

Monthly Progress Report

(Month Ending November 2001)

GLAST Large Area Telescope (LAT)

January 28, 2002

LAT-MR-00542-01

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 November, 2001.

2.0 Recent Progress and Status

Tracker: Two mini multichip modules with ASICs were delivered to the Electronics subsystem for interface testing. The subsystem managers made a trip to Italy to review the readiness to fabricate the flight ladders. It was determined that they weren't ready; however, there is enough capacity to build the ladders twice as fast as planned. Procedures were developed for the Italian work to meet the NASA quality assurance requirements.

Calorimeter: The first version of the digital ASIC was completed. It was transferred to field programmable gate array, and testing commenced on the verification model printed circuit board. We learned of disruptions in the French program, subsequent to a CNES review. Impact and fallback options are being investigated.

ACD: Mechanical parts and materials lists were compiled for the tile shell assembly. A vendor was selected for the photomultiplier tubes and a contract awarded.

Electronics: The pre-engineering model electronics were delivered to the Tracker subsystem. The VME interface LATcom card is available for Calorimeter integration. The conceptual design document for the first engineering model was completed. Progress was made in the global trigger design.

Mechanical Systems: The (analytical) thermal model was fully developed. The engineering model heat pipes have been fabricated, tested, and are ready for delivery.

3.0 Schedule Status

The status of significant milestones identified in the Project Management Plan for the LAT project is summarized in Attachment 1. Level 3 milestone status is included as Attachment 2.

4.0 Financial Status

Attachment 3 depicts the costs and commitments through the end of the current reporting period. Attachments 4 and 5 summarize the actual costs through the current period, by WBS level 3 and institution, respectively.

5.0 Performance Status (Comparison to Project Baseline)

Attachment 6 is a Cost Performance Report (CPR) for the end of the current reporting period, by WBS level 3. The CPR shows the time-phased budget to date (BCWS), the earned value (BCWP), and the actual costs through the end of the month (ACWP). Attachment 7 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.

Attachment 8 shows performance analysis (by WBS level 3), including trends in the schedule and cost variances.

There are no significant schedule variances.

A report of actual costs through the current period was not received from GSFC, resulting in positive cost variances in 4.1.6 ACD and 4.1.1 Management.

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 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. 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.A Performance & Safety Assurance is due to the delay in the hire of a part-time parts engineer at NRL, and some work being carried out by existing personnel which was originally planned as subcontracts. The positive cost variance in 4.1.B Instrument Operations Center is due to the delay in NASA funding in turn delaying M&S and travel expenditures. The positive cost variance in 4.1.C Education & Public Outreach is due to SSU's not receiving funding in time to correspond with scheduled work. 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 9-12 demonstrate the staffing plan, and reports of actual manpower received.

Attachment 1 Milestones, Levels 1-2

Activity Description	Finish Date	Fiscal Year															
		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*										▼						
Run Date		01/23/02 19:07		GLAST-LAT PROJECT Project Milestones (Level 1-2)										Sheet 1 of 1			
© Primavera Systems, Inc.																	

Attachment 2 Level 3 Milestones (One-Year View)

