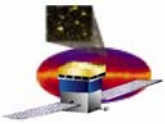


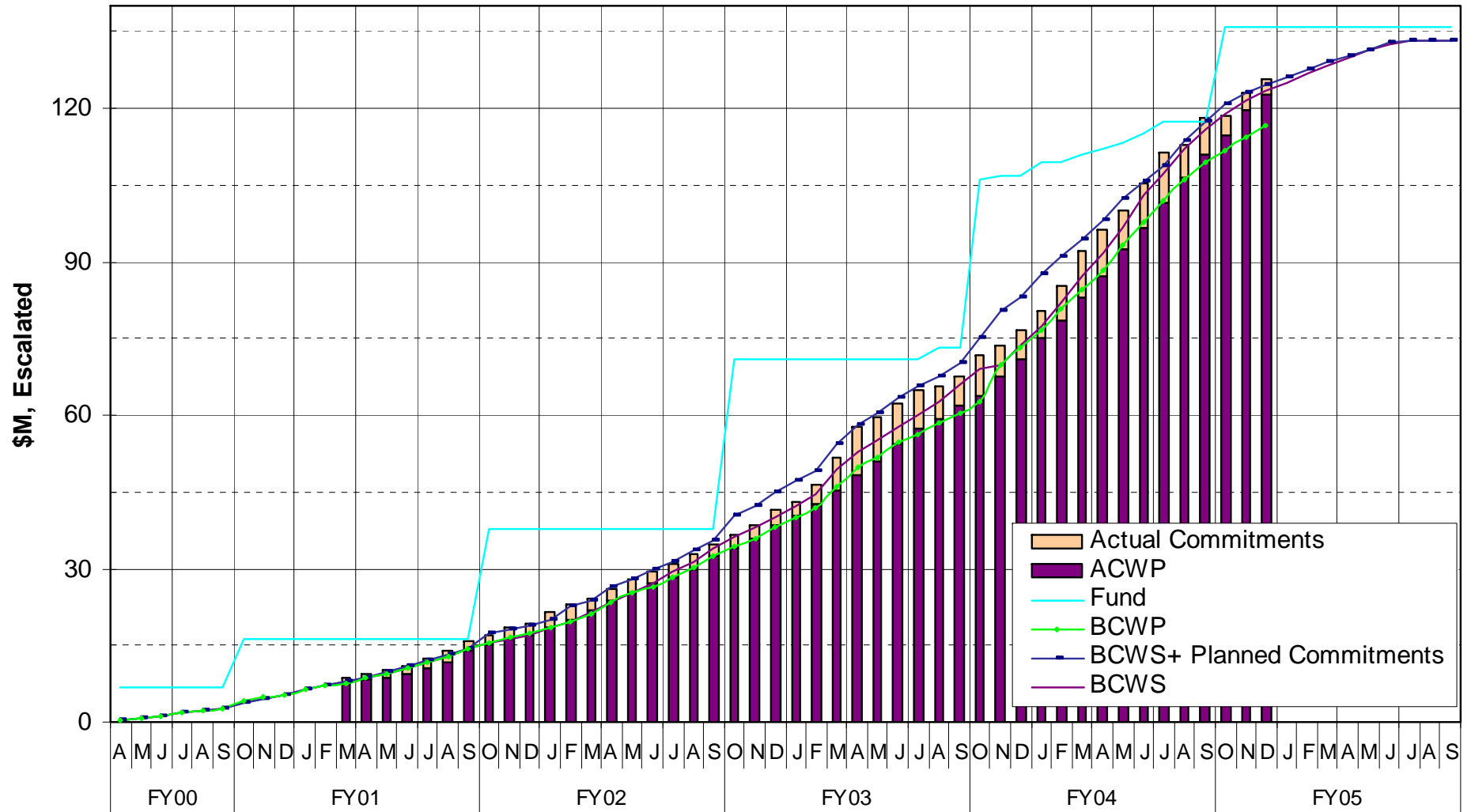
LAT Project Status Overview

December 2004

Lowell Klaisner
LAT Project Manager



Budget, Cost, Funding, Performance





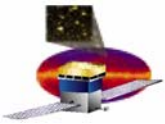
Current Critical Path to Pre-Environmental Test Review

- **1st critical path: Tracker MCM Fabrication Towers 3-14**
 - 111 days float to “Pre-Environmental Test Review”
 - 65 days float to LAT pre-ship review
- **2nd critical path: Electronics Flight TEM and TEM PS Tower 1 and; Electronics Flight SIU and EPU**
 - 3 days behind 1st critical path
- **3rd critical path: Tracker Tray Assembly Towers 2-14**
 - 1 days behind 2nd critical path
- **1st critical path to Module A: Electronics Flight TEM and TEM PS**



