

# **Monthly Mission Review**

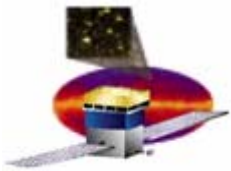
# **Project Status Overview**

**August 24, 2006**

**Ken Fouts**

**SLAC**

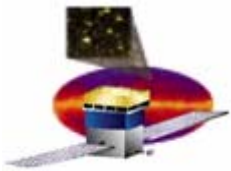
**[kfouts@slac.stanford.edu](mailto:kfouts@slac.stanford.edu)**



# Monthly Agenda

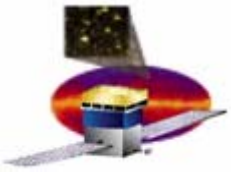
**All Times are Eastern Daylight Time**

11:00-11:30am	Project Status Overview and PMCS Summary	Ken Fouts
11:30-12:00pm	LAT TVAC Test Status	Jack Goodman
12:00-12:30pm	LAT Commissioning Status	Eric Grove
12:30-1:30pm	NCR & Verification Status	Pat Hascall/Joe Cullinan
1:30-2:00pm	FSW Status	Jana Thayer
2:00-2:30pm	Observatory Readiness	Rich Bielawski
2:30-3:00pm	EPO	Sarah Silva