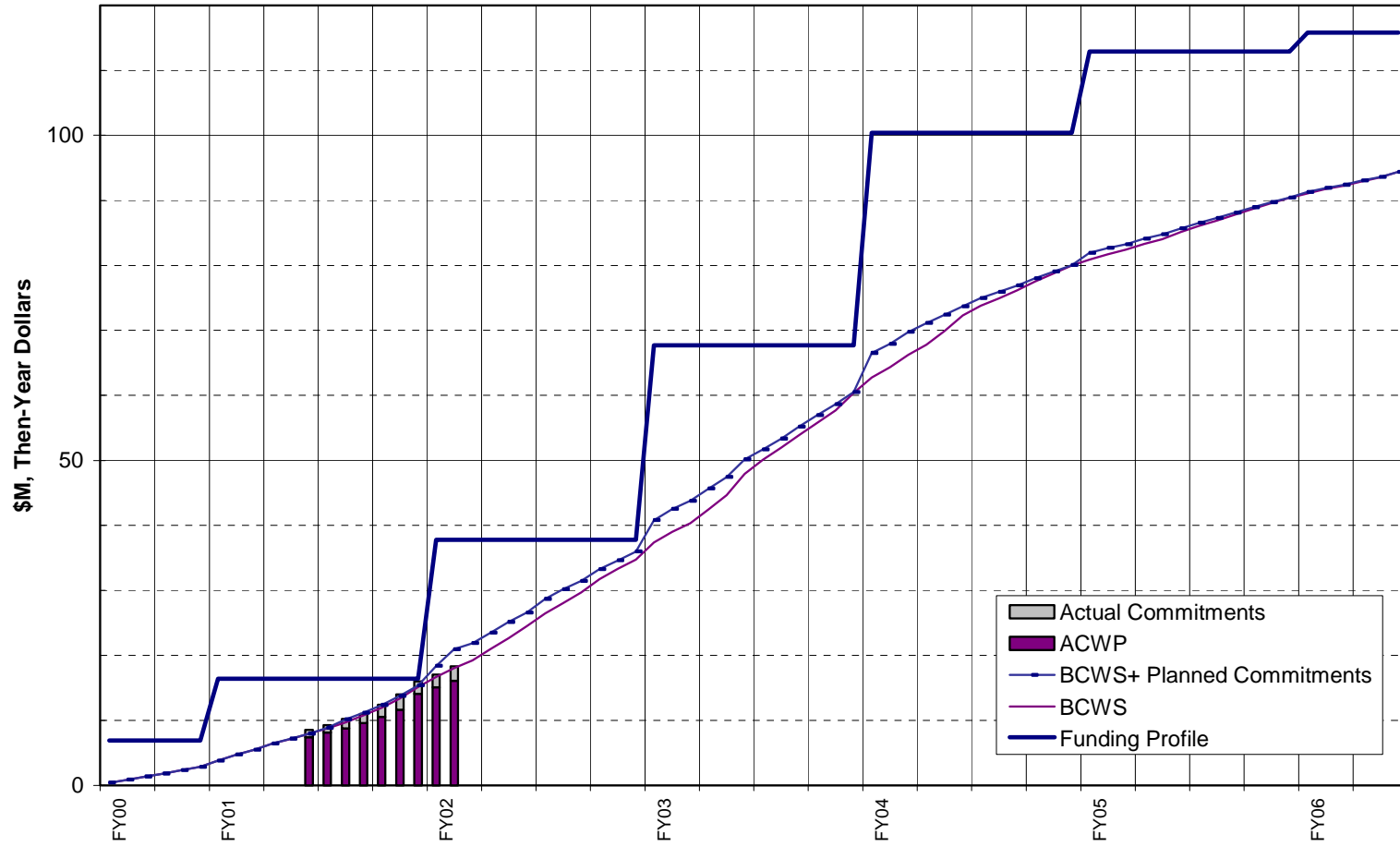
Activity Description	Finish Date	ND	AV	FY01				FY02				FY03
				Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	
Instrument Project Office (Level 3)												
Tracker PDR	06/19/01A	2	4			▼						
Anticoincidence Detector PDR	07/25/01A	2	6				▼					
Calorimeter PDR	07/27/01A	2	5				▼					
Mechanical Systems PDR	08/15/01A	2	8				▼					
Electronics & DAQ PDR	08/16/01A	2	7				▼					
Flight Software PDR	08/16/01A	2	7				▼					
IOC PDR	08/17/01A	2	B				▼					
Science Analysis Software PDR	08/17/01A	2	D				▼					
Com Card for TKR EM Function Test-Elec to TKR	10/16/01A	4	7					▼				
VME Com Card (TEM Sim)-from Elec to CAL	11/05/01A	5	7					▼				
PDR Submittals Due	12/04/01*								▼			
(2) Mini MCM's from Tracker to Elec	02/07/02*	7	4							▼		
(1) Prototype Electronics Module (Elec to ACD)	03/15/02*	6	7								▼	
EGSE Workstation / Software #1 (I&T to ACD)	03/15/02*	6	9									▼
Run Date	01/23/02 19:09	GLAST-LAT PROJECT Project Milestones (Level 3) 1 Yr (+/- 6mo)						Sheet 1 of 2				
© Primavera Systems, Inc.												

**Attachment 2, Continued
Level 3 Milestones (One-Year View)**

Activity Description	Finish Date	ND	AV	FY01			FY02				FY03	
				Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	
Instrument Project Office (Level 3)												
MGSE Requirements for ACD (from I&T to ACD)	03/22/02*	6	9						▼			
SLAC Facilities Specification (from I&T to ACD)	03/22/02*	6	9						▼			
VM Versions of CAL AFFE-CAL to Elec	04/12/02*	7	5						▼			
EGSE EM1 H/W Release-Elec to I&T	04/22/02*	9	7						▼			
Online System Spec from I&T to IOC	05/01/02*	B	9						▼			
Calorimeter Calibration Prototype Coding SAS-I&T	05/15/02*	9	D						▼			
Mechanical Systems CDR	05/22/02*	2	8						▼			
1st Major Release of Sim/Recon (SAS to I & T)	05/31/02*	9	D						▼			
Run Date	01/23/02 19:09	GLAST-LAT PROJECT Project Milestones (Level 3) 1 Yr (+/- 6mo)							Sheet 2 of 2			
© Primavera Systems, Inc.												