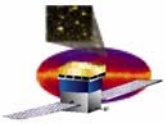
Current Rebaseline Activities

- Rebaseline proposal is for \$24.6M with \$21.8M in FY05.
- Currently run out of funds in March – June if NASA rebaseline approved
- OMB has capped the Capital Equipment Project at \$45M (currently \$42M).
 - On-going operating funds limited to \$5M per year
- Cost plus commitments January 31 on DOE funds are \$40M.
- Office of Science wants us to identify a CEP which is funded by DOE alone.
 - Proposal is fabrication of flight electronics boxes & thermal control.
- ASI has not completed the 2.9 M€ contract with G&A.
- The DOE \$3M plus the \$17M from NASA gives an additional \$20M in funding for FY05
 - Need to descope the work in the rebaseline to reduce FY05 costs by \$2.8M



Rebaseline timeline

- **DOE**
 - Identify the fabrication phase closeout deliverables – January 26, 2005
 - Rebaseline review at Germantown – February 18, 2005 (TBR)
 - Baseline Change Proposal – Ev Valle
 - List of remaining DOE Deliverables for CD-4
 - Risk analysis of the remaining DOE Deliverables
 - NASA sign-off on the remaining DOE Deliverables
 - Updated overall LAT project cost and schedule
 - Cost variance analysis (updated version of Nov '04 document)
 - Contingency analysis (updated version of Nov '04 document)
 - Lessons learned
- **ASI**
 - Complete the contract for fabrication in Italy – January 24, 2005
- **NASA**
 - CCB at mission level to delay the delivery date of the LAT
 - Mission level review of unsolicited proposal from Stanford University
 - New funding
 - Will require rapid response to accomplish by early summer
- **Stanford**
 - Unsolicited proposal from Stanford University – Peter Michelson



Components of the DOE closeout project

Flight TEM and TEM PS modules	\$123	
Flight GASU modules	\$423	
Flight LAT Communications modules	\$159	
Test bed upgrades, system timing	\$698	
SIU/EPU modules	\$565	
Flight power supplies	\$220	
EGSE upgrades	\$68	
I&T support for DAQ hardware	\$264	
DAQ Management	\$168	
	DAQ Subtotal	\$2,688
30% contingency on above	\$806	
	DAQ Total	\$3,494
System Engineering 2/1/05 thru 9/30/05	\$1,500	
	Total DOE costs 2/1/05 thru 9/30/05	\$4,994



Status of FY05 Rebaseline

WBS	Item	Current	Proposed thru FY05		Plan thru FY05		Reduction	Reduction Description
		Oct-04 Baseline	Baseline	Difference	Baseline	Difference		
4.1.1	Instrument Management	16,911	17,897	986	17,647	736	250	Reduce staff by 3 people
4.1.2	System Engineering	7,047	7,768	721	7,618	571	150	Reduce staff by 1 person
4.1.4	Tracker	16,573	20,557	3,984	21,224	4,651	-667	Last 2 towers non-flight Stop 2nd cable vendor Misc. list
4.1.5	Calorimeter	22,022	23,260	1,238	22,593	571	667	No environ test for 15,16
4.1.6	Anticoincidence Detector	15,595	17,341	1,746	17,241	1,646	100	Reduced testing, T/V and EMI
4.1.7	Electronics, Data Acquisition, Flight Software	22,055	28,724	6,669	28,524	6,469	200	Eliminate GASU, SIU PDU, EPU spares
4.1.8	Mechanical Systems	14,179	15,940	1,761	15,840	1,661	100	Reduce staff
4.1.9	Integration & Test	7,764	9,801	2,037	9,451	1,687	350	Reduce staff Reduce VdG testing
4.1.A	Performance & Safety Assurance	2,935	3,894	959	3,844	909	50	Staff roll off
4.1.B	Instrument Science Operations Center	328	336	8	336	8	0	
4.1.C	Education & Public Outreach	2,448	2,684	236	2,684	236	0	
4.1.D	Science Analysis Software	3,019	3,069	50	3,069	50	0	
4.1.E	Suborbital Flight Test	1,325	1,325	0	1,325	0	0	
4.1	Budget at Completion	\$132,202	\$152,596	\$20,394	\$151,396	\$19,194	\$1,200	
4.1	Contingency	\$3,783	\$5,211	\$1,428	\$4,589	\$806	\$622	
4.1	Total Estimated Cost	\$135,985	\$157,807	\$21,822	\$155,985	\$20,000	\$1,822	



