

Monthly Mission Review

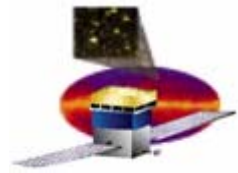
Project Status Overview

January 11, 2007

Ken Fouts

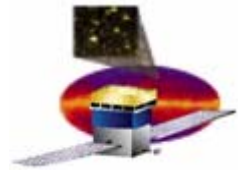
SLAC

kfouts@slac.stanford.edu



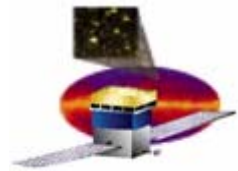
LAT Project Status

-
- | | |
|-----------------|---|
| 11/29 | B0-7-0 uploaded to LAT |
| 12/1 | Reboot occurred – SIU0 |
| | Released EMI Test Report |
| | Delivered the correlated thermal model |
| 12/4 | Updated LAT upper EEPROM bank to run B0-6-15+ |
| 12/6 | Updated LAT lower EEPROM bank to run B0-7-1 |
| 12/7 | Reboot occurred – EPU2 |
| 12/7 | Terminate testing of B0-7-1 and revert to B0-6-15+ |
| 12/8 | Completed mechanical installation of LAT on SC |
| 12/9 | Completed STM resistance tests on LAT |
| 12/12 | Completed LVDS STM tests on SC |
| 12/15 | Completed STM InRush test. |
| 12/18 | Completed InRush data review. |
| 12/18-19 | Supported LAT functional test procedure review |
| 12/20-22 | LAT functional test |
| 01/04 | Resumed LAT functional test |



LAT Planned Milestones

<u>Activity</u>	<u>ECD</u>
LAT Functional Test	1/15/07
LAT FSW 0.8.0	1/19/07
LAT/SC Signal Characterization	2/4/07
Observatory CPT Completion	2/22/07
LAT Radiator Integration	3/5/07
LAT FSW 1.0.0	3/15/07

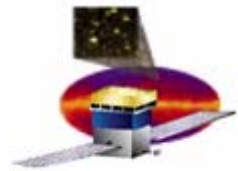


Online Progress

GLAST Monthly
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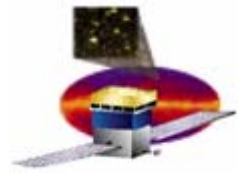
GLAST LAT Instrument

- ❑ **LICOS 2.5.0 installed at GD (Tuvi, Panetta)**
 - EPU s/w version number reporting added
 - FSW build number reporting added
 - Various JIRAed bug fixes
- ❑ **Updates due to running against the observatory (e.g., mnemonic issues)**
 - Script updates to take S/C telemetry into account (Tuvi)
 - AstroRT proxies (“bent pipe”) updates (Leas)
- ❑ **Online analysis system (Hart)**
 - Fixed “killed jobs” issue introduced with new system (memory exhaustion)
 - Analysis script updates
 - DFI support
- ❑ **Register & Software Configuration Tools (Panetta, Charles)**
 - Team formed
 - Design and implementation in progress
- ❑ **Negotiated DFI package completion (Claus)**
 - Additional SLAC resources committed.
- ❑ **Supported FSW spontaneous reboot diagnosis (Claus)**
- ❑ **3rd party tool (Python, Qt, PyQt) maintenance (Claus)**

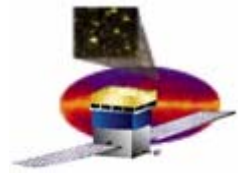


JIRA issues

Package	JIRAs opened	JIRAs closed	Total (on 1/10)
LICOS	15	18	28
LICOS_Config	7	2	12
LICOS_ETC	5	5	9
LICOS_Scripts	23	26	35
INT	2	2	22
LDF	0	0	1
LSF	0	0	0
E-Logbook	2	1	20
Totals	54	54	127

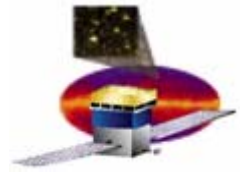


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- ❑ **LS-173: SIU-P & SIU-R Discrete Status Reversed**
 - ❑ **LS-150: Modify LatPowerOn for LAT Observatory power on**
 - ❑ **LS-151: Modify LatPowerOnTurbo for LAT Observatory power on**
 - ❑ **Register & Software Configuration Tools (no JIRA yet)**
 - ❑ **DFI integration into analyses (LS-88, LCS-72, LCS-129, LCS-132, LCS-136, LCS-137, LCS-161)**