Attachment 3

Budget vs Actuals vs Funding DOE + NASA Project Expenditures



**Attachment 4
LAT Costs, through November 2001, by WBS**

Monthly Financial Management Report 30-Nov-01							Report for Month Ending: 11/30/01			
To: Liz Citrin, GLAST Project Manager (NASA) Ev Valle, LAT Project Manager (DOE)				From: Tanya Boysen, LAT Project Controls Manager			Budget Value			
				Cost:		Fee:				
1101 Type:							Fund Limitation:			
GLAST LAT Project										
Reporting Category	Cost Incurred/Hours Worked				Estimated Cost/Hours to Complete			4/3/00	Billing	
	During Month		Cum. to Date		Detail		Balance of Budget	Estimated Final Cost/Hours		Unfilled Orders Outstanding
	Actual	Planned	Actual	Planned	DEC01	JAN02		Project Estimate	Budget Value	
4.1.1 INSTRUMENT MANAGEMENT	255	234	2,817	2,917	175	246	8,068	11,307	11,307	
4.1.2 SYSTEM ENGINEERING	97	85	966	1,033	64	87	2,974	4,092	4,092	
4.1.4 TRACKER	137	145	3,437	3,332	130	179	5,936	9,681	9,681	
4.1.5 CALORIMETER	191	214	2,659	2,814	152	219	10,348	13,378	13,378	
4.1.6 ANTICOINCIDENCE DETECTOR	0	219	1,445	1,940	216	305	7,994	9,960	9,960	
4.1.7 ELECTRONICS	107	145	1,759	2,034	167	225	14,369	16,520	16,520	
4.1.8 MECHANICAL SYSTEMS	45	104	570	1,313	132	267	7,318	8,288	8,288	
4.1.9 INSTRUMENT INTEGRATION AND	19	95	31	204	71	100	7,092	7,294	7,294	
4.1.A PERFORMANCE AND SAFETY AS	23	41	276	330	42	59	1,829	2,206	2,206	
4.1.B LAT INSTRUMENT OPERATIONS	16	15	141	166	16	17	3,537	3,711	3,711	
4.1.C EDUCATION AND PUBLIC OUTRI	81	19	280	294	14	26	2,588	2,908	2,908	
4.1.D SCIENCE ANALYSIS SOFTWARE	17	26	388	350	22	53	3,237	3,700	3,700	
4.1.E SUBORBITAL FLIGHT TEST	0	0	1,305	1,321	0	0	16	1,321	1,321	
Total	988	1,342	16,076	18,047	1,201	1,783	75,307	94,366	94,366	

**Attachment 5
LAT Costs, through November 2001, by Organization and Cost Code**

Monthly Financial Management Report 30-Nov-01								Report for Month Ending: 11/30/01		
To: Liz Citrin, GLAST Project Manager (NASA) Ev Valle, LAT Project Manager (DOE)				From: Tanya Boysen, LAT Project Controls Manager				Budget Value		
1101		Type:						Fund Limitation:		
GLAST LAT Project										
Reporting Category	Cost Incurred/Hours Worked				Estimated Cost/Hours to Complete			4/3/00	Billing	
	During Month		Cum. to Date		Detail		Balance of Budget	Estimated Final Cost/Hours		Unfilled Orders Outstanding
	Actual	Planned	Actual	Planned	DEC01	JAN02		Project Estimate	Budget Value	
GSFC	0	251	2,342	2,912	240	338	10,205	13,124	13,124	
HEPL	56	75	1,961	1,982	68	93	7,379	9,502	9,502	
SLAC	561	654	7,143	8,051	625	906	37,937	46,611	46,611	
NRL	234	289	3,575	3,845	212	309	15,262	19,358	19,358	
SSU	81	19	280	294	14	26	2,538	2,858	2,858	
Texas A&M	0	0	0	16	0	0	16	16	16	
UCSC	57	56	775	947	43	110	1,970	2,898	2,898	
Total	988	1,342	16,076	18,047	1,202	1,782	75,307	94,366	94,366	

LABOR	594	900	10,433	11,650	705	1,055	43,866	56,059	56,059
FTE	92	139	938	1,515	152	169	6,399	7,658	7,658
HOURS	14,795	22,297	165,923	253,803	18,247	28,407	1,049,400	1,261,977	1,261,977
TRAVEL	19	45	345	428	33	46	3,001	3,425	3,425
MATERIAL & SERVICES	375	365	5,136	5,730	441	647	26,715	32,939	32,939
MPS & LAB TAX	0	32	162	238	24	34	1,724	1,944	1,944
Total (not incl FTE/Hrs)	988	1,342	16,076	18,047	1,203	1,782	75,306	94,366	94,366

