

Monthly Progress Report

(Month Ending October 2001)

GLAST Large Area Telescope (LAT)

December 21, 2001

LAT-MR-00508-01

1.0 Introduction

This monthly progress report is submitted to the GLAST Project Office at the Goddard Space Flight Center and the Department of Energy SLAC Site Office. The report summarizes LAT project status as of the end of October, 2001, and reflects the proposed baseline of the project.

2.0 Recent Progress and Status

Tracker: A preliminary design review was held for the Tracker readout electronics. The wire bonding from detector to hybrid was tested at INFN. Amplifier channels for the test readout chip were tested. SSD testing at INFN has begun.

Calorimeter: Dimensional measurements and measurements on the cosmic bench were completed for the engineering model CsI crystals in Sweden. Tooling is ready for the engineering model and second verification model structure. The verification model front end electronics printed circuit board has been designed, laid out, fabricated, and assembled.

ACD: The layout design for the tile detector assemblies has been completed. The first run ASIC for the base electronics assembly has been designed. Vendor proposals for the photomultiplier tubes have been received, and selection has commenced.

Electronics: The first ASIC test chip has been fabricated. The conceptual design for the dataflow electronics front end simulator has been produced and reviewed. The CPU has been procured for the first engineering model. Flight software CPU resources have been determined.

Mechanical Systems: The structural FEA analysis model was finalized and the thermal FEA model was updated. The engineering model heat pipe was fabricated.

3.0 Schedule Status

The status of significant milestones identified in the Project Management Plan for the LAT project is summarized in Attachment 1.

4.0 Financial Status

Attachment 2 depicts the costs and commitments through the end of the current reporting period. Attachments 3 and 4 summarize the actual costs through the current period, by WBS level 3 and institution, respectively.

5.0 Performance Status (Comparison to Project Baseline)

Attachment 5 is a Cost & Schedule Status Report (CSSR) for the end of the current reporting period, by WBS level 3. The CSSR shows the time-phased budget to date (BCWS), the earned value (BCWP), and the actual costs through the end of the month (ACWP). Attachment 6 shows the same information for each participating DOE- and/or NASA-funded institution. The schedule variance is equal to the difference between the budget-to-date and the earned value and represents a measure of the ahead (positive) or behind (negative) schedule position. The cost variance is equal to the difference between the earned value and the actual costs.

There are no significant schedule variances due to the pre-baseline status of the project during the month of October, 2001.

The positive cost variance in 4.1.8 Mechanical Systems is due to a delay in staffing one engineering position, and a delay in subcontractor invoicing. An invoicing delay for contract labor is the source of the positive cost variance in 4.1.6 ACD, as well. SLAC labor actual costs against 4.1.9 I&T are lower than the original plan (note: new plan underway, which will be addressed via change control action). The positive cost variance in 4.1.C Education & Public Outreach is due to SSU not receiving funding in time to report on the actual costs. The 4.1.7 Electronics cost variance is caused by a combination of invoicing delays and the use of existing (rather than purchased) equipment. The negative cost variance in 4.1.D Science Analysis Software is the result of a resource leveling issue (expected to be reconciled in the course of the fiscal year).

6.0 Change Control and Contingency Analysis

There were no change control actions this month.

7.0 Staffing

Attachments 7-9 demonstrate the staffing plan, and reports of actual manpower received, for a one-year period.

