

**GLAST LAT Instrument**

*GLAST Monthly  
Mission Review  
July 12, 2007*



## **Monthly Mission Review**

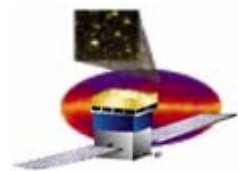
## **Project Status Overview**

**July 12, 2007**

**Neil Johnson**

**NRL**

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



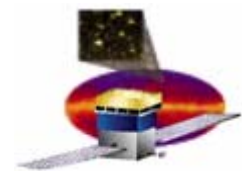
# **LAT Monthly Agenda**

**Teleconference: 888-935-4021 Passcode: 936674**

<b>3:30 – 3:45</b>	<b>Project Status Overview and PMCS Summary</b>	<b>Neil Johnson</b>
<b>3:45 – 4:15</b>	<b>System Engineering-VCRM Status, NCR update</b>	<b>Pat Hascall</b>
<b>4:15 – 4:45</b>	<b>FSW Status</b>	<b>Jana Thayer</b>
<b>4:45 – 5:15</b>	<b>ISOC</b>	<b>Richard Dubois</b>
<b>5:15 – 5:30</b>	<b>TVAC at NRL?</b>	<b>Neil Johnson</b>

# LAT Project Status

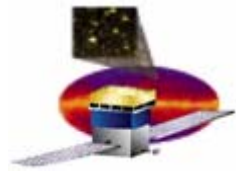
<b>6/6 - 28</b>	<b>Supported Observatory EMI Test</b>
<b>6/13</b>	<b>Radiator Removal MGSE arrived at GD</b>
<b>6/17</b>	<b>RS103 sensitivity troubleshooting</b>
<b>6/18</b>	<b>-Y Radiator Removal</b>
<b>6/18</b>	<b>Watt Rod Cage packed and shipped to SLAC</b>
<b>6/19</b>	<b>-Y Radiator Reinstalled</b>
<b>7/6 - 7</b>	<b>ETE 1b &amp; ETE 2</b>
<b>7/10</b>	<b>Repeat ETE 2 LAT Physics Run</b>
<b>7/10</b>	<b>Completion of FSW dFQT – all requirements met</b>
<b>7/11</b>	<b>Begin load LAT FSW 1-0-1</b>



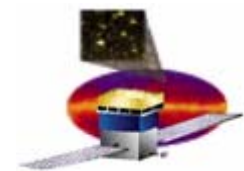
## LAT Planned Milestones

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<b><u>Activity</u></b>	<b><u>ECD</u></b>
LAT FSW 1-0-1 Install & Regression Testing	7/14
Post EMI Observatory move	7/14
Post EMI Radiator Removal	7/15
Post EMI CPT	7/18
LAT Radiator Flight Install	7/25

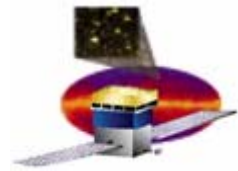


- ❑ **EMI test completed with LICOS 3.0.0**
  - No issues (and people say x.0 releases don't work... hrmph!)
- ❑ **Bent pipe updates**
  - Modified indicators to be clearer about unavailability of command window
  - Added confirmation dialog to handle accidental reconnect requests (can result in loss of tlm or cmd packets)
  - Solved long-standing byte swapping bug
- ❑ **Additional LRS strip charts created and installed at GD for EMI testing**
- ❑ **Released LICOS 3.1 for compatibility with FSW B1-0-1**
  - Prepared configurations using new configuration generation tool
    - LPA and LCI configurations built and verified to the extent possible on the various test stands
    - Some additional configurations generated
    - Prepared roll-back procedure
  - **T&C DB updated**
  - **Script updates**
    - intSeApp, etc.
    - GRB Handling (completion delayed to tomorrow due to testbed contention)
    - Science Modes
  - **No significant procedural changes for operators**
- ❑ **Verified some Online analyses against B1-0-1 data from the testbed**
  - **ACD cable 14 issue found – FSW investigating**
- ❑ **Converting Online analyses to process meta event data**
  - Provides robustness against dropped event packets
- ❑ **Handling of non-event science data**
- ❑ **Various JIRAed bug fixes**