Attachment 6
LAT Performance, through November 2001, by WBS

Cost Performance Report - Work Breakdown Structure											Run Date: 1/24/02		
Contractor:					Contract Type/No:			Project Name/No:		Report Period:			
Location:					GLAST LAT Program			10/31/01			11/30/01		
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	0	0	0	0			
CAPW[3]	Current Period					Cumulative to Date					At Completion		
	Budgeted Cost		Actual Cost	Variance		Budgeted Cost		Actual Cost	Variance		Budgeted	Latest Revised Estimate	Variance
	Work Scheduled	Work Performed	Work Performed	Schedule	Cost	Work Scheduled	Work Performed	Work Performed	Schedule	Cost			
Item	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
4.1.1 INSTRUMENT MANAGEMENT	234	218	255	-16	-36	2,917	2,901	2,817	-16	84	11,307	11,307	0
4.1.2 SYSTEM ENGINEERING	85	85	97	0	-12	1,033	1,033	966	0	67	4,092	4,092	0
4.1.4 TRACKER	145	94	137	-51	-43	3,332	3,266	3,437	-66	-171	9,681	9,681	0
4.1.5 CALORIMETER	214	197	191	-18	6	2,814	2,811	2,659	-3	152	13,378	13,378	0
4.1.6 ANTICOINCIDENCE DETECTOR	219	142	0	-77	142	1,940	1,876	1,445	-64	431	9,960	9,960	0
4.1.7 ELECTRONICS	145	157	107	12	50	2,034	2,059	1,759	25	300	16,520	16,520	0
4.1.8 MECHANICAL SYSTEMS	104	57	45	-47	11	1,313	1,261	570	-52	691	8,288	8,288	0
4.1.9 INSTRUMENT INTEGRATION AND T	95	95	19	0	76	204	204	31	0	173	7,294	7,294	0
4.1.A PERFORMANCE AND SAFETY ASSU	41	41	23	0	18	330	330	276	0	54	2,206	2,206	0
4.1.B LAT INSTRUMENT OPERATIONS CE	15	25	16	9	8	166	166	141	0	25	3,711	3,711	0
4.1.C EDUCATION AND PUBLIC OUTREAC	19	10	81	-9	-71	294	318	280	23	38	2,908	2,908	0
4.1.D SCIENCE ANALYSIS SOFTWARE	26	25	17	-1	9	350	349	388	-2	-39	3,700	3,700	0
4.1.E SUBORBITAL FLIGHT TEST	0	0	0	0	0	1,321	1,321	1,305	0	16	1,321	1,321	0
Gen. and Admin.	0	0	0	0	0	0	0	0	0	0	0	0	0
Undist. Budget											0	0	0
Sub Total	1,342	1,145	988	-197	158	18,047	17,893	16,076	-153	1,818	94,366	94,366	0
Management Resrv.											0	0	0
Total	1,342	1,145	988	-197	158	18,047	17,893	16,076	-153	1,818	94,366	94,366	0

**Attachment 7
LAT Performance, through November 2001, by Organization**

Cost Performance Report - Work Breakdown Structure											Run Date: 1/24/02		
Contractor: Location:				Contract Type/No:			Project Name/No: GLAST LAT Program		Report Period: 10/31/01 11/30/01				
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	0		0	0			
OBS Item	Current Period					Cumulative to Date					At Completion		
	Budgeted Cost		Actual Cost Work	Variance		Budgeted Cost		Actual Cost Work	Variance		Budgeted	Latest Revised Estimate	Variance
	Work Scheduled	Work Performed		Schedule	Cost	Work Scheduled	Work Performed		Schedule	Cost			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
DG *** GSFC	251	173	0	-77	173	2,912	2,848	2,342	-64	506	13,124	13,124	0
DH *** HEPL	75	66	56	-9	10	1,982	1,972	1,961	-10	11	9,502	9,502	0
DL *** SLAC	654	582	561	-71	22	8,051	7,956	7,143	-94	813	46,611	46,611	0
DN *** NRL	289	270	234	-19	36	3,845	3,846	3,575	1	271	19,358	19,358	0
DS *** SSU	19	10	81	-9	-71	294	318	280	23	38	2,858	2,858	0
DT *** Texas A&M	0	0	0	0	0	16	16	0	0	16	16	16	0
DU *** UCSC	56	44	57	-11	-12	947	938	775	-9	163	2,898	2,898	0
Gen. and Admin.	0	0	0	0	0	0	0	0	0	0	0	0	0
Undist. Budget											0	0	0
Sub Total	1,342	1,145	988	-197	158	18,047	17,893	16,076	-153	1,818	94,366	94,366	0
Management Resrv.											0	0	0
Total	1,342	1,145	988	-197	158	18,047	17,893	16,076	-153	1,818	94,366	94,366	0