Attachment 1
Milestones, Levels 1-3

Activity Description	Start	Finish	FY00		FY01		FY02		FY03		FY04		FY05		FY06			
DOE / NASA Headquarters (Level 1)																		
Launch Instrument		03/01/06*														▼		
Project Office (Level 2)																		
Launch Balloon Flight		08/01/01A				▼												
Instrument Preliminary Design Review		01/07/02*					▼											
Instrument Critical Design Review		08/05/02*						▼										
1st Two Towers Ready for Calibration		08/15/03*								▼								
Start LAT Integration		01/02/04*									▼							
Pre Environmental Testing Review		07/09/04*										▼						
Instrument Pre-Ship Review		01/07/05*											▼					
LAT Ready for Integration (RFI) to Spacecraft		03/22/05*												▼				
Instrument Project Office (Level 3)																		
DOE Funding Available: FY 2001	10/02/00A		▼															
NASA Funding Availability: FY 2001	10/02/00A		▼															
ACD Subsystem Requirements Review	03/20/01A			▼														
Tracker Subsystem Requirements Review	03/22/01A			▼														
Calorimeter Subsystem Requirements Review	03/28/01A			▼														
Science Analysis Software Requirements Review	04/20/01A			▼														
Electronics & DAQ Subsystem Requirements Review	04/25/01A			▼														
Mechanical Subsystem Requirements Review	05/02/01A			▼														
Run Date			12/12/01 13:43				GLAST - LAT PROJECT Project Milestones (Level 1-3)										Sheet 1	
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Activity Description	Start	Finish	FY00		FY01		FY02		FY03		FY04		FY05		FY06	
Instrument Project Office (Level 3)																
IOC Requirements Review		05/03/01A				▼										
Flight Software Requirements Review		05/30/01A				▼										
Tracker PDR		06/19/01A				▼										
Anticoincidence Detector PDR		07/25/01A				▼										
Calorimeter PDR		07/27/01A				▼										
Mechanical Systems PDR		08/15/01A				▼										
Electronics & DAQ PDR		08/16/01A				▼										
Flight Software PDR		08/16/01A				▼										
IOC PDR		08/17/01A				▼										
Science Analysis Software PDR		08/17/01A				▼										
DOE Funding Available: FY 2002	10/01/01A					▼										
NASA Funding Availability: FY 2002	10/01/01A					▼										
Com Card for TKR EM Function Test-Elec to TKR		10/16/01A				▼										
VME Com Card (TEM Sim)-from Elec to CAL		11/05/01*				▼										
PDR Submittals Due		12/04/01*				▼										
(2) Mini MCM's from Tracker to Elec		02/07/02*						▼								
(1) Prototype Electronics Module (Elec to ACD)		03/15/02*						▼								
EGSE Workstation / Software #1 (I&T to ACD)		03/15/02*						▼								
MGSE Requirements for ACD (from I&T to ACD)		03/22/02*						▼								
Run Date 12/12/01 13:43			GLAST - LAT PROJECT Project Milestones (Level 1-3)									Sheet 2				
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Activity Description	Start	Finish	FY00		FY01		FY02		FY03		FY04		FY05		FY06	
Instrument Project Office (Level 3)																
SLAC Facilities Specification (from I&T to ACD)		03/22/02*					▼									
VM Versions of CAL AFFE-CAL to Elec		04/12/02*					▼									
EGSE EM1 H/W Release-Elec to I&T		04/22/02*					▼									
Online System Spec from I&T to IOC		05/01/02*					▼									
Mechanical Systems CDR		05/22/02*					▼									
High Voltage Power Supply (Bd & Prts)-ACD toElec		06/03/02*					▼									
Calorimeter CDR		06/05/02*					▼									
Flight Software CDR		06/12/02*					▼									
Pre-EM TEM-from Elec to CAL		06/14/02*					▼									
Tracker CDR		06/18/02*					▼									
Electronics Pre-Eng Model from Elec to Tracker		06/19/02*					▼									
Electronics & DAQ CDR		06/20/02*					▼									
Anticoincidence Detector CDR		06/26/02*					▼									
ACD Electronics Module - EM1 (Elec to ACD)		07/01/02*					▼									
Test/Screening Board w/ASIC for EM1 -ACD to Elec		07/01/02*					▼									
EGSE Workstation / Software #2 (I&T to ACD)		07/01/02*					▼									
(9) MCM's from Tracker to Elec		07/02/02*					▼									
CDR Submittals Due		07/12/02*					▼									
CAL AFFE Engr Model-CAL to Elec		08/01/02*					▼									
Run Date	12/12/01 13:43	GLAST - LAT PROJECT Project Milestones (Level 1-3)										Sheet 3				
