

Monthly Progress Report

(Month Ending March 2002)

GLAST Large Area Telescope (LAT)

LAT-MR-00710-01

May 9, 2002

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 March, 2002.

2.0 Recent Progress and Status

Tracker: The front-end ASIC was received, tested, and found to be functional. The controller ASIC was received, tested, and found to be non-functional. INFN's silicon strip detector order was placed. The assembly of EM tray structures has commenced.

Calorimeter: GCFE version 4 ASIC testing was completed. GCRC rev. 1 was received and tested. Some problems were discovered, but easily solved with the addition of buffers. Issues of CNES funding of French contributions were discussed (and favorably resolved in April).

ACD: Thermal testing of the tile detector assemblies was completed. The design for the photomultiplier tube housing is almost complete. Cable routing on the ACD shell mockup was examined.

Electronics: The PC boards for the data CPU's for the first engineering model have been laid out, assembled, and fabricated. The conceptual design for the ACD electronics in the first engineering model has been completed.

Mechanical Systems: Details of the close-out box surrounding the electronics and the X-LAT plate are complete. This will be used to clarify and specify interfaces between the Radiator, Electronics, and Mechanical Systems components. The Thermal Control System (TCS) performance specification has been updated, and a thermal control timeline and turn-on logic sequence finalized.

3.0 Schedule Status

The status of significant milestones identified in the Project Management Plan (LAT-MD-00054-05, currently in review) 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 from the previous period.

The unfavorable cost variance in 4.1.2 System Engineering is due to a change in the SLAC accrual system; the plan will be adjusted accordingly in the process of a pending change request.

The unfavorable cost variance in 4.1.4 Tracker is largely due to a mismatch between planned and actual costs through FY01. This will be corrected via change request. The unfavorable schedule variance is due to the ASIC procurement delay.

The favorable cost variance in 4.1.5 Calorimeter is due to a contractor invoicing delay. The unfavorable schedule variance is due to the flight model procurements being delayed, and the ASIC plan being under revision (pending change request).

The favorable cost variance in 4.1.6 ACD is due to invoicing delays. The unfavorable schedule variance is due to delays in the TDA connector testing, and work on a new ACD cost/schedule plan (expected to be in place next reporting period).

The favorable cost variance in 4.1.7 Electronics is caused by a combination of invoicing and hiring delays. Personnel were diverted to other high priority LAT tasks, contributing to the unfavorable schedule variance; a workaround plan is underway.

The favorable cost variance in 4.1.8 Mechanical Systems has been reduced through the receipt of a subcontractor invoice. The schedule variance is attributed to attention being diverted to preparations for the delta PDR/baseline review.

Actual costs against 4.1.9 I&T are lower than planned due to delayed subcontractor invoicing and outstanding commitments. As with 4.1.6 ACD, a new cost/schedule plan is being developed which will take this into consideration.

The favorable 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, an NRL subcontractor invoicing delay, and less travel undertaken than planned.

The favorable cost variance in 4.1.B Instrument Operations Center has decreased from last reporting period (NASA funding through May, 2002 has been received). The variance is still attributed to delayed M&S and travel expenses, and in part to credit given to more work than planned for the month.

The favorable cost variance in 4.1.C Education & Public Outreach is attributed to a delay in funding.

6.0 Change Control and Contingency Analysis

There were no change control actions this period. The current contingency pool is \$21.4M, relative to the estimate at completion. (Note that, due to typographical error, contingency was incorrectly stated to be \$20.4M in the February report.)

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	Timeline														
		FY01	FY02	FY03	FY04	FY05	FY06									
DOE Headquarters (Level 1)																
CD-0	06/25/01A		▼													
CD-1	05/29/02*			▼												
CD-2	09/13/02*				▼											
CD-3	04/15/03*					▼										
TEM Power Supply Eng. Model 2 Complete	03/15/04*						▼									
Flight GRID Complete	09/15/04*							▼								
LAT Integrated on Thermal-Vacuum Mount	04/15/05*								▼							
LAT Shipment for Observatory Integration	10/17/05*									▼						
CD-4	12/15/05*										▼					
DOE/NASA Project Managers (Level 1)																
Launch Balloon Flight	08/01/01A		▼													
Instrument Preliminary Design Review	01/08/02A			▼												
I-CDR (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*							▼								
PSR-(Instrument Pre-Ship Review)	01/07/05*								▼							
LAT Ready for Integration (RFI) to Spacecraft	03/22/05*									▼						
Run Date	05/06/02 13:36	GLAST LAT PROJECT Project Milestones (Level 1-2)										LT - MS (L1-2)	Sheet 1			
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Attachment 2 Level 3 Milestones (One-Year View)