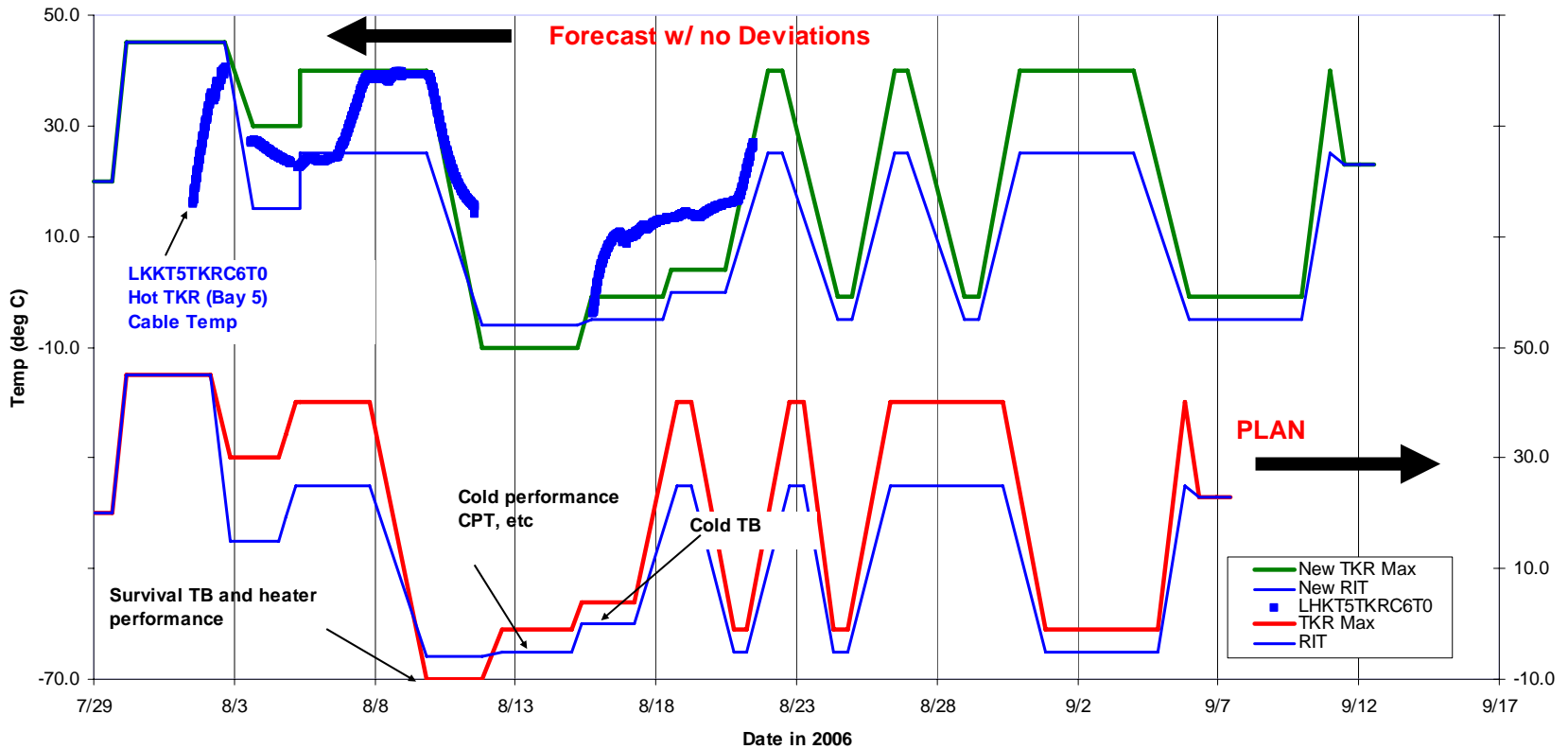
# **Project Status**

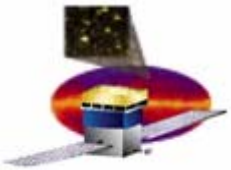
- ❑ Closed TVAC Chamber door – July 28**
- ❑ Pump down complete and bakeout began – July 30**
- ❑ Hot thermal balance, CPT and Calibrations complete – August 9**
- ❑ LAT GPR and lift fixture shipped to GD – August 9**
- ❑ LICOS-AstroRT command protocol demonstration at SASS – August 10**
- ❑ Established SLAC – SASS Connectivity – August 14**
- ❑ Completed delta FQT-A on FSW B0-6-11 – August 14**
- ❑ Cold survival, performance and operational tests complete – August 20**
- ❑ LAT/Observatory Integration pathfinding at SASS – August 23**