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Activity Description	Start	Finish	FY00		FY01		FY02		FY03		FY04		FY05		FY06	
Instrument Project Office (Level 3)																
Science Analysis Software CDR		09/04/02*							▼							
DOE Funding Available: FY 2003	10/01/02*								▼							
NASA Funding Availability: FY 2003	10/01/02*								▼							
Sub System Qual Readiness Review-ACD		01/02/03*								▼						
Doc defining Backsplash Test Model (ACD to I&T)		01/03/03*								▼						
EGSE EM2 Release-Elec to I&T		01/15/03*								▼						
EM2 TEM for Qual Towers A,B from Elec to Tracker		01/16/03								▼						
SS Qual Readiness Review IPS-ELEC		01/30/03*								▼						
SS Qual Review IPS-ELEC		01/30/03*								▼						
Sub System Production Readiness Review-CAL		02/21/03*								▼						
(2) ACD Electronics Modules - EM2 (Elec to ACD)		03/03/03*								▼						
(11) FREE Bds & ASICS, (1) Fully Tested Bd - EM2		03/03/03*								▼						
EGSE Workstation / Software #3 (I&T to ACD)		03/03/03*								▼						
Sub System Qual Readiness Review-CAL		03/03/03*								▼						
(6) EM2 TEM-from Elec to CAL		03/17/03*								▼						
(36) MCM's for EM2 from Tracker to Elec		03/25/03*								▼						
SS RFI 1st Article IPS-ELEC		03/28/03*								▼						
Sub System Qual Review-ACD		03/31/03*								▼						
Sub System Qual Readiness Review-MECH		04/03/03*								▼						
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Activity Description	Start	Finish	FY00		FY01		FY02		FY03		FY04		FY05		FY06	
Instrument Project Office (Level 3)																
Flight Grid Ready for ACD Fit Test-(Mech to ACD)		05/08/03*								▼						
EGSE Qual Unit Release-Elec to I&T		05/16/03*								▼						
Sub System Qual Readiness Review-TRKR		06/12/03*								▼						
Sub System Production Readiness Review-TRKR		08/04/03*								▼						
Sub System Qual Review-TRKR		08/08/03*								▼						
Tracker Modules A & B RFI (for Calibration)		08/15/03*								▼						
Calorimeter Modules A & B RFI (for Calibration)		08/15/03*								▼						
EM2 TEM Assy A,B-Elec to I&T		08/15/03*								▼						
EM2 TEM PS Assy A,B-Elec to I&T		08/15/03*								▼						
Sub System-TRKR RFI's --1st Article		08/15/03*								▼						
Sub System-CAL RFI's --1st Article		08/15/03*								▼						
EM from CAL to I&T		08/29/03*								▼						
Sub System Qual Review-CAL		09/18/03*								▼						
SS Qual Readiness Review TEM TRKR/CAL-ELEC		09/22/03*								▼						
Sub System Qual Review-Grid-MECH		09/29/03*								▼						
DOE Funding Available: FY 2004	10/01/03*									▼						
NASA Funding Availability: FY 2004	10/01/03*									▼						
SS Qual Readiness Review Event Proc-ELEC		10/03/03*								▼						
SS Qual Readiness Review ACD/GLT-ELEC		10/15/03*								▼						
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Activity Description	Start	Finish	FY00		FY01		FY02		FY03		FY04		FY05		FY06	
Instrument Project Office (Level 3)																
Sub System-MECH-(GRID) RFI's		10/24/03*										▼				
SS Qual Review TEM TRKR/CAL-ELEC		10/29/03*										▼				
Tracker Modules 1 & 2 RFI (for Calibration)		11/03/03*										▼				
Calorimeter Modules 1 & 2 RFI (for Calibration)		11/03/03*										▼				
ACD Calibration Test Unit at SLAC, Tested & RFI		11/03/03*										▼				
Flight TEM PS Assy 1,2-Elec to I&T		11/03/03*										▼				
EGSE Flight Unit Release-Elec to I&T		11/05/03*										▼				
SS Qual Review Event Proc-ELEC		11/17/03*										▼				
SS Qual Review ACD/GLT-ELEC		12/01/03*										▼				
IOC CDR		12/04/03*										▼				
SS Qual Readiness Review SIU-ELEC		12/05/03*										▼				
Flight Grid RFI-Mech to I&T		01/02/04*										▼				
Flight Tracker Tower 3, 4 RFI		01/02/04*										▼				
Flight Calorimeter Tower 3, 4 RFI		01/02/04*										▼				
LAT Assembly Readiness Review		01/02/04*										▼				
Flight TEM Assy 1,2-Elec to I&T		01/14/04*										▼				
SS RFI 1st Article TEM TRKR/CAL-ELEC		01/14/04*										▼				
Flight Tracker Tower 5, 6 RFI		01/15/04*										▼				
Flight Calorimeter Tower 5, 6 RFI		01/15/04*										▼				
Run Date	12/12/01 13:43	GLAST - LAT PROJECT Project Milestones (Level 1-3)										Sheet 6				
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Activity Description	Start	Finish	FY00		FY01		FY02		FY03		FY04		FY05		FY06	