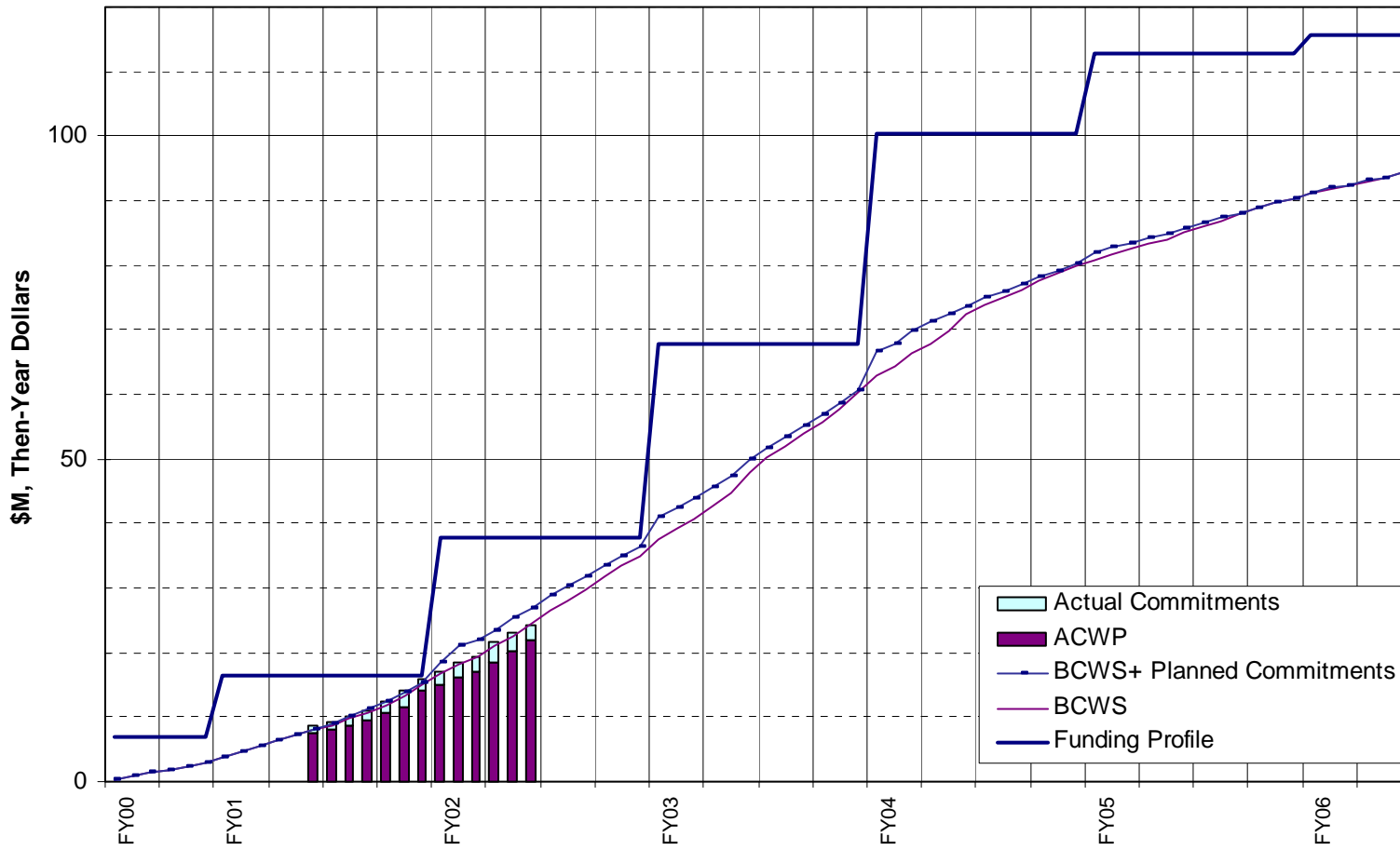
Activity Description	Finish Date	ND	AV	FY01			FY02			FY03			
				Q3	Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3
Instrument Project Office (Level 3)													
VME Com Card (TEM Sim)-from Elec to CAL	11/05/01A	5	7				▼						
(2) Mini MCM's from Tracker to Elec	11/06/01A	7	4				▼						
VM Versions of CAL AFPE-CAL to Elec	12/14/01A	7	5				▼						
PDR Submittals Due	12/15/01A						▼						
MGSE Requirements for ACD (from I&T to ACD)	03/22/02A	6	9					▼					
SLAC Facilities Specification (from I&T to ACD)	03/22/02A	6	9					▼					
(1) Prototype Electronics Module (Elec to ACD)	03/29/02*	6	7					▼					
EGSE Workstation / Software #1 (I&T to ACD)	03/29/02*	6	9					▼					
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 M-CDR	05/22/02*	2	8					▼					
1st Major Release of Sim/Recon (SAS to I & T)	05/31/02*	9	D					▼					
High Voltage Power Supply (Bd & Prts)-ACD toElec	06/03/02*	7	6					▼					
Calorimeter CDR	06/05/02*	2	5					▼					
Flight Software CDR	06/12/02*	2	7					▼					
Tracker CDR	06/18/02*	2	4					▼					
Run Date	05/06/02 13:38	GLAST LAT PROJECT Project Milestones (Level 3) 1 Year View (+/- 6mo)						LT - MS (L3)			Sheet 1 of 2		
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**Attachment 2, Continued
Level 3 Milestones (One-Year View)**