**Attachment 8
LAT Performance Analysis, November 2001**

	WBS	BAC	BCWS	BCWP	ACWP	SV \$	CV \$	% BCWS	% BCWP	% ACWP	SV Trend	CV Trend	SPI	CPI	Cpi_Fcst	3moCpi_Fcst	CpiSpi_Fcst
1	4	94,366	18,047	17,893	16,076	-153	1,818	19.12	18.96	17.04	↓	↔	0.992	1.113	84,780	84,780	85,368
2	4.1	94,366	18,047	17,893	16,076	-153	1,818	19.12	18.96	17.04	↓	↔	0.992	1.113	84,780	84,780	85,368
3	4.1.1	11,307	2,917	2,901	2,817	-16	84	25.80	25.66	24.92	↔	↓	0.995	1.030	10,981	10,981	11,024
4	4.1.2	4,092	1,033	1,033	966	0	67	25.24	25.24	23.61	↔	↓	1.000	1.069	3,828	3,828	3,828
5	4.1.4	9,681	3,332	3,266	3,437	-66	-171	34.42	33.73	35.50	↓	↓	0.980	0.950	10,190	10,190	10,327
6	4.1.5	13,378	2,814	2,811	2,659	-3	152	21.03	21.01	19.88	↓	↔	0.999	1.057	12,655	12,655	12,664
7	4.1.6	9,960	1,940	1,876	1,445	-64	431	19.47	18.83	14.51	↓	↑	0.967	1.298	7,673	7,673	7,886
8	4.1.7	16,520	2,034	2,059	1,759	25	300	12.31	12.47	10.65	↑	↑	1.012	1.171	14,111	14,111	13,960
9	4.1.8	8,288	1,313	1,261	570	-52	691	15.84	15.22	6.88	↓	↔	0.961	2.211	3,749	3,749	3,879
10	4.1.9	7,294	204	204	31	0	173	2.80	2.80	0.43	↔	↔	1.000	6.571	1,110	1,110	1,110
11	4.1.A	2,206	330	330	276	0	54	14.94	14.94	12.51	↔	↑	1.000	1.194	1,848	1,848	1,848
12	4.1.B	3,711	166	166	141	0	25	4.47	4.47	3.80	↑	↑	1.000	1.175	3,159	3,159	3,159
13	4.1.C	2,908	294	318	280	23	38	10.12	10.93	9.63	↓	↓	1.079	1.135	2,563	2,563	2,395
14	4.1.D	3,700	350	349	388	-2	-39	9.47	9.43	10.49	↓	↑	0.995	0.898	4,118	4,118	4,136
15	4.1.E	1,321	1,321	1,321	1,305	0	16	100.00	100.00	98.81	↔	↔	1.000	1.012	1,305	1,305	1,305
16	[PMB]	94,366	18,047	17,893	16,076	-153	1,818	19.12	18.96	17.04	↓	↔	0.992	1.113	84,780	84,780	85,368

LEGEND

BAC: Budget At Complete
 BCWS: Budgeted Cost of Work Scheduled (to date)
 BCWP: Budgeted Cost of Work Performed (to date)
 ACWP: Actual Cost of Work Performed (to date)