LAT Issues and Concerns

- ❑ **LAT Reboots**
 - **Scheduled to begin running muons on 3rd shift next week**
- ❑ **LAT Script Issues**
 - **Made significant progress this week correcting scripts for S/C environment.**
- ❑ **Spacecraft Schedule**
 - **Need advanced notice for LAT test opportunities.**
- ❑ **Dropped telemetry packets**
 - **Causes DAQ script instability**
 - **Will delay completion of LAT functional test**
- ❑ **Reduced uplink rate**
 - **Extends test execution time**
- ❑ **SSR capture issues**
 - **Delays data transfer/test completion**



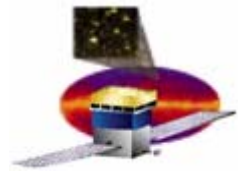
GLAST/LAT Instrument



**Gamma-ray Large
Area Space
Telescope**



Cost/Schedule Reports for 4.1 LAT Presentation November 2006 Month End

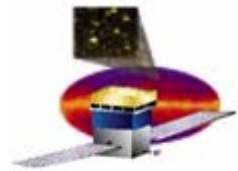


CPR Level 3

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GLAST LAT Instrument

Cost Performance Report - Work Breakdown Structure														
Contractor: Location:						Contract Type/No:			Project Name/No: LAT		Report Period: 10/31/2006 11/30/2006			
Quantity	Negotiated Cost		Est. Cost Authorized Unpriced Work		Tgt. Profit/ Fee %	Tgt. Price	Est Price	Share Ratio	Contract Ceiling	Estimated Contract Ceiling				
1	0		0		0	0.00	0		0	0				
CAPW[3]	Current Period					Cumulative to Date					At Completion			
Item (1)	Budgeted Cost		Actual Cost Work Performed (4)	Variance		Budgeted Cost		Actual Cost Work Performed (9)	Variance		Budgeted (12)	Latest Revised Estimate (13)	Variance (14)	
	Scheduled (2)	Performed (3)		Schedule (5)	Cost (6)	Scheduled (7)	Performed (8)		Schedule (10)	Cost (11)				
4.1.1 INSTRUMENT MANAGEMENT	232	232	159	0	73	22,784	22,784	21,803	0	981	25,533	25,533	0	
4.1.2 SYSTEM ENGINEERING	114	114	176	0	-62	10,886	10,886	10,885	0	1	12,165	12,165	0	
4.1.4 TRACKER	0	0	-218	0	218	21,486	21,486	21,272	0	214	21,486	21,486	0	
4.1.5 CALORIMETER	0	0	-2	0	2	21,554	21,554	21,551	0	3	21,554	21,554	0	
4.1.6 ANTICOINCIDENCE DETECTOR	0	0	-2	0	2	18,164	18,164	18,163	0	1	18,164	18,164	0	
4.1.7 ELECTRONICS	71	71	-602	0	673	31,648	31,648	31,241	0	407	32,455	32,455	0	
4.1.8 MECHANICAL SYSTEMS	0	0	-785	0	785	17,463	17,463	16,680	0	782	17,463	17,463	0	
4.1.9 INTEGRATION & TEST	177	177	182	0	-5	14,484	14,484	15,860	0	-1,376	16,130	16,130	0	
4.1.A PERFORMANCE AND SAFETY ASSURANCE	45	45	-101	0	146	5,588	5,588	5,272	0	315	6,028	6,028	0	
4.1.B LAT INSTRUMENT SCIENCE OPERATIONS CENTER	0	0	0	0	0	317	317	317	0	0	317	317	0	
4.1.C EDUCATION AND PUBLIC OUTREACH	50	50	62	0	-12	3,423	3,423	3,159	0	264	3,988	3,988	0	
4.1.D SCIENCE ANALYSIS SOFTWARE	88	88	77	0	11	4,107	4,107	3,819	0	288	5,114	5,114	0	
4.1.E SUBORBITAL FLIGHT TEST	0	0	0	0	0	1,325	1,325	1,325	0	0	1,325	1,325	0	
Gen. and Admin.	0	0	0	0	0	0	0	0	0	0	0	0	0	
Undist. Budget												0	0	0
Sub Total	778	778	-1,054	0	1,831	173,228	173,228	171,347	0	1,881	181,722	181,722	0	
Contingency												6,333	6,333	0
Total	778	778	-1,054	0	1,831	173,228	173,228	171,347	0	1,881	188,055	188,055	0	