Activity Description	Finish Date	ND	AV	FY01		FY02				FY03			
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Instrument Project Office (Level 3)													
Electronics & DAQ CDR	06/20/02*	2	7										
ACD Pulse Height Histogram (SAS to I & T)	06/21/02*	9	D										
Tracker Dead/Noisy Strips (SAS to I & T)	06/21/02*	9	D										
Anticoincidence Detector CDR	06/26/02*	2	6										
ACD Electronics Module - EM1 (Elec to ACD)	07/01/02*	6	7										
Test/Screening Board w/ASIC for EM1 -ACD to Elec	07/01/02*	7	6										
EGSE Workstation / Software #2 (I&T to ACD)	07/01/02*	6	9										
(9) MCM's from Tracker to Elec	07/02/02*	7	4										
CDR Submittals Due	07/12/02*	1											
CAL AFFE Engr Model-CAL to Elec	08/01/02*	7	5										
Science Analysis Software CDR	09/04/02*	2	D										
Run Date				05/06/02 13:38	GLAST LAT PROJECT Project Milestones (Level 3) 1 Year View (+/- 6mo)				LT - MS (L3)		Sheet 2 of 2		
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Attachment 3

Budget vs Actuals vs Funding DOE + NASA Project Expenditures



**Attachment 4
LAT Costs, through March 2002, by WBS**

Monthly Contractor Financial Management Report 31-Mar-02								Report for Month Ending: 3/31/02		
To: Liz Citrin, GLAST Project Manager (NASA) Ev Valle, LAT Project Manager (DOE)				From: Tanya Boysen, LAT Project Controls Manager				Budget Value		
								Cost:	Fee:	
								0	0	
201 Type: GLAST LAT Project								Fund Limitation: 0		
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	APR02	MAY02		Project Estimate	Budget Value	
4.1.1 INSTRUMENT MANAGEMENT	308	172	3,870	3,674	181	181	7,075	11,307	11,307	
4.1.2 SYSTEM ENGINEERING	230	91	1,542	1,358	96	96	2,358	4,092	4,092	
4.1.4 TRACKER	262	326	4,276	4,161	209	89	5,122	9,696	9,696	
4.1.5 CALORIMETER	126	329	3,365	3,783	272	250	9,490	13,378	13,378	
4.1.6 ANTICOINCIDENCE DETECTOR	333	277	2,444	2,971	397	301	6,818	9,960	9,960	
4.1.7 ELECTRONICS	153	184	2,303	2,783	209	166	13,842	16,520	16,520	
4.1.8 MECHANICAL SYSTEMS	370	267	1,201	2,201	255	270	6,562	8,288	8,288	
4.1.9 INSTRUMENT INTEGRATION AND TESTING	137	100	293	565	104	104	6,794	7,294	7,294	
4.1.A PERFORMANCE AND SAFETY ASSURANCE	15	59	385	544	62	62	1,697	2,206	2,206	
4.1.B LAT INSTRUMENT OPERATIONS CENTER	19	26	211	249	28	28	3,444	3,711	3,711	
4.1.C EDUCATION AND PUBLIC OUTREACH	11	31	336	380	56	28	2,488	2,908	2,908	
4.1.D SCIENCE ANALYSIS SOFTWARE	46	58	525	537	56	52	3,067	3,700	3,700	
4.1.E SUBORBITAL FLIGHT TEST	-15	0	1,315	1,321	0	0	6	1,321	1,321	
Gen. and Admin.	0	0	0	0	0	0	0	0	0	
Total	1,994	1,920	22,065	24,527	1,925	1,627	68,764	94,381	94,381	

Attachment 5
LAT Costs, through March 2002, by Organization and Cost Code

Monthly Contractor Financial Management Report 31-Mar-02								Report for Month Ending: 3/31/02		
To: Liz Citrin, GLAST Project Manager (NASA) Ev Valle, LAT Project Manager (DOE)				From: Tanya Boysen, LAT Project Controls Manager				Budget Value		
								Cost:	Fee:	
								0	0	
201 Type: GLAST LAT Project								Fund Limitation: 0		
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	APR02	MAY02		Project Estimate	Budget Value	
DG *** GSFC	336	311	3,494	4,066	432	336	8,862	13,124	13,124	
DH *** HEPL	92	92	2,332	2,319	118	94	6,958	9,502	9,502	
DL *** SLAC	1,312	1,009	10,429	11,380	898	782	34,516	46,625	46,625	
DN *** NRL	172	435	4,501	5,169	378	346	14,134	19,358	19,358	
DS *** SSU	11	31	336	380	56	28	2,438	2,858	2,858	
DT *** Texas A&M	0	0	0	16	0	0	16	16	16	
DU *** UCSC	71	42	973	1,197	42	42	1,841	2,898	2,898	
Total	1,994	1,920	22,065	24,527	1,924	1,628	68,764	94,381	94,381	