## **Online JIRA issues (as of 7/10)**

<b>Package</b>	<b>Issues opened since 6/4</b>	<b>Issues closed since 6/4</b>	<b>Total # of issues currently open</b>
<b>LICOS</b>	<b>4</b>	<b>14</b>	<b>6</b>
<b>LICOS_Config</b>	<b>3</b>	<b>0</b>	<b>7</b>
<b>LICOS_ETC</b>	<b>8</b>	<b>20</b>	<b>15</b>
<b>LICOS_Scripts</b>	<b>6</b>	<b>11</b>	<b>16</b>
<b>INT</b>	<b>0</b>	<b>4</b>	<b>15</b>
<b>LDF</b>	<b>0</b>	<b>0</b>	<b>1</b>
<b>LSF</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>E-Logbook</b>	<b>0</b>	<b>0</b>	<b>20</b>
<b>Totals</b>	<b>21</b>	<b>49</b>	<b>80</b>



# LAT Issues and Concerns

## ❑ Data Dropouts

### ▪ Commands

- Situation confusing, GD has increased focus
- During FSW upload experienced dropped commands on RF and hardline – command decoding errors. Occurred on both A and B sides of S/C.

### ▪ Science data

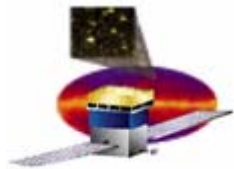
- Situation also improving with increased GD focus

### ▪ Engineering Telemetry

- Still seeing dropouts induced by routine operations at a rate that could hide an underlying problem
- FRB on Tuesday gave the issue more exposure
- LAT team can support, but GD must take the lead

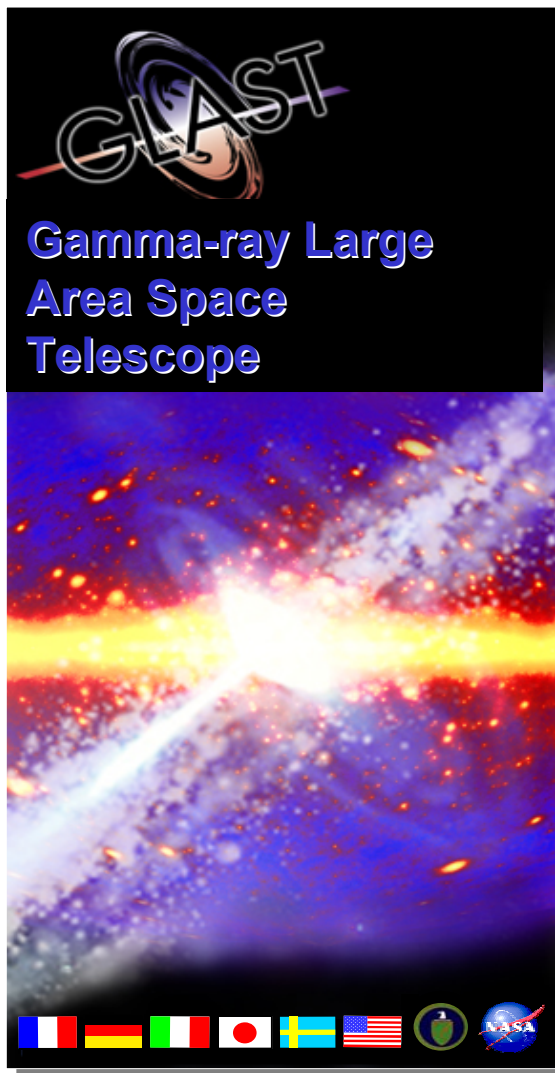
## ❑ LAT Watt-rod Cage Rework

- **Some minor damage to heater rods in transit.**
- **Shipping container will be improved to prevent damage prior to return.**



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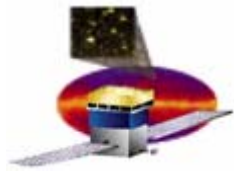
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## **Cost Reports for 4.1 LAT**