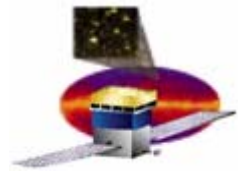


Cost by Organization

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GLAST LAT Instrument

Cost Performance Report - Work Breakdown Structure													
Contractor: Location:				Contract Type/No:				Project Name/No: LAT		Report Period: 10/31/2006 11/30/2006			
Quantity	Negotiated Cost		Est. Cost Authorized Unpriced Work		Tgt. Profit/Fee %		Tgt. Price	Est Price	Share Ratio	Contract Ceiling	Estimated Contract Ceiling		
1	0		0		0.00		0	0		0	0		
OBS BE[2]	Current Period					Cumulative to Date					At Completion		
	Budgeted Cost		Actual Cost	Variance		Budgeted Cost		Actual Cost	Variance			Latest Revised Estimate	Variance
Item	Work Scheduled	Work Performed	Work Performed	Schedule	Cost	Work Scheduled	Work Performed	Work Performed	Schedule	Cost	Budgeted	Estimate	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
DG *** GSFC													
RL LABOR	41	41	0	0	41	10,190	10,190	9,553	0	636	10,657	10,657	0
RT TRAVEL	3	3	0	0	3	282	282	119	0	163	314	314	0
RM MATERIAL & SERVICES	0	0	35	0	-35	7,745	7,745	8,174	0	-429	7,750	7,750	0
RX MPS & LAB TAX	10	10	0	0	10	2,624	2,624	2,435	0	189	2,768	2,768	0
OBSTotals:	54	54	35	0	19	20,841	20,841	20,281	0	560	21,489	21,489	0
DH *** HEPL													
RL LABOR	94	94	84	0	10	5,447	5,447	5,051	0	396	6,576	6,576	0
RT TRAVEL	5	5	1	0	4	292	292	324	0	-31	349	349	0
RM MATERIAL & SERVICES	38	38	3	0	35	4,776	4,776	4,728	0	48	5,104	5,104	0
OBSTotals:	137	137	88	0	49	10,516	10,516	10,103	0	413	12,029	12,029	0
DL *** SLAC													
RL LABOR	242	242	177	0	64	38,754	38,754	39,180	0	-426	41,099	41,099	0
RT TRAVEL	25	25	41	0	-16	1,319	1,319	1,291	0	28	1,595	1,595	0
RM MATERIAL & SERVICES	124	124	-1,629	0	1,754	63,126	63,126	60,903	0	2,223	64,617	64,617	0
OBSTotals:	391	391	-1,411	0	1,802	103,199	103,199	101,374	0	1,824	107,311	107,311	0
DN *** NRL													
RL LABOR	106	106	135	0	-29	24,690	24,690	25,941	0	-1,252	25,878	25,878	0
RT TRAVEL	4	4	11	0	-7	868	868	734	0	133	920	920	0
RM MATERIAL & SERVICES	0	0	1	0	-1	6,514	6,514	6,750	0	-236	6,514	6,514	0
OBSTotals:	110	110	146	0	-36	32,071	32,071	33,426	0	-1,355	33,311	33,311	0
DO *** Financial Plan Transfer/Sub Out													
RM MATERIAL & SERVICES	0	0	0	0	0	59	59	59	0	0	59	59	0
OBSTotals:	0	0	0	0	0	59	59	59	0	0	59	59	0
DS *** SSU													
RL LABOR	35	35	36	0	-1	1,749	1,749	1,888	0	-139	2,139	2,139	0
RT TRAVEL	3	3	3	0	0	152	152	114	0	38	189	189	0
RM MATERIAL & SERVICES	12	12	22	0	-10	1,480	1,480	1,121	0	359	1,609	1,609	0
OBSTotals:	50	50	61	0	-12	3,381	3,381	3,123	0	258	3,937	3,937	0
DT *** Texas A&M													
RL LABOR	0	0	0	0	0	15	15	15	0	0	15	15	0
OBSTotals:	0	0	0	0	0	15	15	15	0	0	15	15	0
DU *** UCSC													
RL LABOR	20	20	26	0	-6	2,176	2,176	2,141	0	35	2,418	2,418	0
RT TRAVEL	1	1	0	0	1	147	147	127	0	20	158	158	0
RM MATERIAL & SERVICES	5	5	0	0	5	403	403	358	0	44	457	457	0
OBSTotals:	26	26	26	0	0	2,725	2,725	2,626	0	99	3,034	3,034	0
DW *** UW													
RL LABOR	7	7	0	0	7	314	314	270	0	44	398	398	0
RT TRAVEL	1	1	1	0	0	46	46	48	0	-2	54	54	0
RM MATERIAL & SERVICES	2	2	0	0	2	60	60	21	0	39	85	85	0
OBSTotals:	10	10	1	0	9	421	421	339	0	82	538	538	0
Gen. and Admin.	0	0	0	0	0	0	0	0	0	0	0	0	0
Undist. Budget													
Sub Total	778	778	-1,054	0	1,831	173,228	173,228	171,347	0	1,881	181,722	181,722	0
Contingency													
Total	778	778	-1,054	0	1,831	173,228	173,228	171,347	0	1,881	188,055	188,055	0