RL LABOR	670	1,029	12,969	15,692	1,177	1,042	41,206	56,394	56,394
<i>FTE</i>	124.4	166.1	1,312.7	2,194.6	167.0	155.0	6,050.1	7,684.8	7,684.8
<i>HOURS</i>	20,898	27,908	223,776	357,987	29,394	27,205	986,100	1,266,475	1,266,475
RT TRAVEL	11	48	419	611	53	55	2,915	3,442	3,442
RM MATERIAL & SERVICES	1,212	810	8,196	7,864	659	495	23,252	32,601	32,601
RX MPS & LAB TAX	102	34	481	360	35	35	1,393	1,944	1,944
Total (not incl FTE/Hours)	1,994	1,920	22,065	24,527	1,924	1,627	68,765	94,381	94,381

**Attachment 6
LAT Performance, through March 2002, by WBS**

Cost Performance Report - Work Breakdown Structure											Run Date: 5/8/02		
Contractor:					Contract Type/No:			Project Name/No:		Report Period:			
Location:								GLAST LAT Project		2/28/02 3/31/02			
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		
CAPW[3]													
Current Period													
Cumulative to Date													
At Completion													
Item	Budgeted Cost		Actual Cost	Variance		Budgeted Cost		Actual Cost	Variance		Budgeted	Latest Revised Estimate	Variance
	Scheduled Work	Work Performed	Work Performed	Schedule	Cost	Scheduled Work	Work Performed	Work Performed	Schedule	Cost			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
4.1.1 INSTRUMENT MANAGEMENT	172	165	308	-8	-143	3,674	3,639	3,870	-34	-230	11,307	11,307	0
4.1.2 SYSTEM ENGINEERING	91	79	230	-12	-151	1,358	1,340	1,542	-18	-201	4,092	4,092	0
4.1.4 TRACKER	326	152	262	-174	-110	4,161	3,884	4,276	-276	-391	9,696	9,696	0
4.1.5 CALORIMETER	329	152	126	-177	26	3,783	3,556	3,365	-227	190	13,378	13,378	0
4.1.6 ANTICOINCIDENCE DETECTOR	277	298	333	22	-35	2,971	2,824	2,444	-147	380	9,960	9,960	0
4.1.7 ELECTRONICS	184	182	153	-2	29	2,783	2,555	2,303	-228	251	16,520	16,520	0
4.1.8 MECHANICAL SYSTEMS	267	28	370	-239	-342	2,201	1,448	1,201	-753	247	8,288	8,288	0
4.1.9 INSTRUMENT INTEGRATION AND TEST	100	100	137	0	-38	565	565	293	0	272	7,294	7,294	0
4.1.A PERFORMANCE AND SAFETY ASSURA	59	59	15	0	45	544	544	385	0	160	2,206	2,206	0
4.1.B LAT INSTRUMENT OPERATIONS CENT	26	15	19	-11	-4	249	246	211	-3	35	3,711	3,711	0
4.1.C EDUCATION AND PUBLIC OUTREACH	31	21	11	-10	11	380	377	336	-3	42	2,908	2,908	0
4.1.D SCIENCE ANALYSIS SOFTWARE	58	84	46	27	39	537	532	525	-4	8	3,700	3,700	0
4.1.E SUBORBITAL FLIGHT TEST	0	0	-15	0	15	1,321	1,321	1,315	0	6	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	1,920	1,336	1,994	-585	-659	24,527	22,832	22,065	-1,695	768	94,381	94,381	0
Management Resrv.											0	0	0
Total	1,920	1,336	1,994	-585	-659	24,527	22,832	22,065	-1,695	768	94,381	94,381	0

**Attachment 7
LAT Performance, through March 2002, by Organization**

Cost Performance Report - Work Breakdown Structure											Run Date: 5/8/02		
Contractor: Location:				Contract Type/No:			Project Name/No: GLAST LAT Project		Report Period: 2/28/02 3/31/02				
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	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			
Item	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
DG *** GSFC	311	335	336	24	-1	4,066	3,919	3,494	-147	425	13,124	13,124	0
DH *** HEPL	92	89	92	-3	-3	2,319	2,301	2,332	-18	-31	9,502	9,502	0
DL *** SLAC	1,009	583	1,312	-426	-729	11,380	10,231	10,429	-1,149	-198	46,625	46,625	0
DN *** NRL	435	268	172	-167	95	5,169	4,875	4,501	-293	375	19,358	19,358	0
DS *** SSU	31	21	11	-10	11	380	377	336	-3	42	2,858	2,858	0
DT *** Texas A&M	0	0	0	0	0	16	16	0	0	16	16	16	0
DU *** UCSC	42	40	71	-2	-31	1,197	1,113	973	-84	140	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	1,920	1,336	1,994	-585	-659	24,527	22,832	22,065	-1,695	768	94,381	94,381	0
Management Resrv.											0	0	0
Total	1,920	1,336	1,994	-585	-659	24,527	22,832	22,065	-1,695	768	94,381	94,381	0

