HKS-HES Collaboration Meeting

S N Nakamura @ Tohoku Univ.

2010/03/05 @ JLab

**** Agenda of HKS/HES Collaboration Meeting **********

Date : March 10 - 11, 2010
Place: JLab, CEBAF CENTER (L102/104)

*** March 10, E01-011 Analysis, Publication Strategy and Future plan

09:00	Hashimoto	Opening and general remarks
09:30	Lulin&Seva	New Seva-code replay and analysis results
10:30	Fujii&Matsumura	Mass and Cross section evaluation and comments on physics interpretation
11:30	Tang	Optical/kinematical calibration and tracking accuracy
12:15	Nue	Discussion on finalizing the spectra

13:00-14:30 ***** Lunch *****

14:30	Hashimoto	Publication Strategy, Schedule and Work Assignment

15:30	Tang	General idea about test run of decay π program in Hall A
16:00	Margarian	Tagged-Weak π–Method and TOF with RF-PMT for HπS
16:30	Tang	Discussion about future plan (2012 run and further future)
17:00	Petkovic	A remark of gratitude on the occasion of 10 years history of the HYspectroscopy at JLab

Finalizing E01-011 Spectra

Seva's new fp time code

How serious it affects the spectra?

Case 1) Important to BE and CS

Case 2) Important only to BE :

Case 3) No significant changes to spectra

Case 1) Important to BE and CS :

Based on new code + new matrices

New official BE spectra

- Replay code+param
- Cut parameters,
- Final Kinematics Parameters
- Optical Matrices
- Raster Corrections
- Mixed event background subtraction

New CS evaluation

- Run summary used to make spectra (Charge)
- Detector Efficiencies

Systematic Error evaluation would NOT be changed

- Blind analysis : The same

Anyone should be able to reproduce them from raw-data.

Deadline?

Case 2) Important only to BE :

- Based on new code + new matrices
- New official BE spectra
  - Replay code+param
  - Cut parameters,
  - Final Kinematics Parameters
  - Optical Matrices
  - Raster Corrections
  - Mixed event background subtraction
- CS evaluation would NOT be changed
  - Run summary used to make spectra (Charge)
  - Use the same detector Efficiencies
  - Reevaluation of tracking efficiency???
- Systematic Error evaluation would NOT be changed
  - Blind analysis : The same
- Obtained CS should be checked with the previous values

Case 3) No significant changes

Un-changed BE spectra + CS

The previous spectra can be published

Systematic Error evaluation

Blind analysis : The same

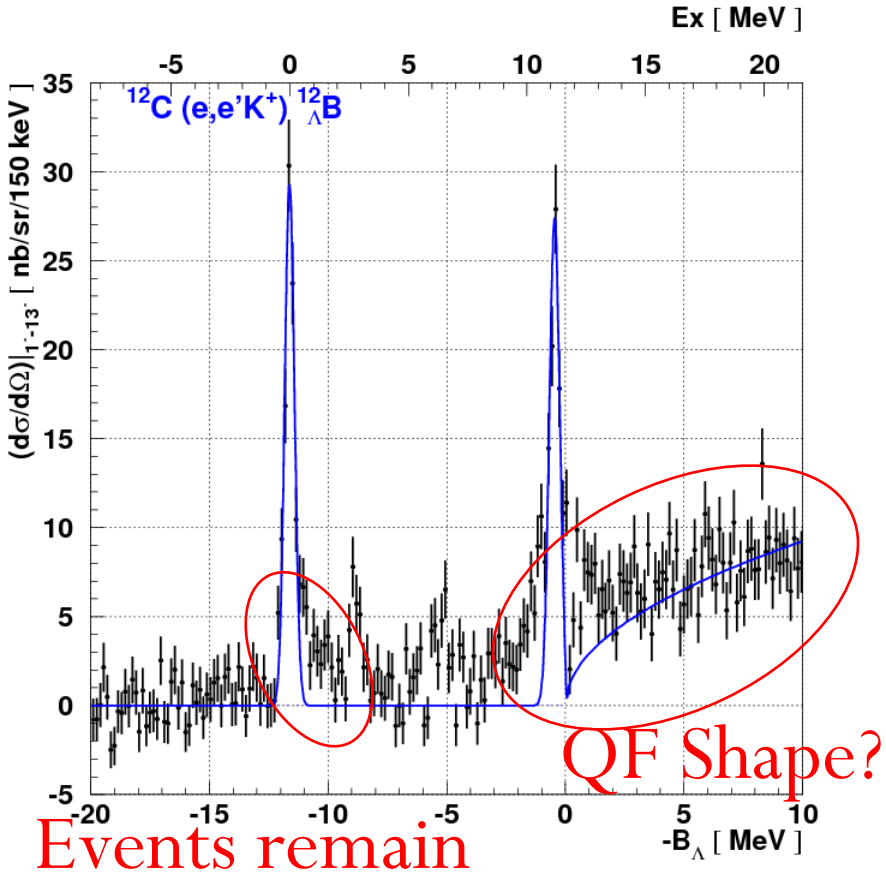
BE, CS changes can be included in systematic error

