

**GLAST LAT Instrument**

*LAT Monthly  
Status Review  
Aug 1, 2007*

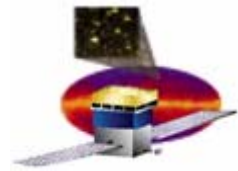


## **GLAST Observatory TVAC at NRL**

**Aug 1, 2007**

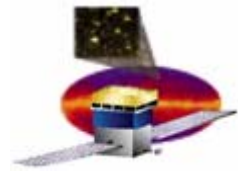
**Neil Johnson  
NRL**

**neil.johnson@nrl.navy.mil**



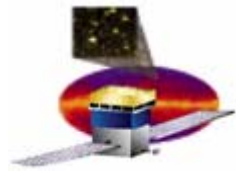
# Organization

- ❑ **Brett Pugh has agreed to take on “test director” mantle for organizing NRL option.**
  - **Billy Greenrock is GD-AIS Point of Contact**
  - **Organizing weekly teleconfs – Mondays, 11:30 EDT**
  - **Talking with GD experts for needed info**
  - **Potential face to face – GD & NRL – in the next week or two**
- ❑ **Scott Clough has agreed to organize turn over fixture**
  - **Recover GSFC fixture and get it recertified**
- ❑ **Will create ICD or Agreements Document (Pugh, Johnson)**
  - **Outlining roles and responsibilities**
  - **Defining documentation**
  - **Required / provided facilities**



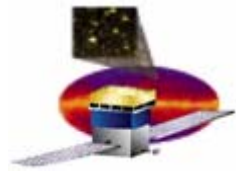
## **Organization: Continued**

- ❑ **NRL Facilities (Mike Van Herpe, Bob Haynes)**
  - Clean tent near TVAC chambers
  - Staging area in Center High Bay
  - Need to work power requirements, networking, offices, etc
- ❑ **Mechanical Design, Analysis and Fab – Marc Campell**
  - Turnover fixture adapter plate
  - TVAC port plates
  - TVAC Trolley / table adaption to L-Frame
  - Released drawings – SLAC
  - Analyses – John Ku
  - Fab – NRL / SLAC.
- ❑ **TVAC preparation and test: Brett Pugh**
  - GD Rep: Billy Greenrock
  - Van Herpe will organize chamber, CDAS, power supplies, etc
- ❑ **QA and Safety: ???**



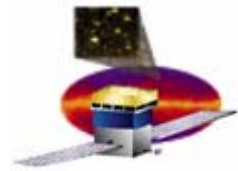
## **NRL TVAC Status**

- ❑ **No show stoppers except ...**
  - Howard Dew suggests that NASCOM connectivity to NRL, if required, will take 240 days
  - Jack Leibee has action to investigate
  - Need to understand GD network requirements
- ❑ **NRL Contract**
  - Neil working LAT CR to cover work thru August.
- ❑ **Bakeout of L-Frame at NRL is on the rise – decision 3 Aug.**
  - GD's first choice does not have needed capabilities
  - Target date is ~ 24 Aug. availability of L-Frame
  - Potential assembly and test of WattRod heaters during bakeout
- ❑ **New target for start of TVAC: 15 Oct**
  - Obs arrival at NRL ~ 1 – 7 Oct.
- ❑ **NRL Access and Badging**
  - Should start identifying list of people needing access and begin badging paperwork. Foreign Nationals????



# **NRL Test Flow**

- ❑ **L-Frame Bakeout (TBD)**
- ❑ **Prep Work**
  - Network connectivity verification
  - Pathfinding Turnover and TVAC Trolley/Table
  - TVAC chamber verification (part of bakeout?)
- ❑ **GLAST Arrival, Unpack**
- ❑ **EGSE setup and checkout**
- ❑ **Post-ship checkout**
- ❑ **GLAST turn over**
- ❑ **Chamber Installation**
- ❑ **Open door CPT**
- ❑ **TVAC**
  - ETE and other testing
- ❑ **Post TVAC CPT**
- ❑ **Post TVAC Potential Flow**
  - Solar Array ReInst
  - Prop System Checkout
  - ETE test
  - Optical Alignments
  - Final mass properties
  - ETE test
  - Pre Ship Review
  - Ship to Cape



# Observatory Turn Over

## From Scott Clough – GSFC Ransome Table

### ❑ Ransome Table Details

- Model 500-P
- Capacity 50,000 lbs
- Rotation Torque 600 K in. lbs
- Tilt Torque 1175 K in. lbs
- C.g. At 12" above and 12" eccentric
- Table rotation .007 RPM min .3 RPM max
- Weight 25300 lbs
- 460 V 3 phase
- Plug, 30A. 480V. 3 phase

### ❑ Issues

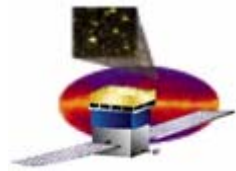
- Potential conflicting use by another GSFC project
- Ownership and documentation

### ❑ Certification

- Need 2x mass and torque test

- ❑ If Issues can not be favorably resolved, NRL has ICM turn over fixture that could be adapted. Need to quickly resolve the need for this work.





- ❑ **Critical Paths?**
  - Network connectivity to NASCOM and GD-AIS(?)
  - Identification, certification, adaptation and installation of turn over fixture
  - Adaptation of L-Frame to NRL TVAC Trolley / Table and necessary analyses / certifications to demonstrate safety.
  - Modification of test procedures / plans for NRL environment
    - Configuration and programming of thermal control system
    - Programming of TC monitoring and displays
- ❑ **Procedures, Configurations**
  - Everything done to GD procedures and drawings?
  - Modifications for NRL facility / processes?
- ❑ **Risk Mitigation**
  - Pathfind with version of L-Frame (#1) and mass model