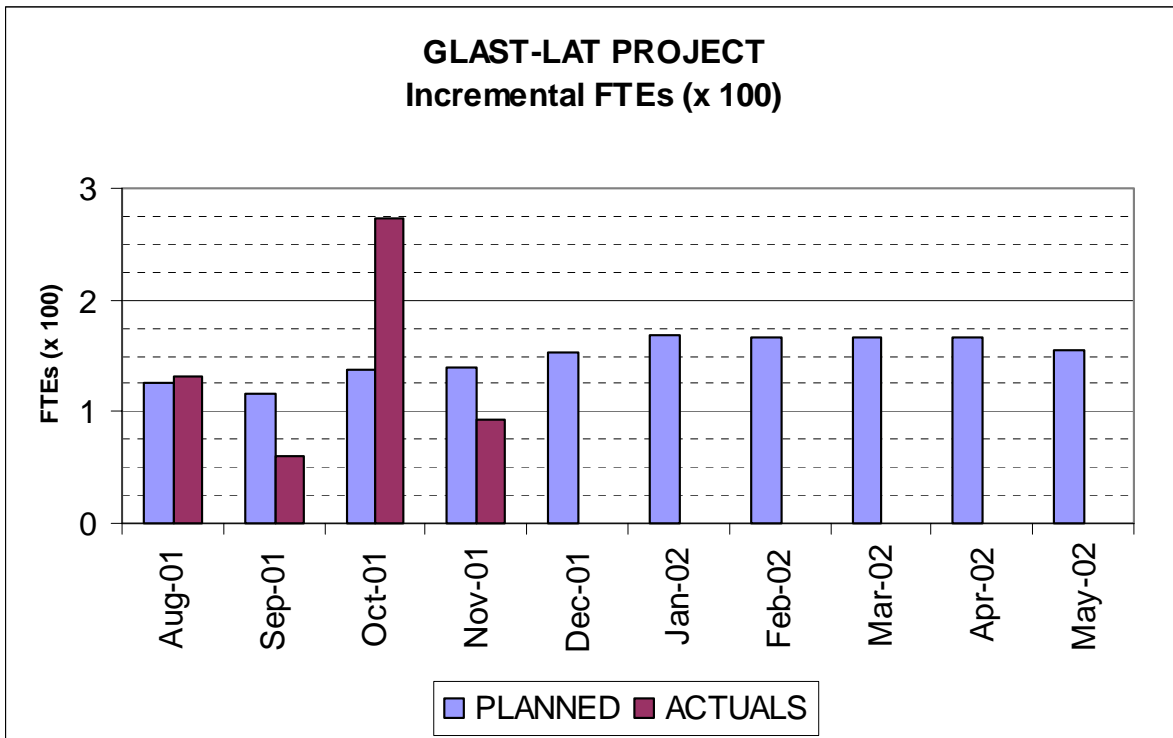
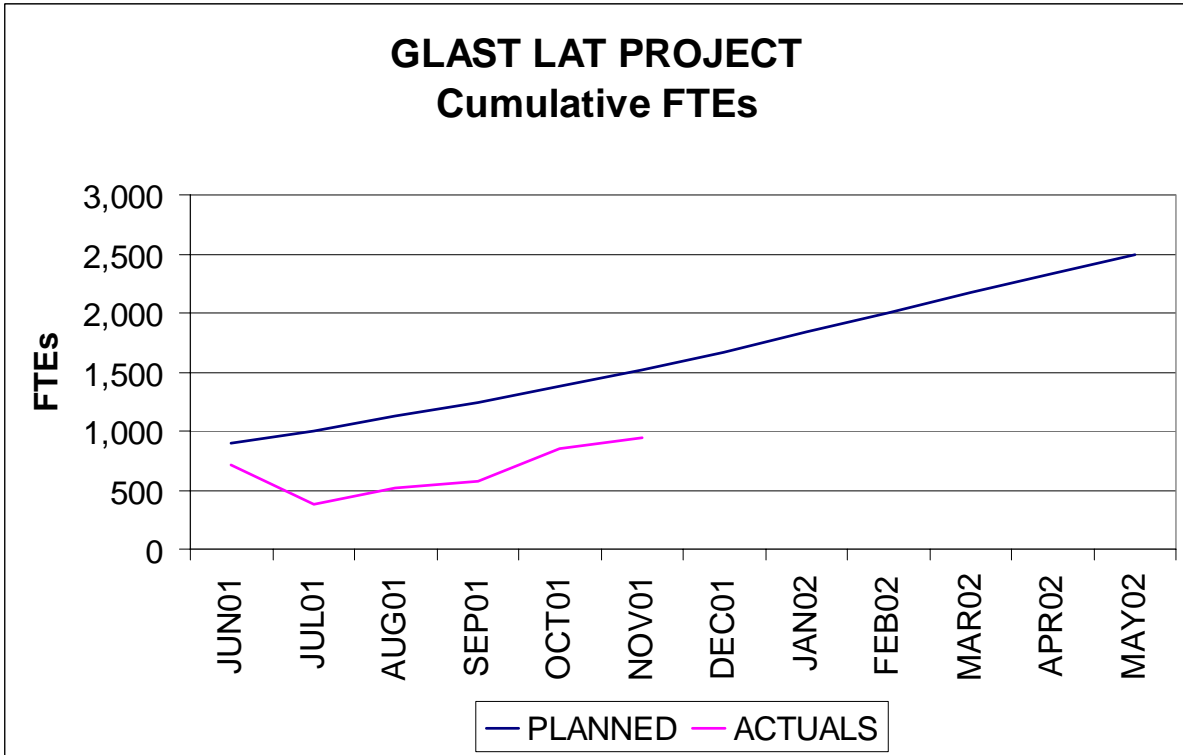
SV \$: Schedule Variance = BCWP - BCWS
 CV \$: Cost Variance = BCWP - ACWP
 SPI: Schedule Performance Index = BCWP/BCWS
 CPI: Cost Performance Index = BCWP/ACWP

% BCWS: Percent Scheduled = BCWS/BAC
 % BCWP: Percent Complete = BCWP/BAC
 % ACWP: Percent Spent = ACWP/BAC

Cpi_Fcst: CPI (to date) EAC Forecast = BAC / CPI
 3MoCpi_Fcst: 3 Month Moving Avg. EAC Forecast = ACWP + [ACWP(last 3 mo.) / BCWP(last 3 mo.)] * (BAC - BCWP)
 CpiSpi_Fcst: Combination CPI and SPI EAC Forecast = ACWP + (BAC - BCWP) / (CPI * SPI)

■ Worse than -15%	■ Between -5% and 10%
■ Between -15% and -5%	■ Better than 10%
Change Threshold: 10%	