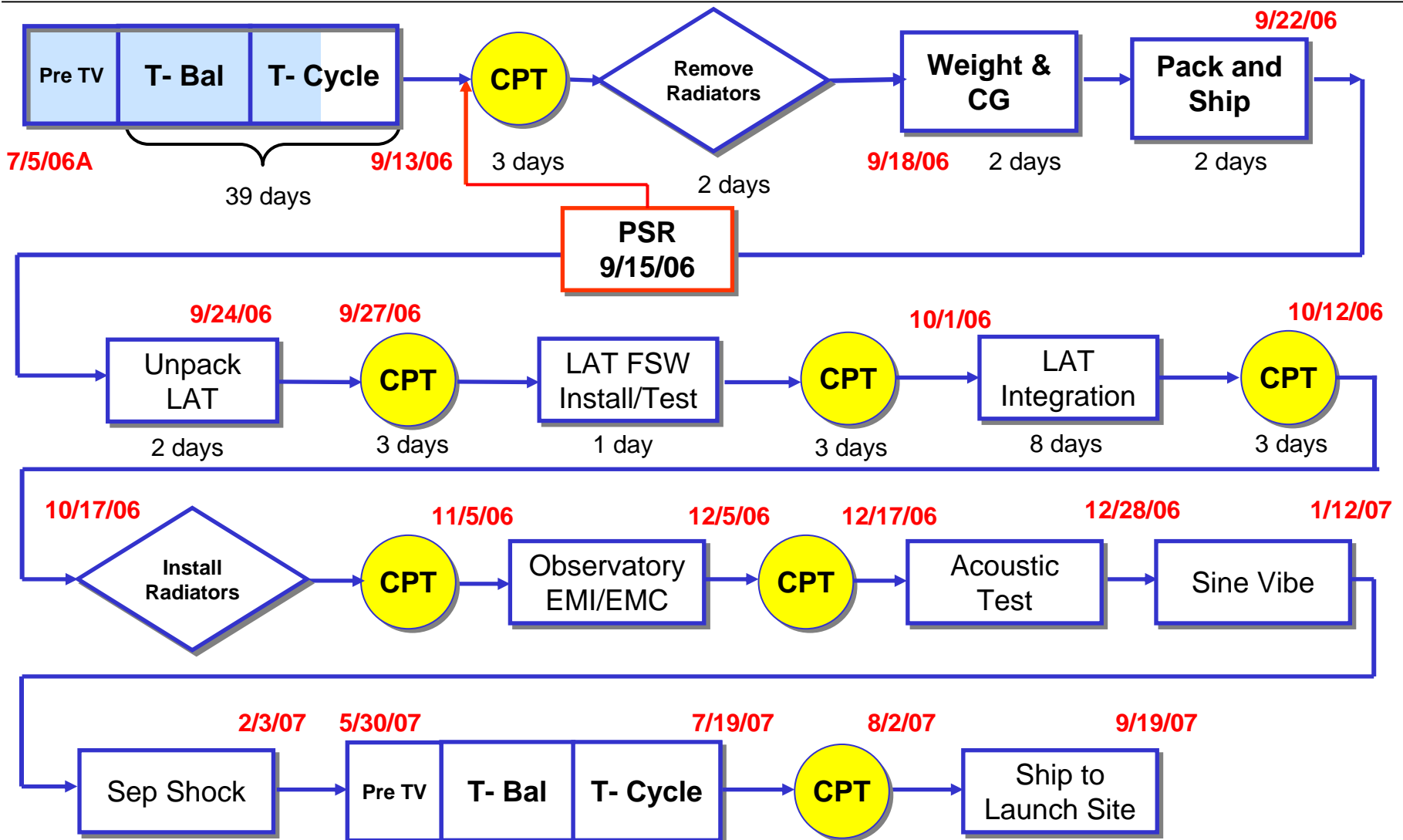
# LAT TVAC Performance

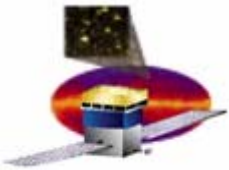
TVAC Performance against Plan - Aug 21 '06





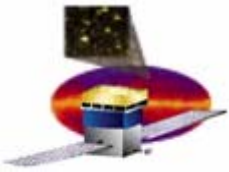
# LAT Flow





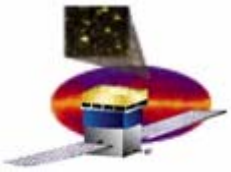
# Detailed Plan (1 of 2)

ID	Task Name	Start	Finish	% Complete	August 2006				September 2006					
					30	6	13	20	27	3	10	17	24	
93	<b>Hot Operational TCS Testing</b>	<b>8/2/06</b>	<b>8/12/06</b>	<b>100%</b>										
94	RIT Control w ith Primary reservoir heaters & Symmetric Orbit Average Load	8/2/06	8/4/06	100%										
95	Peak Power Testin	8/5/06	8/6/06	100%										
96	RIT Control w ith Redundant Reservoir Heaters & Transient Loadin	8/7/06	8/8/06	100%										
97	Hot performance Testing (PFQ) and Hot Turn On/Off/On	8/9/06	8/12/06	100%										
98	<b>Cold Operational TCS testing</b>	<b>8/13/06</b>	<b>8/20/06</b>	<b>100%</b>										
99	Cold survival thermal balance and radiator/grid heater functioning	8/13/06	8/15/06	100%										
100	Cold performance Testing (PFQ) and Cold Turn On	8/16/06	8/18/06	100%										
101	Cold Operational Thermal balance	8/19/06	8/19/06	100%										
102	RIT Control w ith Primary reservoir Heaters and Symmetric Orbit Average Load	8/19/06	8/19/06	100%										
103	RIT Control w ith Redundant reservoir Heaters and Symmetric Orbit Average Load	8/20/06	8/20/06	100%										
104	TCS Parameter Uploads	8/20/06	8/20/06	100%										
105	Thermal Cycling	8/21/06	8/29/06	50%										
106	Final Hot CPT	8/30/06	9/3/06	0%										
107	Final Cold CPT	9/4/06	9/9/06	0%										
108	Transition to Ambient	9/10/06	9/11/06	0%										
109	Final CPT	9/12/06	9/14/06	0%										
110	Remove Radiators	9/15/06	9/16/06	0%										
111	<b>Weight &amp; CG</b>	<b>9/18/06</b>	<b>9/19/06</b>	<b>0%</b>										
112	Instrument Check	9/18/06	9/18/06	0%										
113	Align LAT on Test Platform	9/18/06	9/18/06	0%										
114	Measure overall Mass & cg	9/18/06	9/19/06	0%										
115	Rotate LAT 180 degrees and align to test platform	9/19/06	9/19/06	0%										
116	Measure overall mass & cg	9/19/06	9/19/06	0%										
117	Pack and Ship	9/20/06	9/22/06	0%										