Attachment 8 LAT Performance Analysis, March 2002

	WBS	BAC	BCWS	BCWP	ACWP	SV \$	CV \$	% BCWS	% BCWP	% ACWP	SV Trend	CV Trend	SPI	CPI	Cpi_Fcst	3moCpi_Fcst	CpiSpi_Fcst
1	4	94,381	24,527	22,832	22,065	-1,695	768	25.99	24.19	23.38	↓	↓	0.931	1.035	91,208	91,208	96,340
2	4.1	94,381	24,527	22,832	22,065	-1,695	768	25.99	24.19	23.38	↓	↓	0.931	1.035	91,208	91,208	96,340
3	4.1.1	11,307	3,674	3,639	3,870	-34	-230	32.49	32.19	34.23	↓	↓	0.991	0.940	12,022	12,022	12,099
4	4.1.2	4,092	1,358	1,340	1,542	-18	-201	33.18	32.75	37.67	↓	↓	0.987	0.869	4,707	4,707	4,748
5	4.1.4	9,696	4,161	3,884	4,276	-276	-391	42.91	40.06	44.10	↓	↓	0.934	0.908	10,673	10,673	11,128
6	4.1.5	13,378	3,783	3,556	3,365	-227	190	28.28	26.58	25.16	↓	↑	0.940	1.057	12,662	12,662	13,256
7	4.1.6	9,960	2,971	2,824	2,444	-147	380	29.83	28.35	24.54	↑	↓	0.950	1.156	8,620	8,620	8,941
8	4.1.7	16,520	2,783	2,555	2,303	-228	251	16.85	15.46	13.94	↔	↔	0.918	1.109	14,895	14,895	16,020
9	4.1.8	8,288	2,201	1,448	1,201	-753	247	26.56	17.47	14.50	↓	↓	0.658	1.205	6,875	6,875	9,826
10	4.1.9	7,294	565	565	293	0	272	7.75	7.75	4.01	↔	↓	1.000	1.931	3,777	3,777	3,777
11	4.1.A	2,206	544	544	385	0	159	24.67	24.67	17.44	↔	↑	1.000	1.415	1,559	1,559	1,559
12	4.1.B	3,711	249	246	211	-3	35	6.71	6.62	5.68	↓	↓	0.987	1.166	3,183	3,183	3,222
13	4.1.C	2,908	380	377	336	-3	42	13.08	12.97	11.54	↓	↑	0.991	1.124	2,588	2,588	2,607
14	4.1.D	3,700	537	532	525	-4	8	14.50	14.39	14.18	↑	↑	0.992	1.014	3,647	3,647	3,672
15	4.1.E	1,321	1,321	1,321	1,315	0	6	100.00	100.00	99.55	↔	↑	1.000	1.005	1,315	1,315	1,315
16	[PMB]	94,381	24,527	22,832	22,065	-1,695	768	25.99	24.19	23.38	↓	↓	0.931	1.035	91,208	91,208	96,340

LEGEND

BAC: Budget At Complete

BCWS: Budgeted Cost of Work Scheduled (to date)

BCWP: Budgeted Cost of Work Per formed (to date)

ACWP: Actual Cost of Work Per formed (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

