

GLAST LAT Project Weekly Report for the week ending Aug 9, 2001

*** CALORIMETER (Carosso)

4.1.5.1 CAL Management

- Preparation for Quarterly Review, including: technical status review, program costing and schedule updates
- Began response to CAL PDR action items.

France

- Preparation of meeting with CNES.

4.1.5.3 Performance Assurance

- Prepared T&DF presentation for peer review PDR.
- Provided comments on power supply specification.
- Prepared ASIC flow diagram and test plans.
- Attended CAL and ACD meetings and discussed peer review PDR action items.
- Resolving issue related to photo PIN diode interconnection.
- Working on reliability issue related to T&DF.
- Working on EMI/EMC plan.

4.1.5.4 CAL Design

France

- Mechanical and thermal model study

4.1.5.5 Crystal Detector Elements

- Continue tests on optical bonding epoxies and silicones
- Wrote procedure for radiation hardness test box

France

Continued thermal cycling of flexible epoxy and silicone optical bonds.
Collecting Cs137 spectra after each hot/cold cycle and looking for trends in light yield into dual PIN. (NRL)

- Dimensions and light yield measurements with Tyvek and with 3M wrapping of the 16 CsI log for VM2
- The measurements of the 16 crystals from Sweden for VM2 are done .
- Design of the end of the crystal (wrapping)is in progress

4.1.5.5.3 PIN Photodiode

- PIN Bonding

- 60 thermal cycles under vacuum of the CsI glued on glass by CETIM give good results for the DC 93 500; With EP 37 less interesting results.
- Bad results with the Primer OS 1200 ; New primer delivered for tests.
- Realisation and procurement of the tools for the VM2 bonding.
- New process for the gluing is started :first samples have already been cycled 20 times.

- Work on the design of the flex form , soldering , gluing.

4. 1. 5. 6 CAL Pre Electronics Module

- Plan data acquisition electronics and software for PEM test bench (NRL)
- PEM GSE
Procurement of hardware and progress in software.

4. 1. E. 3 CAL Balloon Flight

- Attended and supported balloon flight: the calorimeter was monitored before and during the flight. Based on the online data monitoring:
 - even though the electronics was not planned to work in vacuum, it looks like it was not seriously affected by the unexpected heating due to the loss of pressure.
 - the pedestal seemed steady during the flight, changing on average by <3%
 - minimum ionizing peaks and clear straight tracks were clearly seen in the calorimeter, as well as showers and higher energy tracks.
- Began analysis of electronic and muon calibration data collected in Palestine. Configuring standard CAL checkout software to use ivtx formatted data. (NRL)

4. 1. 5. 4. 5 CAL Software/Design Verification

- Continued discussion on particle backgrounds in prep for PDR simulation runs, trying to convince ourselves that we have a reliable understanding of the particle albedo. Generated CREME spectra in a variety of geomagnetic and solar conditions, and distributed them to SLAC. (NRL)
- Released requirements doc for CAL Digi classes.

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