FY06 Draft Costs

Sum of Total	OBS							
	DG ***	DH ***	DN ***	DS ***	DU ***	DW ***	DL ***	
Proper	GSFC	HEPL	NRL	SSU	UCSC	UW	SLAC	Grand Total
4.1.1 Instrument Management	198	405	92		134		1,507	2,337
4.1.2 System Engineering		305					468	773
4.1.4 Tracker					292		51	343
4.1.5 Calorimeter			1,713					1,713
4.1.6 Anticoincidence Detector	251							251
4.1.7 Electronics		22	277				927	1,226
4.1.8 Mechanical Systems							1,626	1,626
4.1.9 Integration & Test			1,018				2,541	3,559
4.1.A Performance And Safety Assurance							193	193
4.1.B Lat Instrument Science Operations Center							3,686	3,686
4.1.C Education And Public Outreach				625	10			635
4.1.D Science Analysis Software	234	286	237			109	1,409	2,276
Other Glast Support							700	700
Grand Total	684	1,018	3,337	625	436	109	13,107	19,316

FY06 Available Funding

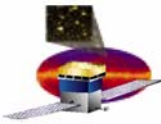
DOE 5,000

NASA 9,425

KEK (Foreign???)

Total 14,425

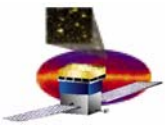
Funding - Needs (4,891)