Instrument Project Office (Level 3)																
Calibration Unit Beam Test from I&T to IOC		01/15/04*										▼				
Flight TEM Assy 3,4-Elec to I&T		01/16/04*										▼				
Flight TEM PS Assy 3,4-Elec to I&T		01/16/04*										▼				
SS Qual Review SIU-ELEC		01/22/04*										▼				
Flight Tracker Tower 7, 8 RFI		01/29/04*										▼				
Flight Calorimeter Tower 7, 8 RFI		01/29/04*										▼				
ACD Test Scripts (from ACD to I&T)		02/02/04*										▼				
Flight TEM PS Assy 5,6-Elec to I&T		02/02/04*										▼				
Flight Tracker Tower 9, 10 RFI		02/12/04*										▼				
Flight Calorimeter Tower 9, 10 RFI		02/12/04*										▼				
Flight TEM Assy 7,8-Elec to I&T		02/17/04*										▼				
Flight TEM PS Assy 7,8-Elec to I&T		02/17/04*										▼				
Flight TEM Assy 5,6-Elec to I&T		02/20/04*										▼				
Flight Tracker Tower 11, 12 RFI		02/26/04*										▼				
Flight Calorimeter Tower 11, 12 RFI		02/26/04*										▼				
SS RFI 1st Article ACD/GLT-ELEC		02/27/04*										▼				
Flight TEM Assy 9,10-Elec to I&T		03/02/04*										▼				
Flight TEM PS Assy 9, 10-Elec to I&T		03/02/04*										▼				
Flight Tracker Tower 13, 14 RFI		03/10/04*										▼				
Run Date	12/12/01 13:43	GLAST - LAT PROJECT Project Milestones (Level 1-3)										Sheet 7				
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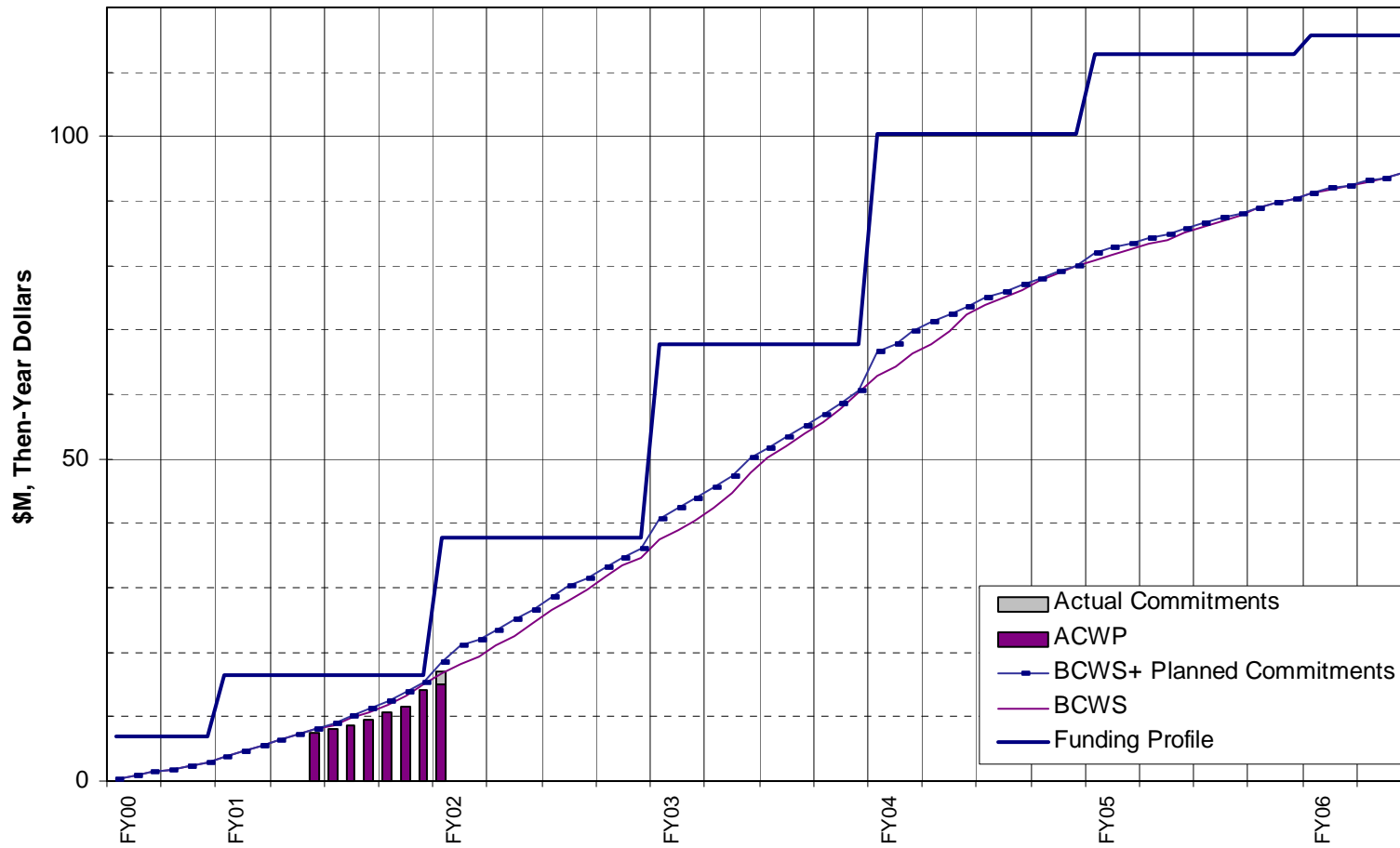
Activity Description	Start	Finish	FY00		FY01		FY02		FY03		FY04		FY05		FY06	
Instrument Project Office (Level 3)																
Flight Calorimeter Tower 13, 14 RFI		03/10/04*										▼				
Flight TEM Assy 11, 12-Elec to I&T		03/12/04*										▼				
Flight TEM PS Assy 11, 12-Elec to I&T		03/12/04*										▼				
Flight Tracker Tower 15, 16 RFI		03/24/04*										▼				
Flight Calorimeter Tower 15, 16 RFI		03/24/04*										▼				
Flight TEM Assy 13, 14-Elec to I&T		03/26/04*										▼				
Flight TEM PS Assy 13,14-Elec to I&T		03/26/04*										▼				
SS RFI 1st Article SIU-ELEC		03/31/04*										▼				
Flight TEM Assy 15, 16-Elec to I&T		04/01/04*										▼				
Flight TEM PS Assy 15,16-Elec to I&T		04/01/04*										▼				
SS RFI 1st Article Event Proc-ELEC		04/01/04*										▼				
Sub System-ACD RFI's		04/12/04*										▼				
Flight Tracker Tower 1, 2 RFI		04/26/04*										▼				
Flight Calorimeter Tower 1,2 RFI from I&T to I&T		04/26/04*										▼				
ACD Flight Unit at SLAC, Tested/Inspected & RFI		04/26/04*										▼				
Flight ICM/GLT-Elec to I&T		04/26/04*										▼				
Flight SIU-Elec to I&T		04/26/04*										▼				
Flight Event Processor Units-Elec to I&T		04/26/04*										▼				
Flight ACD Module-Elec to I&T		04/26/04*										▼				
Run Date	12/12/01 13:43	GLAST - LAT PROJECT Project Milestones (Level 1-3)										Sheet 8				
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Activity Description	Start	Finish	FY00		FY01		FY02		FY03		FY04		FY05		FY06	
Instrument Project Office (Level 3)																
Flight Harness-Elec to I&T		04/26/04*										▼				
X-LAT Thermal Plate RFI from Mech to I&T		04/26/04*										▼				
System Test Readiness Review-incl Safety		07/06/04*										▼				
LAT Ready for Enviromental Testing-I&T to Mech		07/07/04*										▼				
Integrate LAT on Vibe Mount-I&T to Mech		07/12/04*										▼				
Pre-Environmental Readiness Review-incl Safety		07/20/04*										▼				
LAT EMI/EMC Test from I&T to IOC		08/09/04*										▼				
LAT Vib/Acoustic Test from I&T to IOC		08/30/04*										▼				
Integrate LAT on Thermal-Vac Mount-I&T to Mech		09/14/04*										▼				
LAT Thermal Test from I&T to IOC		09/21/04*										▼				
DOE Funding Available: FY 2005	10/01/04*											▼				
NASA Funding Availability: FY 2005	10/01/04*											▼				
LAT Performance Test from I&T to IOC		10/26/04*										▼				
Sub System Qual Review-TCS-Mech		11/19/04*										▼				
Radiators ready for Mission I&T from Mech to I&T		12/01/04*										▼				
Pre-Ship Review-incl Safety		01/07/05*											▼			
LAT Ready to Ship		03/01/05*												▼		
LAT Observatory TV Test from SCO to IOC		04/20/05*													▼	
Ground System Interface Test from SCO to IOC		09/16/05*														▼