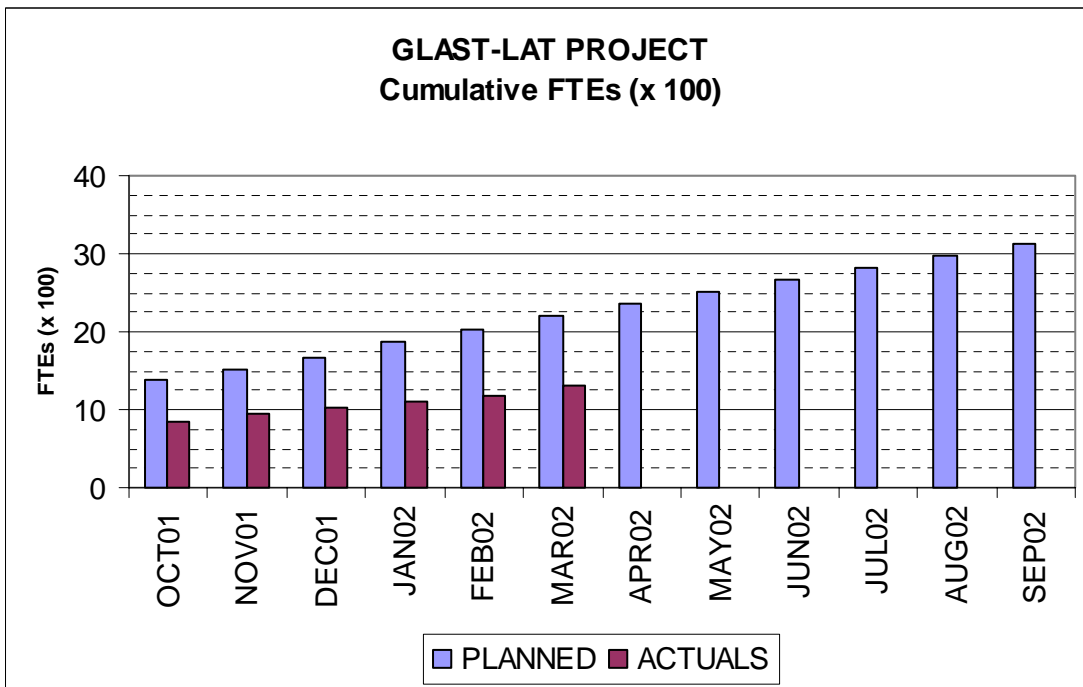
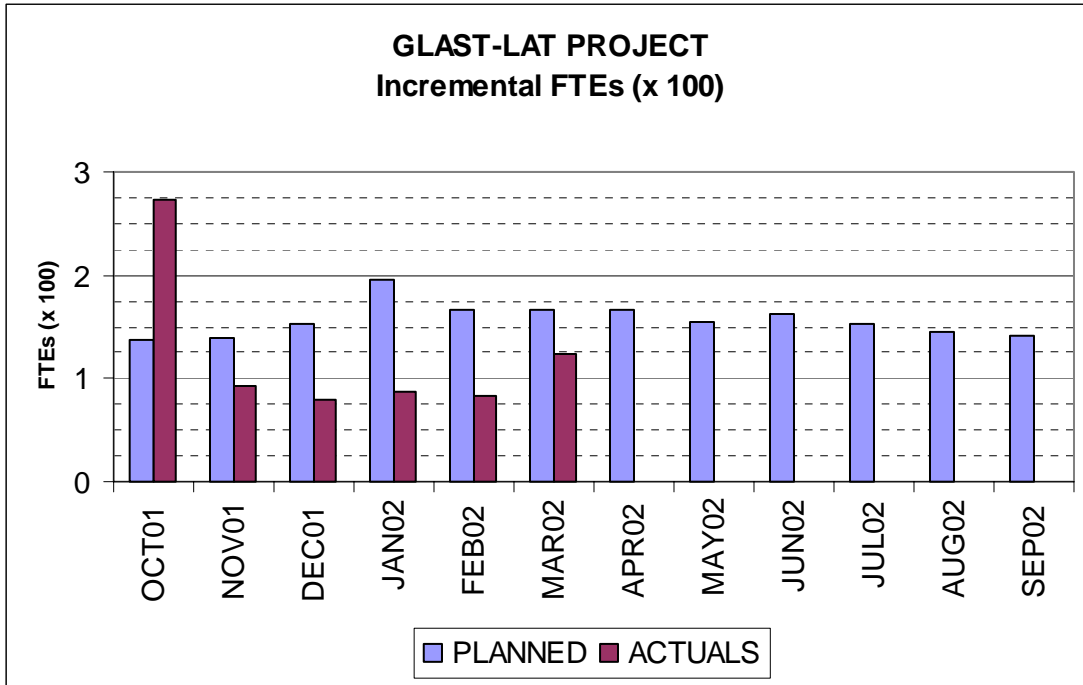
Cpi_Fcst: CPI (to date) EAC Forecast = BAC / CPI