# Detailed Plan (2 of 2)

ID	Task Name	Start	Finish	% Complete	3rd Quarter			4th Quarter			1st Quarter			2nd Quarter			3rd Quarter		
					Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
118	<b>GD-SASS</b>	<b>9/23/06</b>	<b>9/19/07</b>	<b>0%</b>															
119	LAT Integration	9/23/06	10/12/06	0%															
120	LAT/SC Functional CPT	10/12/06	10/17/06	0%															
121	LAT Radiator Integration	10/17/06	11/5/06	0%															
122	LAT CPT	10/31/06	11/5/06	0%															
123	Observatory EM/EMC	11/5/06	12/5/06	0%															
124	Observatory CPT	12/5/06	12/17/06	0%															
125	Observatory Acoustic Test	12/17/06	12/28/06	0%															
126	Observatory Sine Vibe	12/28/06	1/12/07	0%															
127	Observatory Pyro Shock	1/12/07	2/3/07	0%															
128	Pre-TVAC CPT	2/3/07	2/12/07	0%															
129	Observatory TVAC (Including move-in & move-out)	5/30/07	7/19/07	0%															
130	Post TVAC CPT	7/30/07	8/2/07	0%															
131	Ship to Launch Site	9/19/07	9/19/07	0%															



GLAST LAT I&T

GLAST Monthly  
Mission Review  
August 24, 2006

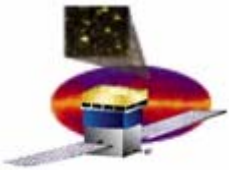
GLAST

Gamma-ray Large  
Area Space  
Telescope



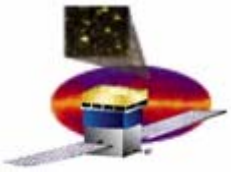
# Cost/Schedule Reports for 4.1 LAT Presentation July 2006 Month End