Activity Description	Start	Finish	Fiscal Year													
			FY00	FY01	FY02	FY03	FY04	FY05	FY06							
Instrument Project Office (Level 3)																
DOE Funding Available: FY 2006	10/03/05*														▼	
NASA Funding Availability: FY 2006	10/03/05*														▼	
Mission Sequence Test from SCO to IOC		10/17/05*													▼	
IOC Readiness Review		01/10/06*													▼	
End-to-End Test from SCO to IOC		01/17/06*													▼	
Flight Readiness Review		02/01/06*													▼	
Operations Readiness Review		03/06/06*													▼	

Attachment 2

Budget vs Actuals vs Funding DOE + NASA Project Expenditures



**Attachment 3
LAT Costs, through October 2001, by WBS**

Monthly Contractor Financial Management Report 31-Oct-01							NASA form 533M Approved OMB # 2700-001		Report for Month Ending: 10/31/01		
To:				From:				Contract Value			
								Cost:	0	Fee:	0
1001		Type:			Contract Number and Latest Definitized Amendment No:			Fund Limitation:			
GLAST LAT Project								0			
Reporting Category	Cost Incurred/Hours Worked				Estimated Cost/Hours to Complete			4/3/00		Billing	
	During Month		Cum. to Date		Detail		Balance of	Estimated Final Cost/Hours		Unfilled Orders Outstanding	
	Actual	Planned	Actual	Planned	NOV01		Contract	Contractor Estimate	Contract Value		
4.1.1 INSTRUMENT MANAGEMENT	160	251	2,563	2,683	234		8,510	11,307	11,307		
4.1.2 SYSTEM ENGINEERING	9	88	869	948	85		3,137	4,092	4,092		
4.1.4 TRACKER	585	151	3,300	3,187	145		6,237	9,681	9,681		
4.1.5 CALORIMETER	172	264	2,468	2,599	214		10,696	13,378	13,378		
4.1.6 ANTICOINCIDENCE DETECTOR	-183	248	1,445	1,721	219		8,296	9,960	9,960		
4.1.7 ELECTRONICS	132	268	1,652	1,890	145		14,724	16,520	16,520		
4.1.8 MECHANICAL SYSTEMS	59	72	525	1,209	104		7,659	8,288	8,288		
4.1.9 INSTRUMENT INTEGRATION AND	13	109	13	109	95		7,187	7,294	7,294		
4.1.A PERFORMANCE AND SAFETY AS	24	47	253	289	41		1,912	2,206	2,206		
4.1.B LAT INSTRUMENT OPERATIONS	15	18	125	150	15		3,572	3,711	3,711		
4.1.C EDUCATION AND PUBLIC OUTR	0	22	199	275	19		2,690	2,908	2,908		
4.1.D SCIENCE ANALYSIS SOFTWARE	40	24	371	324	26		3,303	3,700	3,700		
4.1.E SUBORBITAL FLIGHT TEST	-34	0	1,305	1,321	0		16	1,321	1,321		
Gen. and Admin.	0	0	0	0	0		0	0	0		
Total	991	1,560	15,088	16,704	1,342		77,937	94,366	94,366		

Attachment 4
LAT Costs, through October 2001, by Organization and Cost Code

Monthly Contractor Financial Management Report 31-Oct-01						NASA form 533M Approved OMB # 2700-001		Report for Month Ending: 10/31/01		
To:				From:				Contract Value		
								Cost:	Fee:	
								0	0	
1001	Type:				Contract Number and Latest Definitized Amendment No:			Fund Limitation:		
GLAST LAT Project								0		
Reporting Category	Cost Incurred/Hours Worked				Estimated Cost/Hours to Complete			4/3/00	Billing	
	During Month		Cum. to Date		Detail		Balance of Contract	Estimated Final Cost/Hours		Unfilled Orders Outstanding
	Actual	Planned	Actual	Planned	NOV01			Contractor Estimate	Contract Value	
DG GSFC	-133	284	2,342	2,661	251		10,532	13,124	13,124	
DH SU-HEPL	77	82	1,905	1,908	75		7,521	9,502	9,502	
DL SU-SLAC	765	701	6,582	7,397	654		39,375	46,611	46,611	
DN NRL	234	393	3,341	3,556	289		15,728	19,358	19,358	
DS SSU	0	22	199	275	19		2,640	2,858	2,858	
DT Texas A&M	0	0	0	16	0		16	16	16	
DU UCSC	48	78	718	891	56		2,124	2,898	2,898	
Total	991	1,560	15,088	16,704	1,342		77,937	94,366	94,366	

LABOR	202	1,060	9,839	10,750	900		45,320	56,059	56,059
MM	273	137	845	1,376	139		6,674	7,658	7,658
HRS	50,227	25,176	151,128	231,506	22,297		1,088,552	1,261,977	1,261,977
M&S	627	416	4,761	5,365	365		27,813	32,939	32,939
TRAVEL	0	51	326	383	45		3,054	3,425	3,425
TAXES	162	33	162	206	32		1,750	1,944	1,944
Total (not incl FTE/Hrs)	991	1,560	15,088	16,704	1,342		77,937	94,366	94,366

