REQUEST FOR ACTION (RFA) RESPONSE

GLAST LAT Project
Calorimeter Peer Review **17 – 18 March 2003**

Action Item:	CAL – 026
Presentation Section:	Schedule and Transportation
Submitted by:	Bill Wisniewski

Request: CDE Production - Very complex scheme handing off to vendors, receiving back, etc. This is designed to lose float/schedule. Consider options to do production in-house. Contract part of production with experienced offshore vendor.

Reason / Comment: This is a critical path and has already slipped due to complexity of contracting, and has potential slip of another 2 months.

Response: 27 April 2003

The production of the CAL Crystal Detector Elements is the responsibility of CEA/Saclay. This responsibility has been detailed and documented in the Memorandum of Agreement among Stanford, NRL and CEA. These details are also in the Letter of Agreement between NASA and CNES.

CEA has developed a CDE manufacturing plan that is compatible with their available in-house resources – both labor pool skills and manufacturing space. Due to the large number of CDE to be manufactured per week and the limited available pool of technicians, CEA determined that it would be impossible to sustain the required rate with in-house resources. CEA's staff will be responsible for acceptance testing of the CDE component materials – PIN diodes, crystals, wrap material – which are delivered to contractors for the assembly. CEA is then responsible for the final performance and acceptance testing of the CDE delivered by the outside contractor.

The CEA search for supporting contractors is well underway and has been limited to French industry. Supporting an "offshore" vendor would involve more transportation issues with associated customs problems, or the CDE would have to be accepted offshore, thereby relieving CEA of its responsibility.

After much discussion among the CAL team and with the LAT IPO, there is general agreement that the flight qualification of two sources of CDEs represented an equally great risk to the cost and schedule of LAT. The plan is to establish this source in France and to make sure it has adequate resources to meet the LAT schedule. Such a source has been identified in the French procurement process and options to the statement of work have been included in the procurement process which increase the manufacturing rate to hold the later CAL modules delivery schedule. Unfortunately, due to the delay in the initiation of the procurement process in France, the first four CAL modules can not meet the delivery dates and we have been unable to find an alternate solution to this problem. LAT is planning a revised integration and test program which accommodates the late delivery of the 1st four CAL modules. It appears that the revised program must delay the beam test of LAT components until the end of LAT assembly.

At this late date – CDR – it is essentially impossible to recover the lost schedule and deliver the first CDEs on the baseline schedule. Even if the work was transferred to some other organization, it would take several months for that new organization to organize and manufacture the required tooling and qualify their manufacturing process. That task would even be a challenge for an organization with experience in CDE manufacturing.

We are currently struggling with a new problem in the CDE manufacturing. CNES has withdrawn its support of GLAST in France and CEA has been unable to initiate procurements necessary for the preparation and qualification of CDE components. The procurement selection process for PDA and CDE contractors is continuing on the schedule presented at the Peer Review but diode evaluation and qualification contracts are on hold along with shipping container manufacturing. The LAT IPO is working with the French and CAL team in attempting to restore the CNES funding and, at the same time, developing alternate plans for funding and execution of this work. While the CAL team is, to the extent possible, continuing along the scheduled work plan, these issues will likely add additional delay in the delivery of CDEs and consequently represent a major risk to LAT.