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 March 2002, by WBS

Program: 201		Description: GLAST LAT Project				Approval: Program Manager									
Run Date: 5/8/02		Status Date: 3/31/02				Functional Manager				Cost Account Manager					
		PRIOR	OCT01	NOV01	DEC01	JAN02	FEB02	MAR02	Cum-to Date	APR02	MAY02	JUN02	JUL02	AUG02	SEP02
CAPW[3]															
4.1.1 INSTRUMENT MANAGEMENT															
FTE	PLANNED	79.3	10.2	10.6	10.6	10.6	10.6	10.2	141.9	10.2	10.2	10.2	10.6	10.6	10.6
	ACTUALS	49.7	22.7	16.3	8.0	9.9	10.2	16.6	133.4	0.0	0.0	0.0	0.0	0.0	0.0
4.1.2 SYSTEM ENGINEERING															
FTE	PLANNED	17.4	1.7	1.7	1.7	1.5	1.8	1.8	27.6	1.8	1.8	1.8	2.1	2.1	2.1
	ACTUALS	8.1	0.5	0.5	0.4	0.7	2.0	2.1	14.2	0.0	0.0	0.0	0.0	0.0	0.0
4.1.4 TRACKER															
FTE	PLANNED	248.9	23.9	24.9	25.4	25.8	25.0	23.1	397.0	23.4	24.5	25.3	27.2	24.9	22.5
	ACTUALS	137.7	105.3	26.1	24.4	23.2	22.3	20.7	359.6	0.0	0.0	0.0	0.0	0.0	0.0
4.1.5 CALORIMETER															
FTE	PLANNED	375.7	39.1	38.9	38.5	47.0	46.4	48.0	633.6	47.5	47.6	48.1	47.5	47.7	47.3
	ACTUALS	124.5	-1.5	12.0	13.9	10.1	12.3	6.6	177.9	0.0	0.0	0.0	0.0	0.0	0.0
4.1.6 ANTICOINCIDENCE DETECTOR															
FTE	PLANNED	101.5	22.9	21.6	27.5	25.1	23.6	21.6	243.9	21.1	13.9	20.0	18.3	17.2	14.6
	ACTUALS	16.8	29.5	0.0	0.0	15.8	7.6	55.3	124.9	0.0	0.0	0.0	0.0	0.0	0.0
4.1.7 ELECTRONICS															
FTE	PLANNED	94.7	15.0	11.7	17.2	42.5	14.9	14.3	210.2	16.2	12.0	10.9	10.2	8.8	9.3
	ACTUALS	54.0	46.5	7.2	11.3	8.4	8.4	9.1	144.8	0.0	0.0	0.0	0.0	0.0	0.0
4.1.8 MECHANICAL SYSTEMS															
FTE	PLANNED	42.2	5.0	9.3	4.3	10.7	7.9	8.1	87.5	10.1	10.8	9.2	3.7	4.5	5.4
	ACTUALS	33.7	4.7	3.8	3.8	3.3	3.4	4.6	57.3	0.0	0.0	0.0	0.0	0.0	0.0
4.1.9 INSTRUMENT INTEGRATION AND TESTING															
FTE	PLANNED	0.0	7.3	7.3	7.3	7.3	7.3	7.3	43.8	7.3	7.3	7.3	7.3	7.3	7.3
	ACTUALS	0.0	0.8	2.1	2.6	2.8	2.1	5.3	15.7	0.0	0.0	0.0	0.0	0.0	0.0
4.1.A PERFORMANCE AND SAFETY ASSURANCE															
FTE	PLANNED	20.9	2.6	2.6	2.6	2.6	2.6	2.6	36.4	2.6	2.6	2.6	2.6	2.6	2.6
	ACTUALS	13.1	1.8	1.9	3.6	2.0	2.0	1.0	25.5	0.0	0.0	0.0	0.0	0.0	0.0
4.1.B LAT INSTRUMENT OPERATIONS CENTER															
FTE	PLANNED	11.3	0.8	0.8	1.1	0.9	1.4	1.4	17.6	1.4	1.4	1.4	0.9	0.3	0.3
	ACTUALS	0.0	5.2	9.0	1.2	1.4	1.6	1.5	19.8	0.0	0.0	0.0	0.0	0.0	0.0
4.1.C EDUCATION AND PUBLIC OUTREACH															
FTE	PLANNED	24.5	1.4	1.4	1.4	1.4	1.4	1.5	32.9	1.5	1.5	1.5	4.2	1.5	1.5
	ACTUALS	21.6	0.0	5.6	1.9	1.4	0.9	1.6	33.1	0.0	0.0	0.0	0.0	0.0	0.0
4.1.D SCIENCE ANALYSIS SOFTWARE															
FTE	PLANNED	111.3	6.9	8.7	14.4	20.2	23.0	26.2	210.6	24.0	21.0	24.4	17.9	17.7	18.1
	ACTUALS	68.4	26.7	7.9	8.5	9.1	10.4	0.1	131.1	0.0	0.0	0.0	0.0	0.0	0.0
4.1.E SUBORBITAL FLIGHT TEST															
FTE	PLANNED	111.5	0.0	0.0	0.0	0.0	0.0	0.0	111.5	0.0	0.0	0.0	0.0	0.0	0.0
	ACTUALS	44.7	30.8	0.0	0.0	-0.2	0.0	0.0	75.3	0.0	0.0	0.0	0.0	0.0	0.0
Grand Totals:															
	PLANNED	1239.1	136.8	139.4	152.1	195.4	165.8	166.1	2194.6	167.0	154.6	162.7	152.4	145.1	141.6
	ACTUALS	572.2	273.0	92.5	79.6	87.8	83.2	124.4	1312.7	0.0	0.0	0.0	0.0	0.0	0.0