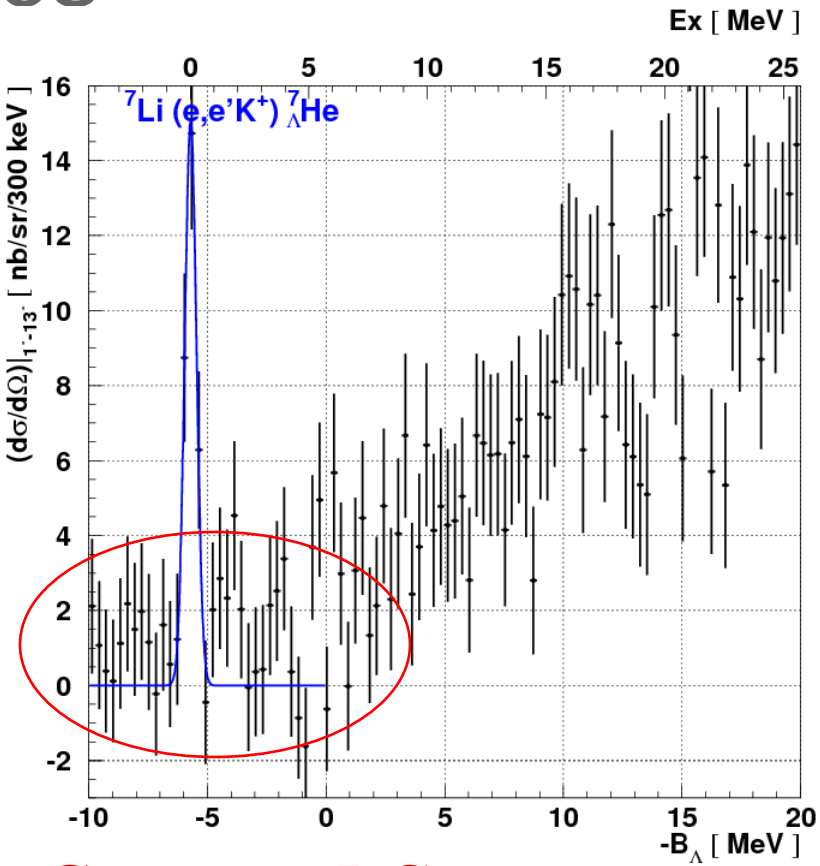
Basically, we are ready to publish E01-011 data

Once spectra are finalized...

- Determine fitting procedure
  - Response function : Simple gauss or with tail?
- Probably fitting procedure is not relevant for BE, but important for CS.
  - Background estimation :
    - Mixed-events BG subtraction may not be perfect
    - For major peaks, a few 10keV effect to BE.
- Final estimation of Systematic Errors
  - BE & CS

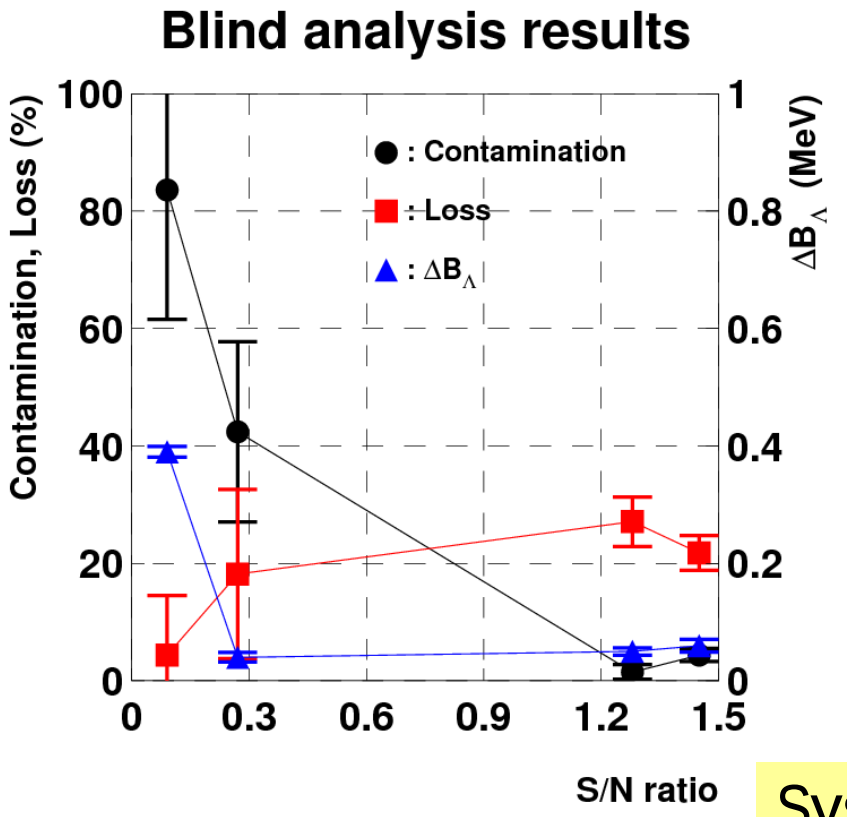
Background shapes





Should be included in Systematic Error Estimation

Simulated data blind analysis result



Contamination : Ratio of misidentified event (negative side)

Loss : Ratio of lost event (positive side)

ΔB_Λ : binding energy difference

Systematic error ….

for major peak (S/N > 1),

Accuracy of binding energy < 100 keV

cross section < +30%, -5%