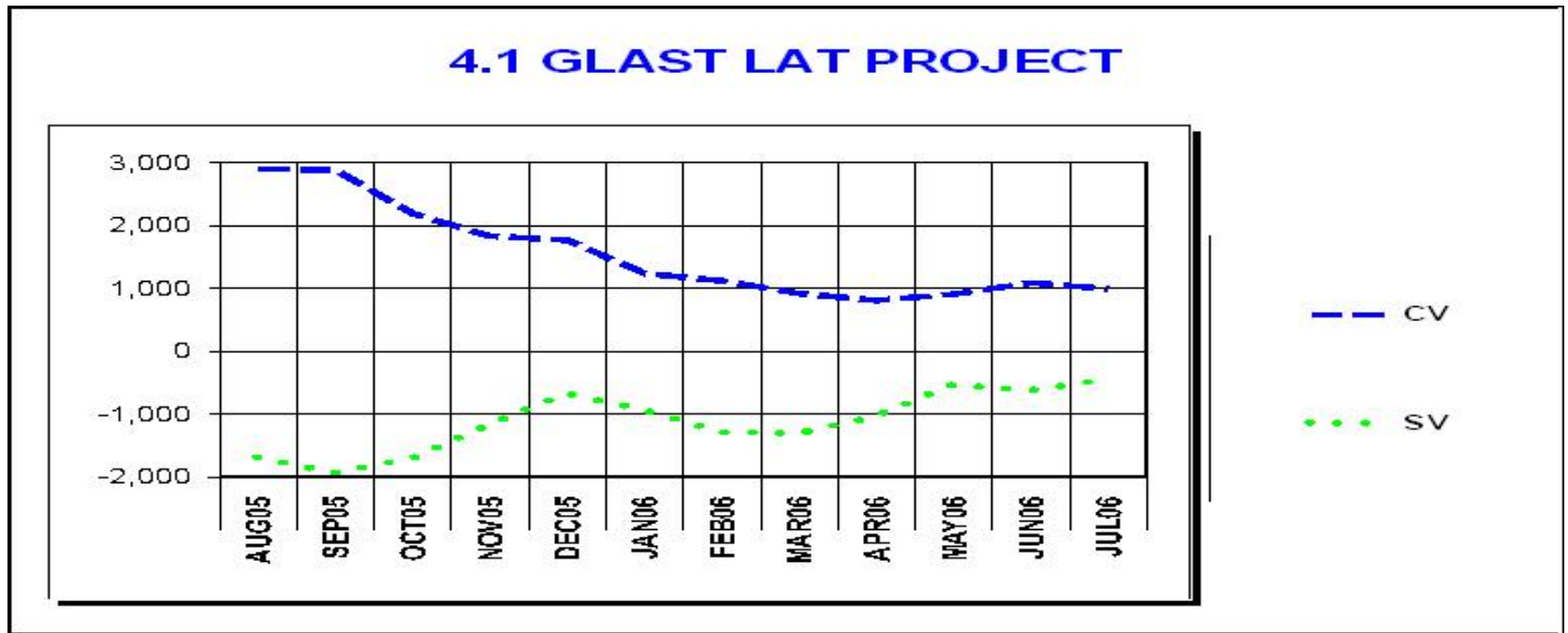


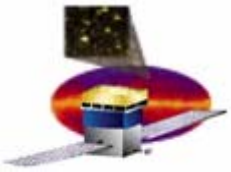
# CPR Level 3

Cost Performance Report - Work Breakdown Structure														
Contractor: Location:				Contract Type/No:				Project Name/No: LAT			Report Period: 6/30/2006 7/31/2006			
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	0	0		
CAPW[3]		Current Period						Cumulative to Date				At Completion		
Item (1)		Budgeted Cost		Actual Cost Work	Variance		Budgeted Cost		Actual Cost Work	Variance		Budgeted	Latest Revised Estimate	Variance
		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		329	329	316	0	12	21,623	21,623	20,476	0	1,147	25,533	25,533	0
4.1.2 SYSTEM ENGINEERING		251	251	276	0	-25	10,126	10,126	10,055	0	71	12,165	12,165	0
4.1.4 TRACKER		0	0	0	0	0	21,486	21,486	21,496	0	-10	21,486	21,486	0
4.1.5 CALORIMETER		0	0	0	0	0	21,554	21,554	21,553	0	2	21,554	21,554	0
4.1.6 ANTICOINCIDENCE DETECTOR		0	0	0	0	0	18,164	18,164	18,165	0	0	18,164	18,164	0
4.1.7 ELECTRONICS		90	39	124	-51	-85	31,327	31,211	31,377	-116	-165	32,455	32,455	0
4.1.8 MECHANICAL SYSTEMS		0	0	0	0	0	17,463	17,463	17,460	0	2	17,463	17,463	0
4.1.9 INTEGRATION & TEST		293	518	562	225	-44	13,467	13,129	13,911	-338	-782	16,130	16,130	0
4.1.A PERFORMANCE AND SAFETY ASSURANCE		150	150	112	0	38	5,179	5,179	4,986	0	193	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		52	52	62	0	-10	3,209	3,209	2,913	0	296	3,988	3,988	0
4.1.D SCIENCE ANALYSIS SOFTWARE		83	83	64	0	20	3,753	3,753	3,511	0	242	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		1,247	1,421	1,517	174	-95	168,993	168,539	167,544	-454	996	181,722	181,722	0
Contingency												6,333	6,333	0
Total		1,247	1,421	1,517	174	-95	168,993	168,539	167,544	-454	996	188,055	188,055	0

