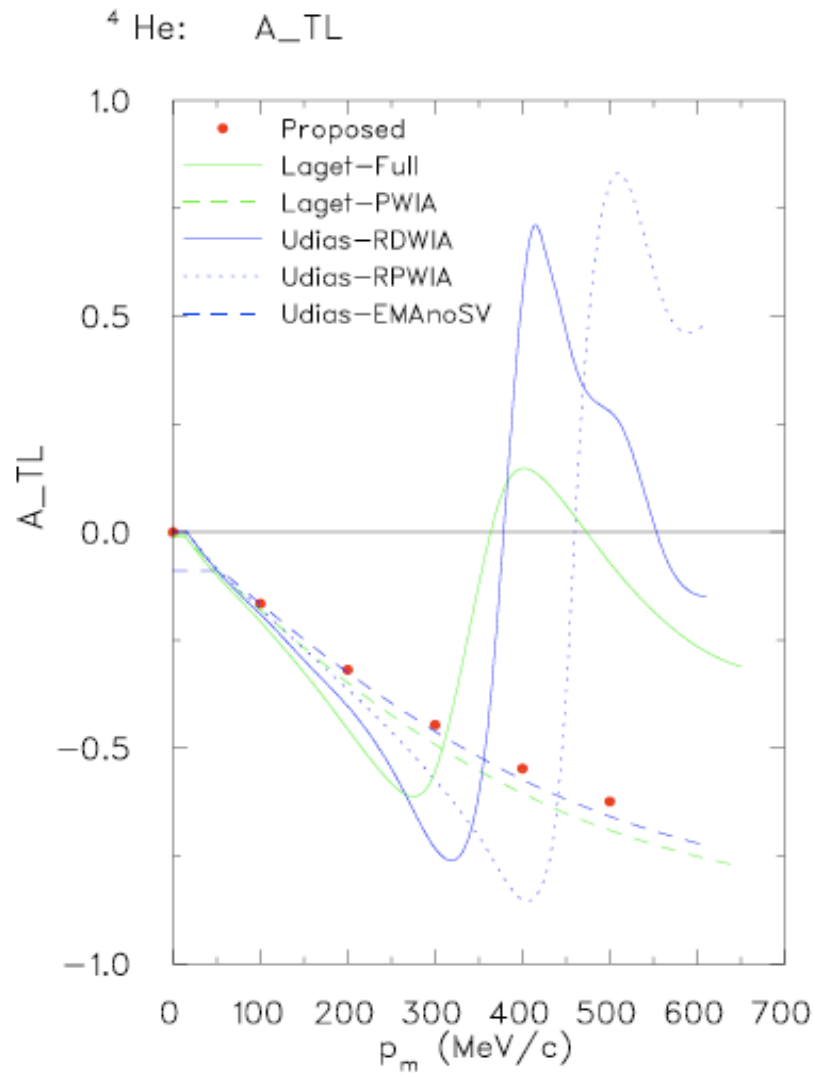
E08-014: A(e,e') x>2 High Stat. Data

3.6 GeV Beam; 12 PAC Days



E08-009: ^{4}He(e,e'p)^{3}H & ^{4}He(e,e'p)pnn

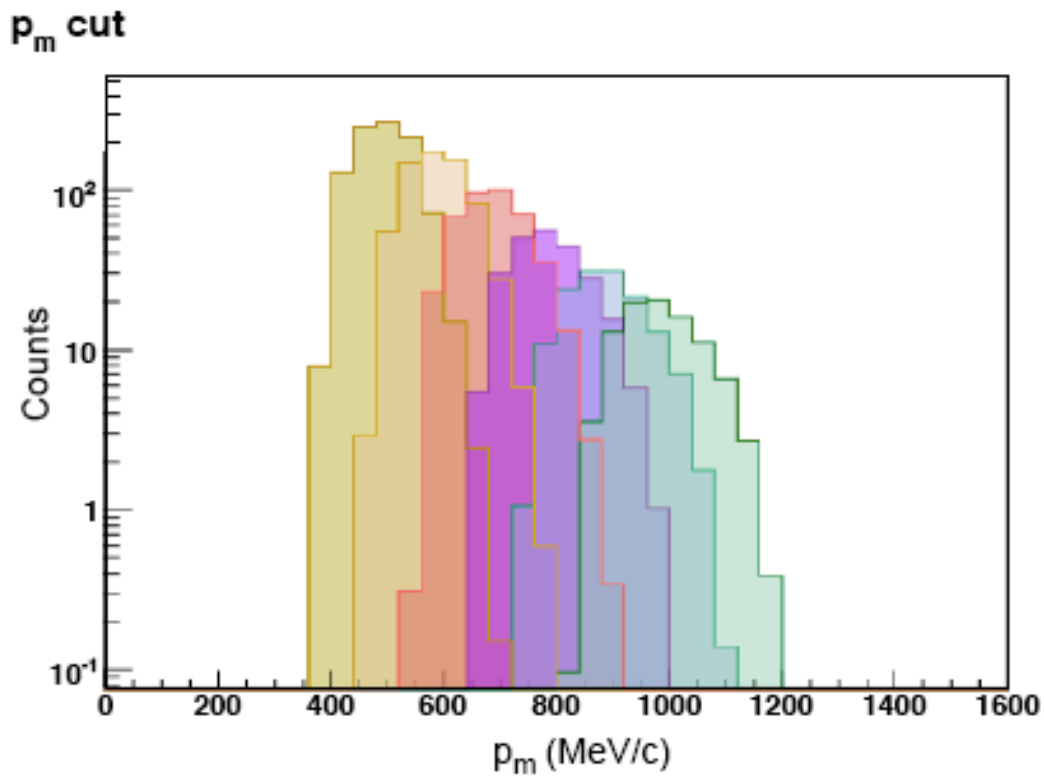




- Q^2= 1.5 GeV, x = 1 & 2,Lots of Cross Sections, and 20 PAC Days

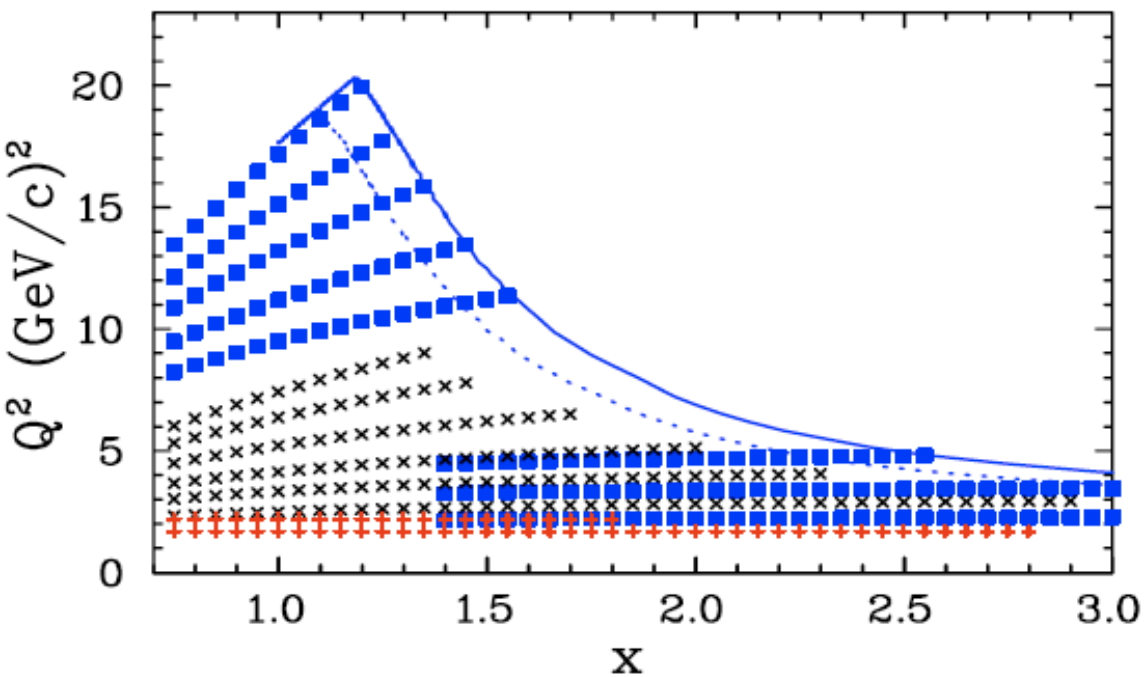
PR08-020: D(e,e'p)n High P_m and x>1

- E = 5.25 GeV/c
- x = 1.3
- $Q^2 = (3.5\ GeV/c)^2$