**Attachment 9
LAT Manpower**



Attachment 10
LAT Manpower Data, through November 2001, by WBS

Program: 1101		Description: GLAST LAT Project		Approval: Program Manager Functional Manager Cost Account Manager												
Run Date: 1/23/02		Status Date: 11/30/01														
		PRIOR	JUN01	JUL01	AUG01	SEP01	OCT01	NOV01	Cum-to Date	DEC01	JAN02	FEB02	MAR02	APR02	MAY02	
CAPW[3]																
4.1.1 INSTRUMENT MANAGEMENT																
FTE	PLANNED	56.8	4.9	5.9	5.9	5.9	10.2	10.6	100.0	10.6	10.6	10.6	10.2	10.2	10.2	
	ACTUALS	153.5	14.9	-127.2	4.3	4.2	22.7	16.3	88.7	0.0	0.0	0.0	0.0	0.0	0.0	
4.1.2 SYSTEM ENGINEERING																
FTE	PLANNED	8.6	2.3	2.3	2.3	2.1	1.7	1.7	20.8	1.7	1.5	1.8	1.8	1.8	1.8	
	ACTUALS	26.2	1.9	-21.3	0.7	0.5	0.5	0.5	9.0	0.0	0.0	0.0	0.0	0.0	0.0	
4.1.4 TRACKER																
FTE	PLANNED	167.7	20.4	18.4	19.4	23.0	23.9	24.9	297.7	25.4	25.8	25.0	23.1	23.4	24.5	
	ACTUALS	217.7	67.1	-132.5	7.5	-22.0	105.3	26.1	269.1	0.0	0.0	0.0	0.0	0.0	0.0	
4.1.5 CALORIMETER																
FTE	PLANNED	226.8	38.6	36.9	37.1	36.4	39.1	38.9	453.7	38.5	47.0	46.4	48.0	47.5	47.6	
	ACTUALS	30.3	13.5	3.8	60.8	16.1	-1.5	12.0	135.0	0.0	0.0	0.0	0.0	0.0	0.0	
4.1.6 ANTICOINCIDENCE DETECTOR																
FTE	PLANNED	60.0	13.4	8.2	8.2	11.7	22.9	21.6	146.1	27.5	25.1	23.6	21.6	21.1	13.9	
	ACTUALS	0.0	0.0	0.0	0.0	16.8	29.5	0.0	46.2	0.0	0.0	0.0	0.0	0.0	0.0	
4.1.7 ELECTRONICS																
FTE	PLANNED	58.8	6.4	8.7	10.2	10.7	15.0	11.7	121.4	17.2	16.1	14.9	14.3	16.2	12.0	
	ACTUALS	39.3	12.8	-22.6	8.8	15.7	46.5	7.2	107.6	0.0	0.0	0.0	0.0	0.0	0.0	
4.1.8 MECHANICAL SYSTEMS																
FTE	PLANNED	23.5	3.6	5.7	4.3	5.0	5.0	9.3	56.5	4.3	10.7	7.9	8.1	10.1	10.8	
	ACTUALS	74.6	16.1	-65.9	4.3	4.5	4.7	3.8	42.2	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	7.3	7.3	14.6	7.3	7.3	7.3	7.3	7.3	7.3	
	ACTUALS	0.0	0.0	0.0	0.0	0.0	0.8	2.1	2.9	0.0	0.0	0.0	0.0	0.0	0.0	
4.1.A PERFORMANCE AND SAFETY ASSURANCE																
FTE	PLANNED	15.1	1.5	1.5	1.5	1.5	2.6	2.6	26.1	2.6	2.6	2.6	2.6	2.6	2.6	
	ACTUALS	44.0	3.1	-35.8	0.9	1.0	1.8	1.9	16.9	0.0	0.0	0.0	0.0	0.0	0.0	
4.1.B LAT INSTRUMENT OPERATIONS CENTER																
FTE	PLANNED	9.3	0.4	0.4	0.5	0.8	0.8	0.8	12.9	1.1	0.9	1.4	1.4	1.4	1.4	
	ACTUALS	0.0	0.0	0.0	0.0	0.0	5.2	9.0	14.2	0.0	0.0	0.0	0.0	0.0	0.0	
4.1.C EDUCATION AND PUBLIC OUTREACH																
FTE	PLANNED	15.5	2.2	2.5	2.4	1.9	1.4	1.4	27.2	1.4	1.4	1.4	1.4	1.4	1.4	
	ACTUALS	1.3	0.5	0.0	16.7	3.2	0.0	5.6	27.3	0.0	0.0	0.0	0.0	0.0	0.0	
4.1.D SCIENCE ANALYSIS SOFTWARE																
FTE	PLANNED	83.6	6.8	6.6	7.4	6.8	6.9	8.7	126.8	14.4	20.2	23.0	26.2	24.0	21.0	
	ACTUALS	0.0	0.0	59.2	5.0	4.2	26.7	7.9	103.1	0.0	0.0	0.0	0.0	0.0	0.0	
4.1.E SUBORBITAL FLIGHT TEST																
FTE	PLANNED	61.3	7.3	7.5	25.8	9.7	0.0	0.0	111.5	0.0	0.0	0.0	0.0	0.0	0.0	
	ACTUALS	0.0	0.1	7.2	21.8	15.6	30.8	0.0	75.5	0.0	0.0	0.0	0.0	0.0	0.0	
Grand Totals:																
	PLANNED	786.8	107.6	104.4	124.9	115.4	136.8	139.4	1515.3	152.1	169.1	165.8	166.0	167.0	154.5	
	ACTUALS	586.9	129.9	-335.1	130.8	59.7	273.0	92.5	937.7	0.0	0.0	0.0	0.0	0.0	0.0	