Attachment 11
LAT Manpower Data, through March 2002, by Organization

Program: 201		Description: GLAST LAT Project		Approval: Program Manager												
Run Date: 5/8/02		Status Date: 3/31/02		Functional Manager												
		Cost Account Manager														
			PRIOR	OCT01	NOV01	DEC01	JAN02	FEB02	MAR02	Cum-to- Date	APR02	MAY02	JUN02	JUL02	AUG02	SEP02
OBS																
DG *** GSFC																
	FTE	PLANNED	158.2	25.6	24.3	29.7	28.2	27.0	24.8	317.8	24.4	17.0	23.2	20.6	19.5	16.9
		ACTUALS	30.7	42.6	0.0	0.0	14.8	8.6	53.3	150.0	0.0	0.0	0.0	0.0	0.0	0.0
DH *** HEPL																
	FTE	PLANNED	129.5	5.3	4.9	6.4	6.5	5.9	6.5	164.9	8.0	6.0	6.4	6.2	4.8	5.8
		ACTUALS	0.0	98.5	22.6	7.4	8.3	7.4	7.2	151.5	0.0	0.0	0.0	0.0	0.0	0.0
DL *** SLAC																
	FTE	PLANNED	299.5	35.2	41.5	46.5	54.3	51.6	52.9	581.5	53.4	50.1	51.8	41.0	40.9	44.0
		ACTUALS	254.7	25.8	27.9	28.3	30.7	30.8	34.3	432.5	0.0	0.0	0.0	0.0	0.0	0.0
DN *** NRL																
	FTE	PLANNED	147.8	18.0	15.3	15.0	40.4	14.7	16.2	267.3	15.3	15.1	15.3	15.3	14.6	12.8
		ACTUALS	177.4	2.3	15.8	20.6	13.5	16.4	9.5	255.4	0.0	0.0	0.0	0.0	0.0	0.0
DS *** SSU																
	FTE	PLANNED	24.5	1.4	1.4	1.4	1.4	1.4	1.5	32.9	1.5	1.5	1.5	4.2	1.5	1.5
		ACTUALS	21.6	0.0	5.6	1.9	1.4	0.9	1.6	33.1	0.0	0.0	0.0	0.0	0.0	0.0
DU *** UCSC																
	FTE	PLANNED	99.0	7.0	5.6	5.8	5.9	5.0	5.0	133.1	4.7	4.7	4.7	4.7	4.7	4.7
		ACTUALS	55.2	59.5	7.8	8.1	7.1	6.4	5.8	149.8	0.0	0.0	0.0	0.0	0.0	0.0
DW *** UW																
	FTE	PLANNED	18.7	1.0	1.0	1.0	0.9	1.6	0.8	24.9	0.9	0.9	0.9	0.9	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	256.5	28.6	28.7	28.0	34.1	35.6	36.2	447.8	36.4	37.2	36.9	35.6	36.2	34.9
		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
FI *** Italy																
	FTE	PLANNED	70.7	12.5	14.7	16.1	16.6	15.9	15.0	161.4	15.2	14.9	14.9	16.7	14.9	13.0
		ACTUALS	32.7	14.5	10.9	11.6	10.3	10.9	10.9	101.7	0.0	0.0	0.0	0.0	0.0	0.0
FJ *** Japan																
	FTE	PLANNED	34.7	2.3	2.3	2.3	2.7	2.7	2.7	49.6	2.7	2.7	2.7	2.7	2.7	2.7
		ACTUALS	0.0	29.8	1.9	1.8	1.8	1.8	1.8	38.7	0.0	0.0	0.0	0.0	0.0	0.0
FK *** Sweden																
	FTE	PLANNED	0.0	0.0	0.0	0.0	4.5	4.5	4.5	13.5	4.5	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	1239.1	136.8	139.4	152.1	195.4	165.8	166.1	2194.6	167.0	154.6	162.7	152.4	145.1	141.6
		ACTUALS	572.2	273.0	92.5	79.6	87.8	83.2	124.4	1312.7	0.0	0.0	0.0	0.0	0.0	0.0
4.1 GLAST LAT																
	Contributed															
		PLANNED	452.9	48.3	52.0	57.6	70.2	72.1	74.7	827.7	73.2	72.3	74.7	70.7	68.8	66.4
		ACTUALS	34.7	46.8	12.8	13.3	11.9	12.6	12.6	144.6	0.0	0.0	0.0	0.0	0.0	0.0
	Funded															
		PLANNED	786.2	88.6	87.4	94.4	125.2	93.7	91.4	1366.9	93.9	82.3	88.0	81.7	76.3	75.2
		ACTUALS	537.6	226.2	79.7	66.3	75.9	70.6	111.8	1168.1	0.0	0.0	0.0	0.0	0.0	0.0
Grand Totals:																
		PLANNED	1239.1	136.8	139.4	152.1	195.4	165.8	166.1	2194.6	167.0	154.6	162.7	152.4	145.1	141.6
		ACTUALS	572.2	273.0	92.5	79.6	87.8	83.2	124.4	1312.7	0.0	0.0	0.0	0.0	0.0	0.0