- 17 PAC Days

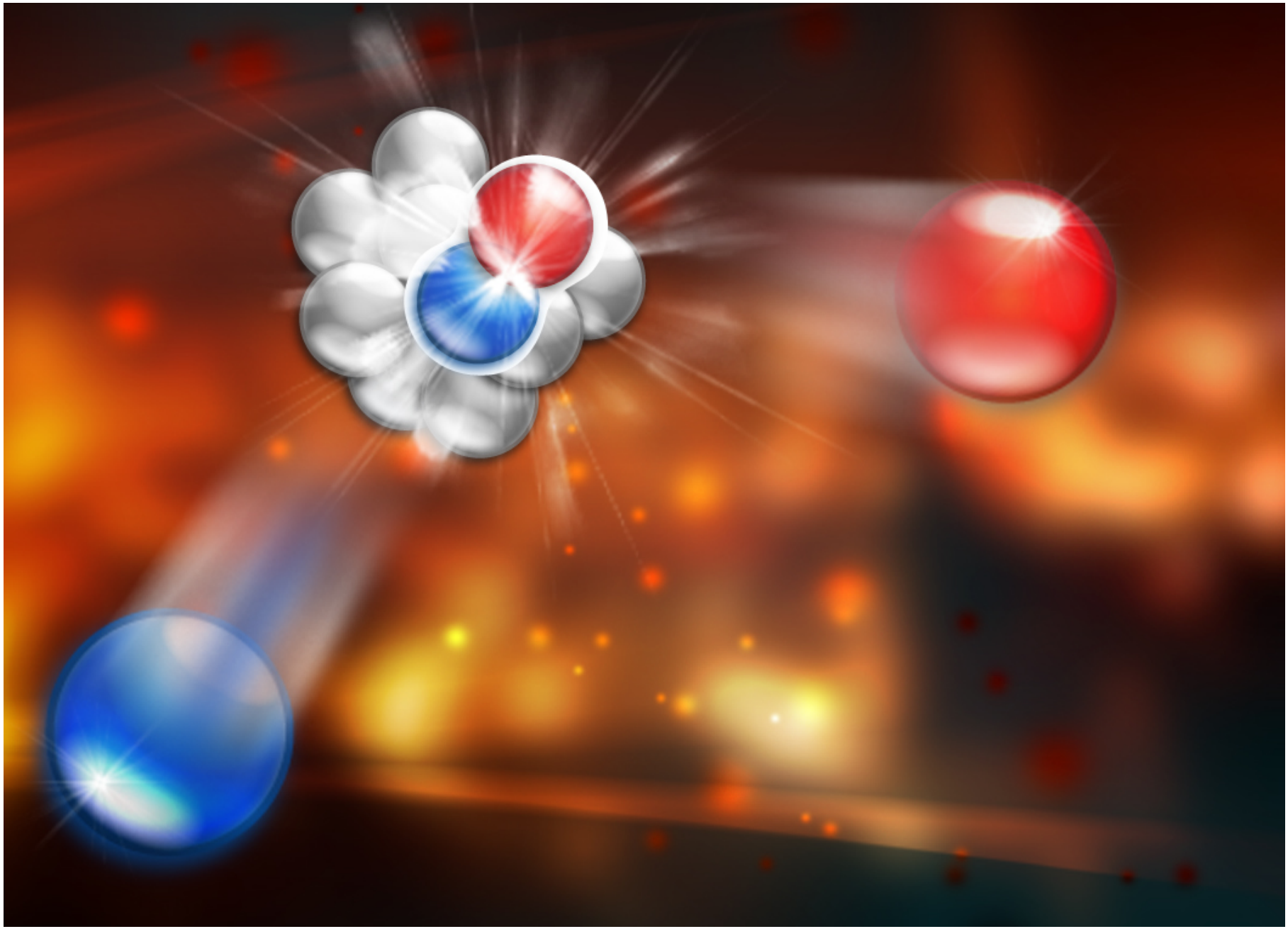


p_m	E_f	ϑ_e	$\lvert\vec{q}\rvert$	p_f	ϑ_p	ϑ_{pq}
0.5	3.815	24.13	2.358	2.041	51.53	10.11
0.6	3.815	24.13	2.358	1.985	53.89	12.48
0.7	3.815	24.13	2.358	1.922	56.20	14.79
0.8	3.815	24.13	2.358	1.852	58.48	17.07
0.9	3.815	24.13	2.358	1.777	60.75	19.34
1.0	3.815	24.13	2.358	1.696	63.03	21.61

PR12-06-105: x>1 in DIS



11 GeV Beam

θ (deg)	E' settings (GeV)	x	Q^2 GeV^2
8.0	10.6	0.7-4.0	2.1-2.3
10.0	10.4	0.7-3.0	3.0-3.5
12.0	9.8	0.7-2.6	4.0-5.0
22.0	5.7,7.0	0.7-1.55	8.1-12
26.0	4.8,6.0	0.7-1.45	9.5-14
32.0	3.3,3.9,4.6	0.7-1.35	11-17
40.0	2.4,2.8,3.3	0.7-1.25	12-18
55.0	1.5,1.7,2.0	0.7-1.20	13-20

Red is the range of CLAS Data
Black is the range of 6 GeV Data
Blue is 11 GeV Proposed Data
Solid Line = 10% Uncertainty; Dashed Line = 5% Uncertainty