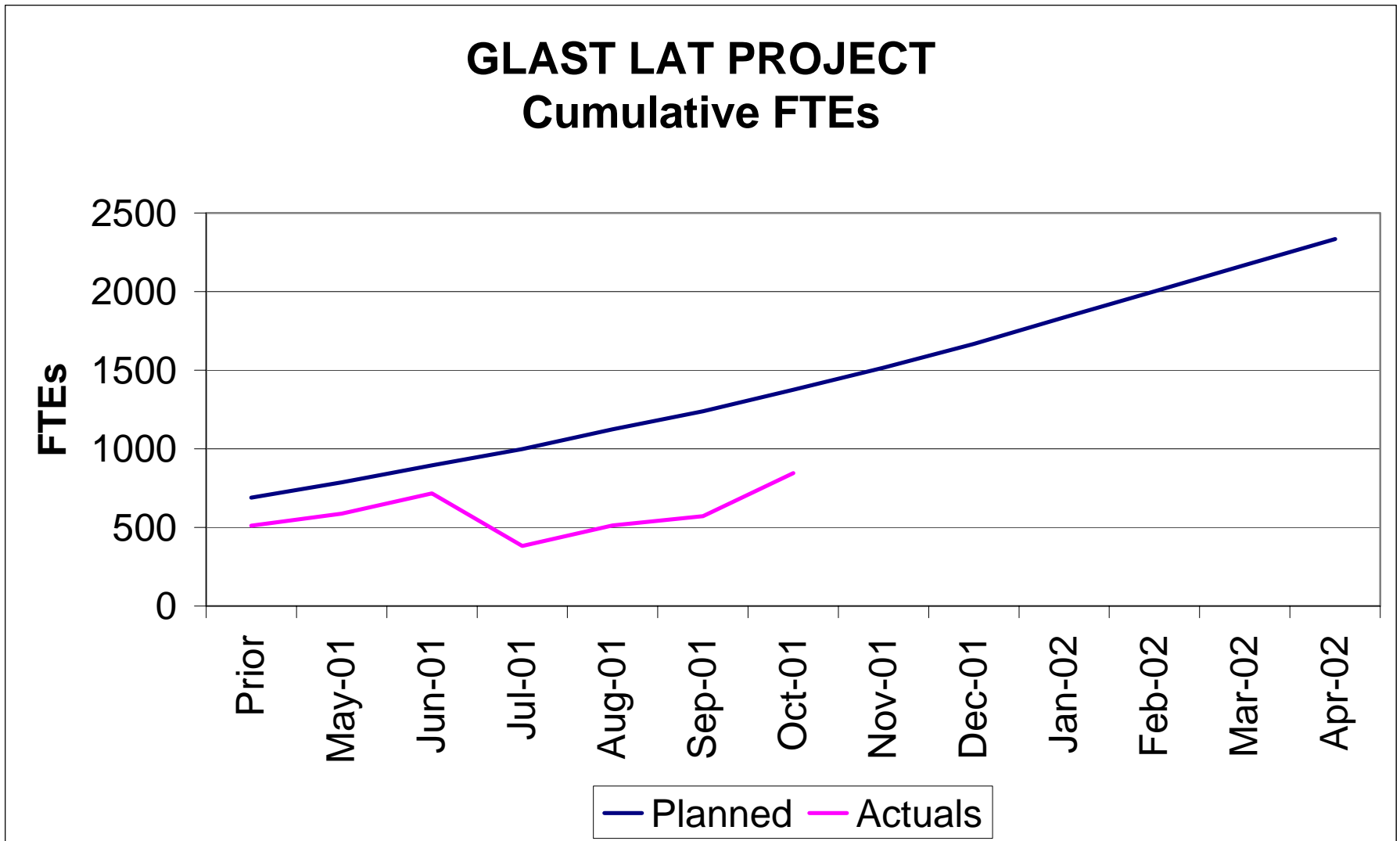
Attachment 5
LAT Performance, through October 2001, by WBS

Cost/Schedule Status Report								
	Contract Type/No:		Project Name/No: GLAST LAT Project		Report Period: 9/30/01 10/31/01		Signature: Title/Date: 12/17/01	
(1) Original Contract Target Cost 0	(2) Negotiated Contract Changes 0		(3) Current Target Cost (1) + (2) 0		(4) Estimated Cost of Authorized Unpriced Work 0		(5) Contract Budget Base (3) + (4) 0	
Performance Data								
CAPW[3]	Cumulative to Date					At Completion		
	Budgeted Cost		Actual Cost Work Performed	Variance		Budgeted	Latest Revised Estimate	Variance
	Work Scheduled	Work Performed		Schedule	Cost			
4.1.1 INSTRUMENT MANAGEMENT	2,683	2,683	2,563	0	120	11,307	11,307	0
4.1.2 SYSTEM ENGINEERING	948	948	869	0	78	4,092	4,092	0
4.1.4 TRACKER	3,187	3,171	3,300	-16	-128	9,681	9,681	0
4.1.5 CALORIMETER	2,599	2,614	2,468	15	146	13,378	13,378	0
4.1.6 ANTICOINCIDENCE DETECTOR	1,721	1,734	1,445	13	289	9,960	9,960	0
4.1.7 ELECTRONICS	1,890	1,902	1,652	13	250	16,520	16,520	0
4.1.8 MECHANICAL SYSTEMS	1,209	1,205	525	-4	679	8,288	8,288	0
4.1.9 INSTRUMENT INTEGRATION AND TEST	109	109	13	0	97	7,294	7,294	0
4.1.A PERFORMANCE AND SAFETY ASSURA	289	289	253	0	36	2,206	2,206	0
4.1.B LAT INSTRUMENT OPERATIONS CENT	150	141	125	-9	17	3,711	3,711	0
4.1.C EDUCATION AND PUBLIC OUTREACH	275	308	199	33	108	2,908	2,908	0
4.1.D SCIENCE ANALYSIS SOFTWARE	324	323	371	-1	-48	3,700	3,700	0
4.1.E SUBORBITAL FLIGHT TEST	1,321	1,321	1,305	0	16	1,321	1,321	0
Undist. Budget						0	0	0
Sub Total	16,704	16,748	15,088	44	1,660	94,366	94,366	0
Management Resrv.						0	0	0
Total	16,704	16,748	15,088	44	1,660	94,366	94,366	0

Attachment 6
LAT Performance, through October 2001, by Organization

Cost/Schedule Status Report									
	Contract Type/No:		Project Name/No:		Report Period:		Signature:		
			GLAST LAT Project		9/30/01 10/31/01		Title/Date: 12/17/01		
(1) Original Contract Target Cost 0	(2) Negotiated Contract Changes 0		(3) Current Target Cost (1) + (2) 0		(4) Estimated Cost of Authorized Unpriced Work 0		(5) Contract Budget Base (3) + (4) 0		
Performance Data									
OBS	Cumulative to Date						At Completion		
	Budgeted Cost		Actual Cost Work Performed	Variance		Budgeted	Latest Revised Estimate	Variance	
	Work Scheduled	Work Performed		Schedule	Cost				
DG GSFC	2,661	2,675	2,342	13	333	13,124	13,124	0	
DH SU-HEPL	1,908	1,906	1,905	-1	1	9,502	9,502	0	
DL SU-SLAC	7,397	7,374	6,582	-23	792	46,611	46,611	0	
DN NRL	3,556	3,576	3,341	20	235	19,358	19,358	0	
DS SSU	275	308	199	33	108	2,858	2,858	0	
DT Texas A&M	16	16	0	0	16	16	16	0	
DU UCSC	891	893	718	2	175	2,898	2,898	0	
Undist. Budget						0	0	0	
Sub Total	16,704	16,748	15,088	44	1,660	94,366	94,366	0	
Management Resrv.						0	0	0	
Total	16,704	16,748	15,088	44	1,660	94,366	94,366	0	

