

Current Support Needed for PrimEx

A.Somov on behalf of the PrimEx working group

GlueX Meeting, March 24, 2020

Status of the PrimEx analysis

- Performed initial calibration of key sub-detectors
- **A lot of progress in many directions:** implemented CCAL and target geometries, CCAL simulation in Geant (tune energy resolutions), FCAL reconstruction, luminosity, target density stability, implementation of event generators (official GlueX location)
- **Reconstruction of Compton events.** Made progress in the measurement of the Compton cross section
- **Work on the analysis of Primakoff events.** Shape of the angular distribution of reconstructed eta mesons in the Primakoff region is consistent with MC simulation
- Progress discussed on weekly PrimEx meetings (on Fridays)

Short term plans

- need to improve calibration of GlueX sub-detectors and proceed with the first round of data processing
- have already performed the first monitoring launch

Current Support Needed

- Calibration and check of tracking detectors for runs with the CDC/FDC switched on
 - refine the beam spot and position of the target (Simon has already made some progress)
- Refine /check calibration of BCAL (Karthik assigned at the calorimeter meeting)
- Check/refine calibration of the tagger
 - Sean corrected (almost all) 4 ns fadc time shifts in tagging detectors. Two iterations have been done
 - Make sure that time walk corrections are applied
- Check calibration of TOF
 - Beni calibrated TOF, some global time offset(s) applied by Drew, have to check
- FCAL calibration
 - HV for about 250 channels have been tuned before the PtimEx run, initial calibration after that
 - Chandra and Drew are working on refining the calibration. Some help maybe needed from Colin