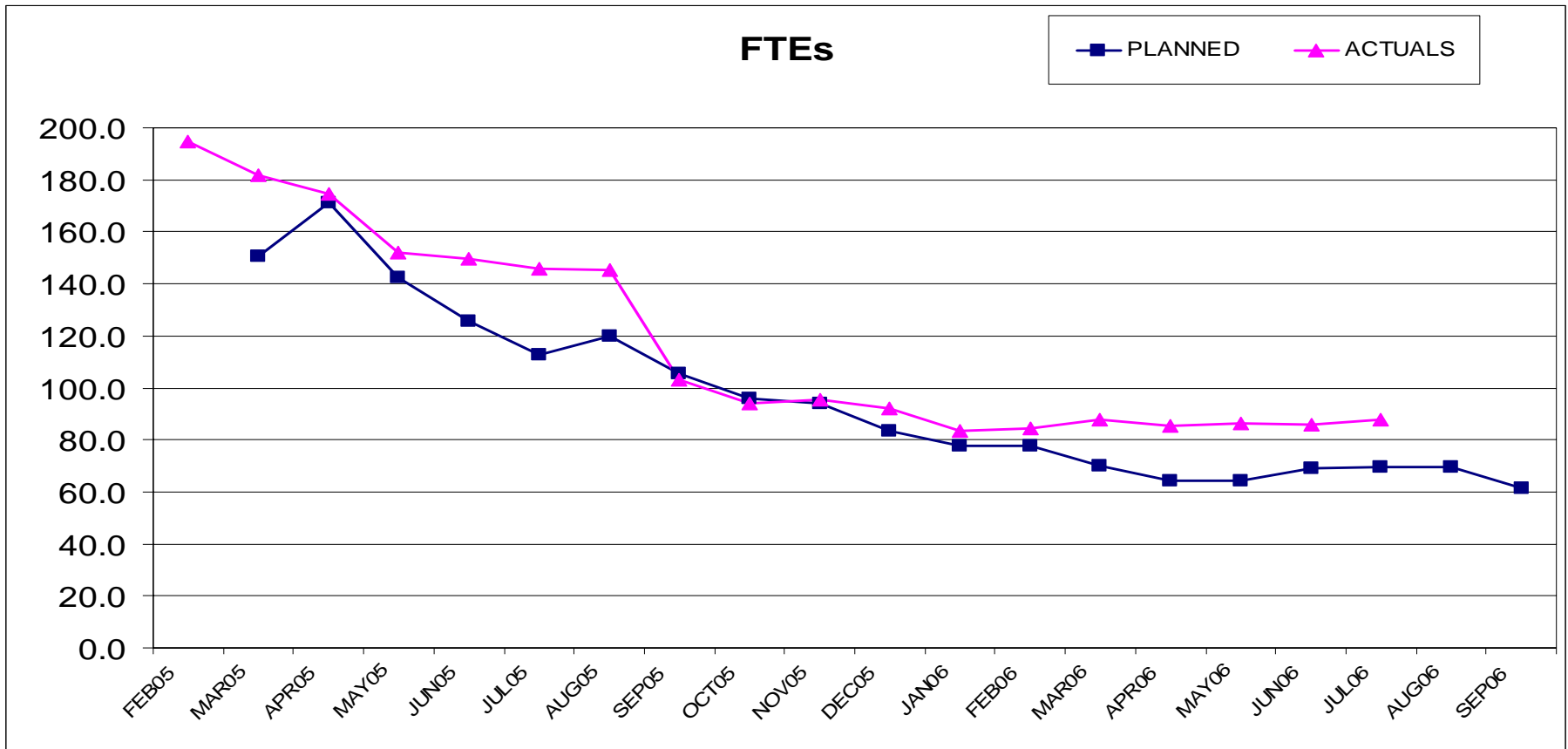


# Cost & Schedule Variance

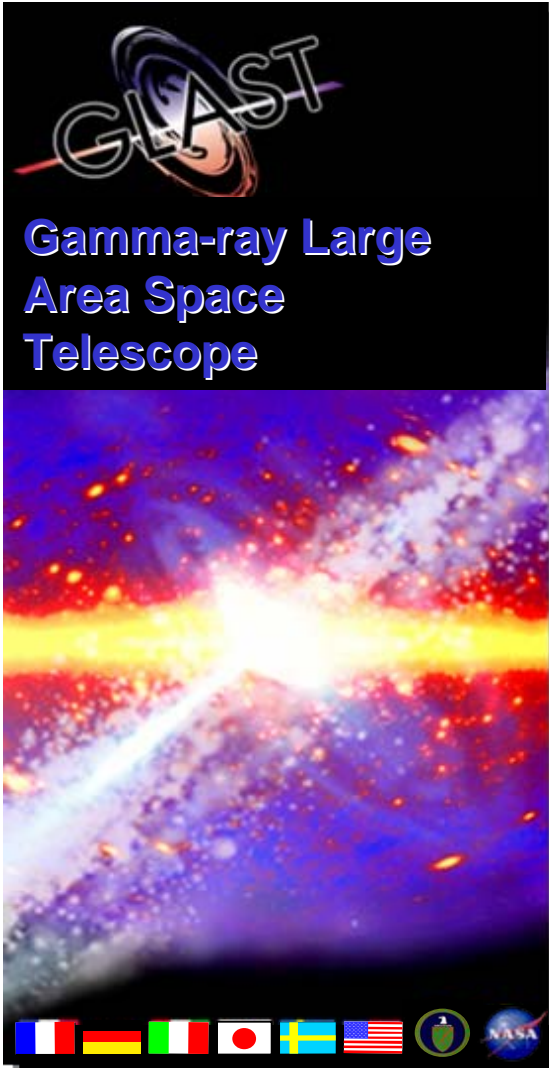
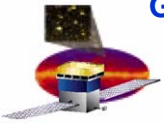




# FTE Report (DOE/NASA-funded only)



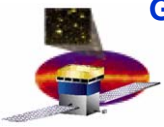




# GLAST Large Area Telescope

## Pre-Ship Review

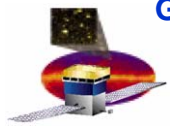
# Objectives & Agenda



# PSR Charge/Objectives

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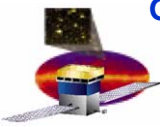
- Review and concur that environmental test objectives have been met
  - Clear closure plan for any open NCRs/issues
  - Recommendation for NCR promotion to Observatory QAR
  - No liens that require LAT level re-test at NRL
  - Plan in place for release of all test reports & model correlation analysis
  - Update of residual risks
- Review status and closure plan for requirements verification
  - Confirm all data required from environmental test was collected
  - Closure plan for any issues
  - Current status of requirements sell off and roadmap to closure
  - LAT ADP Summary
- Ensure readiness to ship LAT to SASS
  - Shipping & Handling requirement defined through off load at SASS
  - Post - ship test plan & readiness
- LAT Readiness for Observatory Integration