Attachment 7
LAT Manpower , through October 2001



Attachment 8
LAT Manpower Data, through October 2001, by WBS

Program: 1001	Description: GLAST LAT Project	Approval: Program Manager Functional Manager Cost Account Manager
Run Date: 12/17/01	Status Date: 10/31/01	

		Cum-to														
		PRIOR	MAY01	JUN01	JUL01	AUG01	SEP01	OCT01	Date	NOV01	DEC01	JAN02	FEB02	MAR02	APR02	
CAPW[3]																
4.1.1 INSTRUMENT MANAGEMENT																
FTE	PLANNED	51.9	4.9	4.9	5.9	5.9	5.9	10.2	89.4	10.6	10.6	10.6	10.6	10.2	10.2	
	ACTUALS	138.4	15.1	14.9	-127.2	4.3	4.2	22.7	72.4	0.0	0.0	0.0	0.0	0.0	0.0	
4.1.2 SYSTEM ENGINEERING																
FTE	PLANNED	7.0	1.6	2.3	2.3	2.3	2.1	1.7	19.1	1.7	1.7	1.5	1.8	1.8	1.8	
	ACTUALS	24.2	1.9	1.9	-21.3	0.7	0.5	0.5	8.6	0.0	0.0	0.0	0.0	0.0	0.0	
4.1.4 TRACKER																
FTE	PLANNED	146.7	21.0	20.4	18.4	19.4	23.0	23.9	272.8	24.9	25.4	25.8	25.0	23.1	23.4	
	ACTUALS	201.8	16.0	67.1	-132.5	7.5	-22.0	105.3	243.0	0.0	0.0	0.0	0.0	0.0	0.0	
4.1.5 CALORIMETER																
FTE	PLANNED	190.9	35.9	38.6	36.9	37.1	36.4	39.1	414.8	38.9	38.5	47.0	46.4	48.0	47.5	
	ACTUALS	20.3	10.1	13.5	3.8	60.8	16.1	-1.5	123.0	0.0	0.0	0.0	0.0	0.0	0.0	
4.1.6 ANTICOINCIDENCE DETECTOR																
FTE	PLANNED	47.3	12.7	13.4	8.2	8.2	11.7	22.9	124.5	21.6	27.5	25.1	23.6	21.6	21.1	
	ACTUALS	0.0	0.0	0.0	0.0	0.0	16.8	29.5	46.2	0.0	0.0	0.0	0.0	0.0	0.0	
4.1.7 ELECTRONICS																
FTE	PLANNED	53.6	5.2	6.4	8.7	10.2	10.7	15.0	109.7	11.7	17.2	16.1	14.9	14.3	16.2	
	ACTUALS	27.5	11.8	12.8	-22.6	8.8	15.7	46.5	100.4	0.0	0.0	0.0	0.0	0.0	0.0	
4.1.8 MECHANICAL SYSTEMS																
FTE	PLANNED	20.0	3.5	3.6	5.7	4.3	5.0	5.0	47.2	9.3	4.3	10.7	7.9	8.1	10.1	
	ACTUALS	58.4	16.2	16.1	-65.9	4.3	4.5	4.7	38.4	0.0	0.0	0.0	0.0	0.0	0.0	
4.1.9 INSTRUMENT INTEGRATION AND TESTING																
FTE	PLANNED	0.0	0.0	0.0	0.0	0.0	0.0	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	
	ACTUALS	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	
4.1.A PERFORMANCE AND SAFETY ASSURANCE																
FTE	PLANNED	13.6	1.5	1.5	1.5	1.5	1.5	2.6	23.5	2.6	2.6	2.6	2.6	2.6	2.6	
	ACTUALS	40.2	3.8	3.1	-35.8	0.9	1.0	1.8	14.9	0.0	0.0	0.0	0.0	0.0	0.0	
4.1.B LAT INSTRUMENT OPERATIONS CENTER																
FTE	PLANNED	8.6	0.6	0.4	0.4	0.5	0.8	0.8	12.1	0.8	1.1	0.9	1.4	1.4	1.4	
	ACTUALS	0.0	0.0	0.0	0.0	0.0	0.0	5.2	5.2	0.0	0.0	0.0	0.0	0.0	0.0	
4.1.C EDUCATION AND PUBLIC OUTREACH																
FTE	PLANNED	13.9	1.6	2.2	2.5	2.4	1.9	1.4	25.8	1.4	1.4	1.4	1.4	1.4	1.4	
	ACTUALS	0.0	1.3	0.5	0.0	16.7	3.2	0.0	21.6	0.0	0.0	0.0	0.0	0.0	0.0	
4.1.D SCIENCE ANALYSIS SOFTWARE																
FTE	PLANNED	77.3	6.4	6.8	6.6	7.4	6.8	6.9	118.2	8.7	14.4	20.2	23.0	26.2	24.0	
	ACTUALS	0.0	0.0	0.0	59.2	5.0	4.2	26.7	95.2	0.0	0.0	0.0	0.0	0.0	0.0	
4.1.E SUBORBITAL FLIGHT TEST																
FTE	PLANNED	58.0	3.3	7.3	7.5	25.8	9.7	0.0	111.5	0.0	0.0	0.0	0.0	0.0	0.0	
	ACTUALS	0.0	0.0	0.1	7.2	21.8	15.6	30.8	75.5	0.0	0.0	0.0	0.0	0.0	0.0	
Grand Totals:																
	PLANNED	688.7	98.0	107.6	104.4	124.9	115.4	136.8	1,375.8	139.4	152.1	169.1	165.8	166.0	167.0	
	ACTUALS	510.8	76.1	129.9	-335.1	130.8	59.7	273.0	845.2	0.0	0.0	0.0	0.0	0.0	0.0	

