GLAST Calorimeter Software Meeting
18-19 July 2002
NRL

Agenda

1. Discussion of CAL Software Resources:
   How many FTEs are actually available?
   a. NRL
      i. Chekhtman
      ii. Strickman
      iii. Grove
   b. SLAC
      i. Dubois
      ii. do Couto e Silva
   c. France
      i. Giebels
      ii. Bordeaux(?)
   d. Elsewhere
2. Discussion of Algorithm and Software Development
   a. Cal geometry update
      i. Review definition
      ii. Validation plans
      iii. Check validity of crystal segmentation in G4 geometry
      iv. Documentation plans
   b. Realistic digitization
      i. Noise
      ii. Realistic light tapering curve shape
      iii. Realistic electronic nonlinearity
      iv. Realistic calibration parameters (by cde)
   c. Reconstruction
      i. Position and direction calculation
         1. Review of algorithms
         2. Validation (?)
         3. Error calculations
         4. Sanity checks (i.e. is reconstructed value reasonable?)
      ii. Energy calculations
         1. Leakage correction
         2. Low energy corrections
         3. Validation (?)
         4. Error calculations
         5. Sanity checks
      iii. Iterative recon with TKR
      iv. Clustering algorithm requirements
   d. Calibration
      i. New calibration classes
ii. Calibration algorithms
   1. Muon
   2. heavy ion (i.e. in orbit)
   3. test beam
   4. Scintillator saturation issues

e. Cal trigger algorithm

f. Failure modes simulation and recovery
   i. Parameter drift
   ii. Complete loss of diode
   iii. “Partial” loss of diode (i.e. radical change in diode performance)
   iv. Complete loss of one or more cde’s
   v. Mitigation of failures elsewhere in the instrument

g. Software structure and engineering concerns
   i. Code structure
   ii. Review
   iii. Output classes
   iv. Testing
      1. Cal MC and recon validation
      2. Instrument performance prediction
      3. Formal s/w testing (e.g. test plan, module & system level
test, acceptance testing, validation test suites)

3. Interfaces to/shared software with calibration, GSE, I&T

4. Documentation
   a. Respond to doc/code reviews
   b. Documents
      i. Requirements
      ii. Design
      iii. Test Plan
      iv. Developer/user guides

5. Discussion of Schedule

6. Action Item Critical Review and Revision