  - LAT I&T Support Plan, Roles & Responsibilities



# PSR Morning Agenda

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08:00-08:15	<b>01 - Project Overview</b>	<b>Neil Johnson</b>
08:15-09:00	<b>02 - Science Requirements Verification</b>	<b>Steve Ritz/Bill Atwood</b>
09:00-09:15	<b>03 - Systems Engineering</b>	<b>Pat Hascall</b>
09:15-10:15	<b>04 - LAT Level Compliance Verification</b>	<b>Rich Baun</b>
10:15-10:30	<b>Break</b>	
10:30-11:15	<b>05 - LAT Test Performance Results &amp; Trends</b>	<b>Eric Grove</b>
11:15-12:00	<b>06 - NCR/Waiver/Residual Risks</b>	<b>Pat Hascall</b>
12:00-12:45	<b>Lunch Break</b>	



# PSR Afternoon Agenda

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12:45-01:30	<b>07 - EMI/EMC Test: Results and Certification</b>	<b>Michael Lovellette</b>
01:30-02:15	<b>08 - Mechanical Test: Results and Certification</b>	<b>John Ku</b>
02:15-03:00	<b>09 - Thermal Vacuum Test: Results and Certification</b>	<b>Jesse Armiger</b>
03:00-04:00	<b>10 - Integration and Test: Shipment and Post Ship Test, Observatory I&amp;T Readiness</b>	<b>Ken Fouts</b>
04:00-04:30	<b>11 - Quality</b>	<b>Joe Cullinan</b>
04:30-04:35	<b>Wrap Up</b>	<b>Neil Johnson</b>
04:35-05:00	<b>Review Team Caucus</b>	
05:00-05:15	<b>Review of RFAs</b>	