Attachment 11
LAT Manpower Data, through November 2001, by Organization

Program: 1101		Description: GLAST LAT Program		Approval: Program Manager Functional Manager Cost Account Manager												
Run Date: 1/23/02		Status Date: 11/30/01														
			PRIOR	JUN01	JUL01	AUG01	SEP01	OCT01	NOV01	Cum to Date	DEC01	JAN02	FEB02	MAR02	APR02	MAY02
OBS																
DG *** GSFC	FTE	PLANNED	89.3	15.9	11.2	29.0	12.9	25.6	24.3	208.0	29.7	28.2	27.0	24.8	24.4	17.0
		ACTUALS	0.0	0.0	0.0	0.0	30.7	42.6	0.0	73.3	0.0	0.0	0.0	0.0	0.0	0.0
DH *** HEPL	FTE	PLANNED	99.3	5.1	5.6	6.0	13.5	5.3	4.9	139.6	6.4	6.5	5.9	6.5	8.0	6.0
		ACTUALS	0.0	0.0	0.0	0.0	0.0	98.5	22.6	121.1	0.0	0.0	0.0	0.0	0.0	0.0
DL *** SLAC	FTE	PLANNED	189.8	25.2	28.4	28.5	27.6	35.2	41.5	376.2	46.5	54.3	51.6	52.9	53.4	50.1
		ACTUALS	495.1	66.2	-353.7	25.0	22.2	25.8	27.9	308.4	0.0	0.0	0.0	0.0	0.0	0.0
DN *** NRL	FTE	PLANNED	102.7	12.8	10.6	12.3	9.3	18.0	15.3	181.0	15.0	14.0	14.7	16.2	15.3	15.1
		ACTUALS	34.2	13.5	13.3	87.5	28.9	2.3	15.8	195.4	0.0	0.0	0.0	0.0	0.0	0.0
DS *** SSU	FTE	PLANNED	15.5	2.2	2.5	2.4	1.9	1.4	1.4	27.2	1.4	1.4	1.4	1.4	1.4	1.4
		ACTUALS	1.3	0.5	0.0	16.7	3.2	0.0	5.6	27.3	0.0	0.0	0.0	0.0	0.0	0.0
DU *** UCSC	FTE	PLANNED	75.6	5.8	5.9	6.1	5.7	7.0	5.6	111.6	5.8	5.9	5.0	5.0	4.7	4.7
		ACTUALS	56.3	-13.5	5.4	1.7	5.2	59.5	7.8	122.5	0.0	0.0	0.0	0.0	0.0	0.0
DW *** UW	FTE	PLANNED	14.6	1.3	1.0	1.0	1.0	1.0	1.0	20.6	1.0	0.9	1.6	0.8	0.9	0.9
		ACTUALS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FF *** France	FTE	PLANNED	144.0	28.0	28.0	28.0	28.6	28.6	28.7	313.8	28.0	34.1	35.6	36.2	36.4	37.2
		ACTUALS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FI *** Italy	FTE	PLANNED	30.5	9.1	9.1	9.5	12.5	12.5	14.7	97.9	16.1	16.6	15.9	15.0	15.2	14.9
		ACTUALS	0.0	63.3	0.0	0.0	-30.6	14.5	10.9	58.1	0.0	0.0	0.0	0.0	0.0	0.0
FJ *** Japan	FTE	PLANNED	25.7	2.3	2.3	2.3	2.3	2.3	2.3	39.3	2.3	2.7	2.7	2.7	2.7	2.7
		ACTUALS	0.0	0.0	0.0	0.0	0.0	29.8	1.9	31.7	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	4.5	4.5	4.5	4.5	4.5
		ACTUALS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grand Totals:		PLANNED	786.8	107.6	104.4	124.9	115.4	136.8	139.4	1515.3	152.1	169.1	165.8	166.1	167.0	154.5
		ACTUALS	586.9	129.9	-335.0	130.8	59.7	273.0	92.5	937.7	0.0	0.0	0.0	0.0	0.0	0.0

4.1. GLAST LAT																
Contributed	PLANNED	257.4	44.5	44.0	45.4	47.1	47.6	51.3	537.3	56.9	69.5	71.5	74.0	72.5	71.6	
	ACTUALS	0.0	63.4	0.0	0.0	-28.7	46.8	12.8	94.2	0.0	0.0	0.0	0.0	0.0	0.0	
Funded	PLANNED	529.5	63.1	60.4	79.4	68.3	89.3	88.1	978.0	95.1	99.6	94.4	92.0	94.5	83.0	
	ACTUALS	586.9	66.6	-335.1	130.8	88.4	226.2	79.7	843.5	0.0	0.0	0.0	0.0	0.0	0.0	
Grand Totals:	PLANNED	786.8	107.6	104.4	124.9	115.4	136.8	139.4	1515.3	152.0	169.1	165.8	166.0	166.9	154.5	
	ACTUALS	586.9	129.9	-335.1	130.8	59.7	273.0	92.5	937.7	0.0	0.0	0.0	0.0	0.0	0.0	