Attachment 9
LAT Manpower Data, through October 2001, by Organization

Program: 1001	Description: GLAST LAT Project	Approval: Program Manager Functional Manager Cost Account Manager
Run Date: 12/17/01	Status Date: 10/31/01	

OBS[1]			PRIOR	MAY01	JUN01	JUL01	AUG01	SEP01	OCT01	Cum-to Date	NOV01	DEC01	JAN02	FEB02	MAR02	APR02
DG GSFC	FTE	PLANNED	75.4	13.9	15.9	11.2	29.0	12.9	25.6	183.8	24.3	29.7	28.2	27.0	24.8	24.4
		ACTUALS	0.0	0.0	0.0	0.0	0.0	30.7	42.6	73.3	0.0	0.0	0.0	0.0	0.0	0.0
DH SU-HEPL	FTE	PLANNED	95.1	4.2	5.1	5.6	6.0	13.5	5.3	134.8	4.9	6.4	6.5	5.9	6.5	8.0
		ACTUALS	0.0	0.0	0.0	0.0	0.0	0.0	98.5	98.5	0.0	0.0	0.0	0.0	0.0	0.0
DL SU-SLAC	FTE	PLANNED	164.8	24.9	25.2	28.4	28.5	27.6	35.2	334.7	41.5	46.5	54.3	51.6	52.9	53.4
		ACTUALS	428.8	66.3	66.2	-353.7	25.0	22.2	25.8	280.4	0.0	0.0	0.0	0.0	0.0	0.0
DN NRL	FTE	PLANNED	93.9	8.8	12.8	10.6	12.3	9.3	18.0	165.8	15.3	15.0	14.0	14.7	16.2	15.3
		ACTUALS	24.0	10.3	13.5	13.3	87.5	28.9	2.3	179.7	0.0	0.0	0.0	0.0	0.0	0.0
DS SSU	FTE	PLANNED	13.9	1.6	2.2	2.5	2.4	1.9	1.4	25.8	1.4	1.4	1.4	1.4	1.4	1.4
		ACTUALS	0.0	1.3	0.5	0.0	16.7	3.2	0.0	21.6	0.0	0.0	0.0	0.0	0.0	0.0
DU UCSC	FTE	PLANNED	70.3	5.3	5.8	5.9	6.1	5.7	7.0	106.0	5.6	5.8	5.9	5.0	5.0	4.7
		ACTUALS	58.0	-1.7	-13.5	5.4	1.7	5.2	59.5	114.7	0.0	0.0	0.0	0.0	0.0	0.0
DW UW	FTE	PLANNED	13.4	1.2	1.3	1.0	1.0	1.0	1.0	19.7	1.0	1.0	0.9	1.6	0.8	0.9
FF France	FTE	PLANNED	116.0	28.0	28.0	28.0	28.0	28.6	28.6	285.2	28.7	28.0	34.1	35.6	36.2	36.4
FI Italy	FTE	PLANNED	22.5	8.1	9.1	9.1	9.5	12.5	12.5	83.2	14.7	16.1	16.6	15.9	15.0	15.2
		ACTUALS	0.0	0.0	63.3	0.0	0.0	-30.6	14.5	47.2	0.0	0.0	0.0	0.0	0.0	0.0
FJ Japan	FTE	PLANNED	23.4	2.3	2.3	2.3	2.3	2.3	2.3	37.0	2.3	2.3	2.7	2.7	2.7	2.7
		ACTUALS	0.0	0.0	0.0	0.0	0.0	0.0	29.8	29.8	0.0	0.0	0.0	0.0	0.0	0.0
FK Sweden	FTE	PLANNED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	4.5	4.5	4.5
		PLANNED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	4.5	4.5	4.5
Grand Totals:		PLANNED	688.7	98.0	107.6	104.4	124.9	115.4	136.8	1375.8	139.4	152.1	169.1	165.8	166.1	167.0
		ACTUALS	510.8	76.1	129.9	-335.0	130.8	59.7	273.0	845.2	0.0	0.0	0.0	0.0	0.0	0.0

4.1. GLAST LAT																
Contributed		PLANNED	213.9	43.5	44.5	44.0	45.4	47.1	47.6	486.0	51.3	56.9	69.5	71.5	74.0	72.5
		ACTUALS	0.0	0.0	63.4	0.0	0.0	-28.7	46.8	81.5	0.0	0.0	0.0	0.0	0.0	0.0
Funded		PLANNED	474.8	54.5	63.1	60.4	79.5	68.3	89.3	889.8	88.1	95.1	99.6	94.4	92.0	94.5
		ACTUALS	510.8	76.1	66.6	-335.1	130.8	88.4	226.2	763.8	0.0	0.0	0.0	0.0	0.0	0.0
Grand Totals:		PLANNED	688.7	98.0	107.6	104.4	124.9	115.4	136.8	1375.8	139.4	152.1	169.1	165.8	166.1	167.0
		ACTUALS	510.8	76.1	129.9	-335.0	130.8	59.7	273.0	845.2	0.0	0.0	0.0	0.0	0.0	0.0