

GLAST Team to Optimize the Configuration of Converters
in the LAT Tracker
("GTOCC")

<u>Team Member</u>	<u>Preliminary Assignment</u>
Ronaldo Bellazzini	Mechanical Issues
Toby Burnett	MC Simulations
Seth Digel	Science Simulations
Arache Djannati-Atai	CAL-TKR Interface
Eduardo do Couto e Silva	BTEM Analysis
Richard Dubois	Software
Jose Hernando	Tracker Performance
Tune Kamae	Design Parameters
Neil Johnson	CAL Performance
Robert Johnson	Tracker Hardware and Resources
Steve Ritz	Backgrounds
Hartmut Sadrozinski, Chair	
Dave Thompson	Science Interface (to GBM and others)
Bill Althouse	ex officio
Peter Michelson	ex officio
Neil Gehrels	ex officio

Charge::

Review the distribution and thickness of converters in the GLAST LAT Tracker and make a recommendation for a final design configuration, taking into account beam test confirmation of the simulation models, the applicable draft requirement documents (SRD, IRD) and engineering issues.

Schedule

Gather inputs	August 15, 00
Study team report (design proposal, with performance plots)	October 15, 00
Final decision on the tracker converter configuration	December 1, 00

Proposed Ground rules:

1) Performance

We need to define design parameters.

I would like to define them as LAT Requirements + Margins.

2) Resources

As a general rule, we should live within the resources of the descope AO design.

Potential increases in power and/or mass of a subsystem will be acceptable only as an exception.

3) System Optimization

An optimization of the whole system should be done.

Both calorimeter and tracker issues should be looked at.

Can TKR and CAL position measurements be combined? BTEM data?

No increase in the calorimeter thickness foreseen.

4) Layout Options

At most two other configurations should be compared in detail with the AO design.

This includes science simulations.

5) Simulations

Simulations at normal incidence (= 5deg), 45deg, 60deg). TBR

Gamma energies: 0.02, 0.05, 0.1, 0.3, 0.5, 1, 3, 10, 100, 300 GeV TBR

Finish BTEM validation asap (2 weeks). TBR

6) Trigger

Review TKR and CAL trigger

(Is the 3-in-a-row trigger too restrictive?)

Do we need 2 empty x-y layers in the bottom?

Cal trigger range?)

Program

1. List current complaints/concerns with the AO proposal design.
Tel Con Tue August 1
2. Which of these are worth a review?
Tel Con Tue August 1
3. Come up with two alternatives to the AO base line
Tel Con August 21?
4. Simulate Performance of max 2 options
5. Science simulation