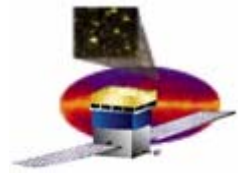


SLAC Costs

GLAST Monthly
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GLAST LAT Instrument

SLAC by WBS Level 3																	
Cost Performance Report - Work Breakdown Structure																	
Contractor: Location:				Contract Type/No:				Project Name/No: LAT			Report Period: 10/31/06 11/30/06						
Quantity		Negotiated Cost		Est. Cost Authorized Unpriced Work		Tgt. Profit/ Fee %		Tgt. Price	Est Price	Share Ratio	Contract Ceiling		Estimated Contract Ceiling				
1		0		0		0.00		0	0	0	0		0				
CAPW[3]		Current Period				Cumulative to Date					At Completion						
Item (1)		Budgeted Cost		Actual Cost Work Performed	Variance		Budgeted Cost		Actual Cost Work Performed	Variance		Budgeted	Latest Revised Estimate	Variance	Accrual Reversal	Nov Cost	Nov Net Effect
		Work Scheduled	Work Performed	Work Performed	Schedule	Cost	Work Scheduled	Work Performed	Work Performed	Schedule	Cost						
		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)			
4.1.1 INSTRUMENT MANAGEMENT		31	31	0	0	31	14,092	14,092	14,102	0	-10	14,436	14,436	0	-42	42	0
4.1.2 SYSTEM ENGINEERING		78	78	176	0	-97	7,943	7,943	7,955	0	-12	8,952	8,952	0	-37	212	176
4.1.4 TRACKER		0	0	-218	0	218	18,144	18,144	17,930	0	214	18,144	18,144	0	-195	-24	-218
4.1.5 CALORIMETER		0	0	-2	0	2	721	721	718	0	3	721	721	0	-2	0	-2
4.1.6 ANTICOINCIDENCE DETECTOR		0	0	-2	0	2	685	685	682	0	4	685	685	0	-2	0	-2
4.1.7 ELECTRONICS		66	66	-610	0	676	27,638	27,638	27,163	0	475	28,385	28,385	0	-617	7	-610
4.1.8 MECHANICAL SYSTEMS		0	0	-785	0	785	17,441	17,441	16,659	0	782	17,441	17,441	0	-771	-14	-785
4.1.9 INTEGRATION & TEST		171	171	140	0	31	11,787	11,787	11,524	0	263	13,359	13,359	0	-35	175	140
4.1.A PERFORMANCE AND SAFETY ASSURANCE		45	45	-110	0	155	4,683	4,683	4,584	0	99	5,124	5,124	0	-183	74	-110
4.1.B INSTRUMENT SCIENCE OPERATIONS CENTER		0	0	0	0	0	59	59	59	0	0	59	59	0	0	0	0
4.1.C EDUCATION AND PUBLIC OUTREACH		0	0	0	0	0	5	5	0	0	5	5	5	0	0	0	0
Gen. and Admin.		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Undist. Budget												0	0	0			
Sub Total		391	391	-1,411	0	1,802	103,199	103,199	101,374	0	1,824	107,311	107,311	0			
Contingency												0	0	0			
Total		391	391	-1,411	0	1,802	103,199	103,199	101,374	0	1,824	107,311	107,311	0	-1,883	472	-1,411



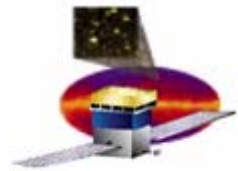
SLAC Cost Issue

- ❑ **In Aug 2006, a -\$1.9M receiver accrual adjustment was made to the NASA 533 cost report. At the same time, a high level adjustment was made in the SLAC accounting system.**

- ❑ **Costs are reported by SLAC to GLAST at a lower level detail.**

- ❑ **In Dec 2006, the issue was raised: is the high level adjustment reflected in the GLAST actual costs?**

- ❑ **SLAC/PPA Directorate Financial Officer completed the Nov 2006 actual costs with the adjustment included and has been on vacation since, so some questions regarding this adjustment remain.**



FTE Report (DOE/NASA-funded only)

