Progress on the E05-102 analysis

2.35

2.30

2.25

2.20

2.15

11

12

13

14

15

16

 θ_{a} [deg]

17

011 012 013 017 018 014 024

- Preliminary results for (e,e'd) and (e,e'p) and both kinematic settings ($Q^2=0.25$, 0.35 (GeV/c)²) available.
- Now trying to compare theory to the data.
- Theory from Krakow/Bochum group. Theory from Hannover/Lisbon forthcoming.
- Calculations made for 35 kinematic points.
- Calculations averaged over all kinematic points and all φ_{da} , using kinematic information from real data.



Comparison with calculations

- The comparison for (e,e'd) channel done first, because no 2BBU/3BBU separation problem.
- Various theoretical models were considered.
- Compared p_{miss} =0 results with $\vec{d}(\vec{e}, e'd)$ asymmetry for P_z =2/3 and P_{zz} =0, to test naïve (He³=pd) model.
- Inconsistencies with theory at low $p_{\mbox{\scriptsize miss}}.$







Comparison with theory for ${}^{3}He(\vec{e},e'p)$

- 2BBU and 3BBU channels can not be clearly separated in data. Data will be compared to the full theory <u>averaged over both reaction channels</u>.
- <u>Working on a modified MCEEP</u> simulation, using Golak's cross-section, to determine the 3BBU/2BBU ratio. Already have first estimations, but still a lot of work ahead.



Conclusions / E05-102

- In experiment E05-102 we measured asymmetries for both (p,d) channels as a function of missing momentum at same Q² with ω covering the whole QE peak and more.
- <u>Preliminary results</u> for all kinematic settings are available.
- Results have been compared to calculations of Krakow/Bochum group. <u>Inconsistencies</u> are **not unexpected** at this stage.
- Disagreement may vanish by applying a <u>more refined averaging</u> <u>procedure</u>.
- <u>Calculations from other theoretical groups</u> are becoming available soon.
- The extracted asymmetries will facilitate our understanding of the properties of He³ (manifestations of S', D state) that were not accessible by unpolarized experiments.