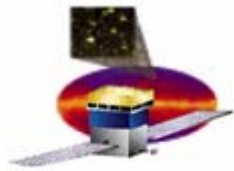
### **May 2007 Month End**





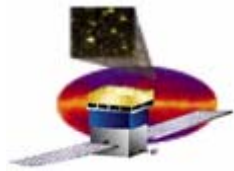
# Cost Status by Organization

May 07 Month-End By Institution K\$	Current Period			Cumulative to Date			Budgeted at Completion
	Budgt'd Cost Work Scheduled	Actual Cost Work Performed	Cost Variance	Budgt'd Cost Work Scheduled	Actual Cost Work Performed	Cost Variance	
DG *** GSFC	59	85	-25	21,198	20,636	562	21,489
DH *** HEPL	116	114	2	11,181	10,684	497	11,797
DL *** SLAC	611	394	217	106,716	105,816	900	109,489
DN *** NRL	187	210	-23	34,557	34,543	14	35,456
DO *** Financial Plan Transfer/Sub Out	0	0	0	59	59	0	59
DS *** SSU	55	30	25	3,682	3,404	278	3,937
DT *** Texas A&M	0	0	0	15	15	0	15
DU *** UCSC	29	32	-3	2,883	2,829	55	3,034
DW *** UW	11	5	6	481	375	106	538
Sub Total	1,067	869	198	180,772	178,360	2,412	185,813
Contingency							2,242
Total	1,067	869	198	180,772	178,360	2,412	188,055



# Cost by Orgs with Variances ≥\$100K

May 07 Month-End By Institution & WBS Level 3 K\$	Current Period			Cumulative to Date			Budgeted at Completion
	Budgt'd Cost Work Scheduled	Actual Cost Work Performed	Cost Variance	Budgt'd Cost Work Scheduled	Actual Cost Work Performed	Cost Variance	
	DG *** GSFC						
4.1.1 INSTRUMENT MANAGEMENT	31	73	-42	1,987	1,612	375	2,139
4.1.6 ANTICOINCIDENCE DETECTOR	0	0	0	17,479	17,482	-3	17,479
4.1.D SCIENCE ANALYSIS SOFTWARE	28	11	17	1,354	1,164	189	1,493
4.1.E SUBORBITAL FLIGHT TEST	0	0	0	378	378	0	378
OBSTotals:	59	85	-25	21,198	20,636	562	21,489
DH *** HEPL							
4.1.1 INSTRUMENT MANAGEMENT	82	91	-9	3,592	3,400	192	4,051
4.1.2 SYSTEM ENGINEERING	0	0	0	2,681	2,638	43	2,681
4.1.4 TRACKER	0	0	0	1,475	1,475	0	1,475
4.1.7 ELECTRONICS	0	0	0	1,021	1,019	2	1,021
4.1.A PERFORM & SAFETY ASSURANCE	0	0	0	263	248	16	263
4.1.B INSTRUMENT SCIENCE OPS CENTER	0	0	0	258	257	0	258
4.1.D SCIENCE ANALYSIS SOFTWARE	34	22	11	1,431	1,186	245	1,588
4.1.E SUBORBITAL FLIGHT TEST	0	0	0	460	461	0	460
OBSTotals:	116	114	2	11,181	10,684	497	11,797
DL *** SLAC							
4.1.1 INSTRUMENT MANAGEMENT	35	23	11	14,341	14,305	36	14,495
4.1.2 SYSTEM ENGINEERING	158	15	143	8,762	8,551	211	9,643
4.1.4 TRACKER	0	0	0	18,144	18,097	47	18,144
4.1.5 CALORIMETER	0	0	0	721	718	2	721
4.1.6 ANTICOINCIDENCE DETECTOR	0	0	0	685	683	3	685
4.1.7 ELECTRONICS	107	111	-5	28,256	28,323	-67	28,605
4.1.8 MECHANICAL SYSTEMS	0	0	0	17,441	17,417	25	17,441
4.1.9 INTEGRATION & TEST	262	188	74	13,345	12,617	728	14,566
4.1.A PERFORM & SAFETY ASSURANCE	50	57	-7	4,956	5,046	-89	5,124
4.1.B INSTRUMENT SCIENCE OPS CENTER	0	0	0	59	59	0	59
4.1.C EDUCATION & PUBLIC OUTREACH	0	0	0	5	0	5	5
OBSTotals:	611	394	217	106,716	105,816	900	109,489
DS *** SSU							
4.1.C EDUCATION & PUBLIC OUTREACH	55	30	25	3,682	3,404	278	3,937
OBSTotals:	55	30	25	3,682	3,404	278	3,937
DW *** UW							
4.1.D SCIENCE ANALYSIS SOFTWARE	11	5	6	481	375	106	538
OBSTotals:	11	5	6	481	375	106	538



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# FTE Report

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