

BCAL Test Data Analysis

Dynamic List of Issues for Discussion

1. Energy Calibration
 - a. Monte Carlo
 - b. Minimization technique; add intercalibration minimization
 - c. Cosmics data
 - d. Use y-scan photon data
2. Energy/Timing Processing
 - a. Calibration
 - b. Time walk correction
 - c. Effect of pedestals (changes vs cart position/rotation)
 - d. ADC linearity source: leakage and readout
3. Energy Resolution as a Function of position and angle
 - a. Understand evolution of floor term
 - b. TRIUMF data
4. Mean Time Resolution
 - a. Tagger contribution
 - b. Beam size contribution
 - c. Photon data
 - d. Cosmics data/TRIUMF data
 - e. Implications for GlueX PID
5. Time Difference Resolution
 - a. Photon data
 - b. Cosmics data
 - c. Translation to position resolution
6. Other Issues
 - a. Sampling fraction
 - b. Pattern recognition
 - c. No of photoelectrons & method (beam test and cosmics data)
 - d. Effective speed of light in fibers
 - e. Attenuation length
7. Monte Carlo Validation
 - a. Model threshold a la data
 - b. Edep profiles for photons (angle and position) versus data
 - c. Extract Eres and Tres
 - d. MIP Edep at forward region; simulate snout on BCAL
 - e. Converter runs
 - f. FLUKA versus GEANT
8. Special Runs: triggers, beam current, thresholds
9. Milestones
 - a. Collaboration meeting report (10-page document)
 - b. GlueX-docs: individual item analysis and global report for review
 - c. Publication