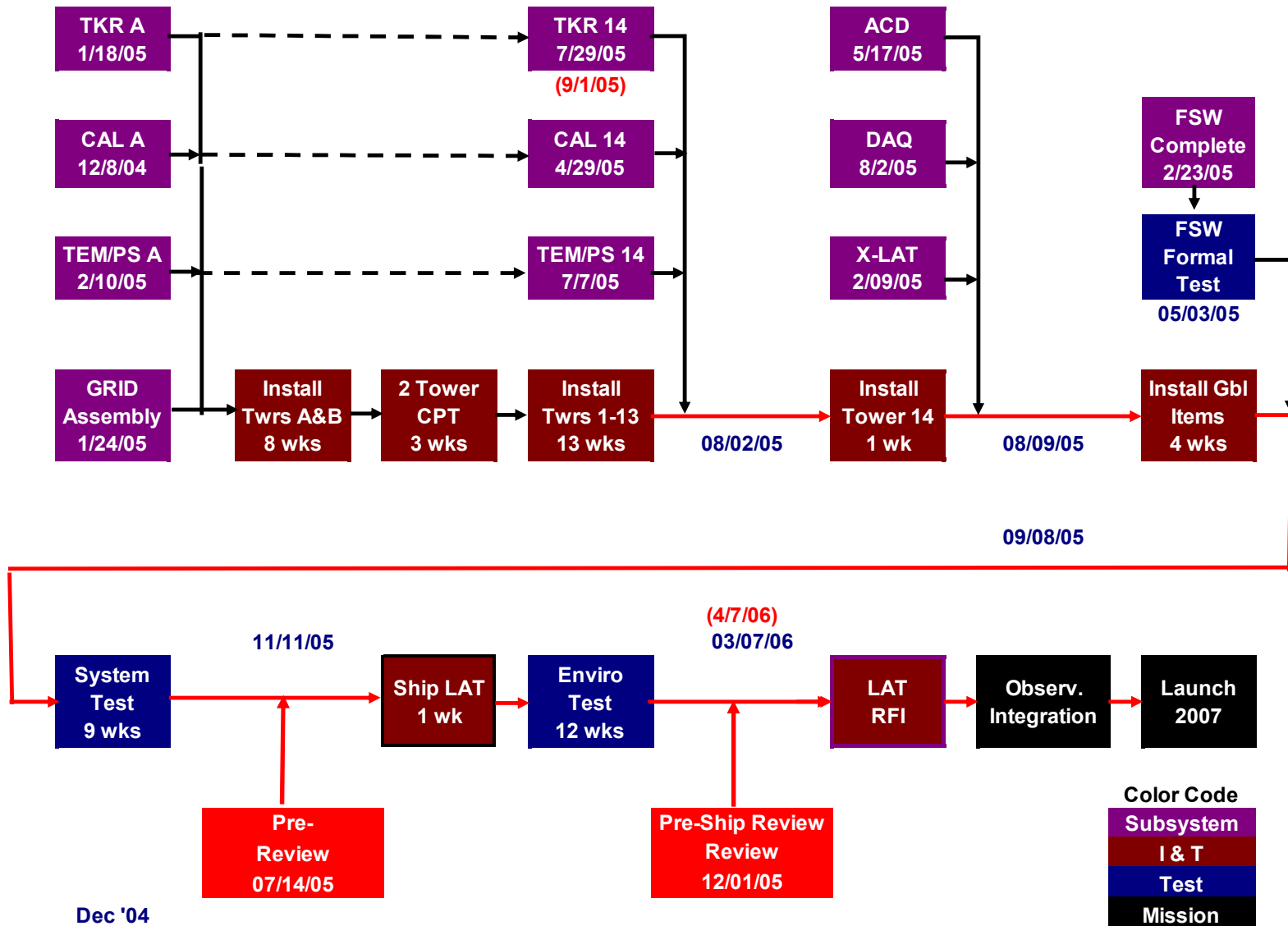
Module Schedule

M/E December 2004	Forecast Dates and Float (working days) to "Preship Review"									
	Mech/ACD		TKR		CAL		TEM/TEM PS		I&T	
Grid	11/08/04A	-								
Module A			18-Jan-05	(35)	12/08/04A	-	10-Feb-05	(52)	14-Mar-05	(52)
Module B			18-Feb-05	(43)	20-Jan-05	(17)	3-Mar-05	(46)	11-Apr-05	(52)
Module 1			8-Mar-05	(29)	27-Jan-05	(2)	22-Apr-05	(62)	2-May-05	(62)
Module 2			15-Mar-05	(29)	27-Jan-05	3	28-Apr-05	(61)	9-May-05	(62)
Module 3			12-Apr-05	(44)	24-Jan-05	11	4-May-05	(60)	16-May-05	(62)
Module 4			19-Apr-05	(44)	24-Feb-05	(6)	10-May-05	(59)	23-May-05	(62)
Module 5			11-May-05	(55)	24-Feb-05	(1)	16-May-05	(58)	31-May-05	(62)
Module 6			16-May-05	(53)	23-Mar-05	(15)	20-May-05	(57)	7-Jun-05	(62)
Module 7			27-May-05	(57)	23-Mar-05	(10)	26-May-05	(56)	14-Jun-05	(62)
Module 8			3-Jun-05	(56)	31-Mar-05	(11)	2-Jun-05	(55)	21-Jun-05	(62)
Module 9			17-Jun-05	(61)	31-Mar-05	(6)	8-Jun-05	(54)	28-Jun-05	(62)
Module 10			23-Jun-05	(60)	14-Apr-05	(11)	14-Jun-05	(53)	6-Jul-05	(62)
Module 11			1-Jul-05	(61)	14-Apr-05	(6)	20-Jun-05	(52)	13-Jul-05	(62)
Module 12			11-Jul-05	(61)	22-Apr-05	(7)	24-Jun-05	(51)	20-Jul-05	(62)
Module 13			22-Jul-05	(65)	22-Apr-05	(2)	30-Jun-05	(50)	1-Aug-05	(65)
Module 14			29-Jul-05	(65)	29-Apr-05	(2)	7-Jul-05	(49)	8-Aug-05	(65)
ACD	31-May-05	(2)								
X-LAT	9-Feb-05	78								
SIU							2-Aug-05	(62)		
PDU							1-Jul-05	(41)		
Harness							1-Jun-05	(19)		
GASU							1-Jul-05	(41)		
EPU							2-Aug-05	(62)		
FSW							23-Feb-05	8		
Inst Global Items									8-Sep-05	(65)
System Test									11-Nov-05	(65)
Ship LAT to NRL									19-Nov-05	(65)
EMI/EMC Test									21-Dec-05	(65)
Sine Vibe									3-Jan-06	(65)
Acoustic Test									15-Jan-06	(65)
TVAC									4-Mar-06	(65)
Weight & CG									6-Mar-06	(65)
Preship Review									7-Mar-06	(65)

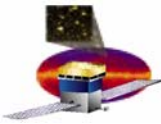
Yellow = Float between 15 and 1
 Red = Float < 1



LAT Schedule



Dec '04



CPR Level 3

 Total project schedule variance

 Cumulative Variance > +/-10%
(will be reported to DOE/NASA)

 Notable current period variances

Cost Performance Report - Work Breakdown Structure													
Contractor:						Contract Type/No:			Project Name/No:		Report Period:		
Location:						LAT			11/30/2004		12/31/2004		
CAPW[3] Item (1)	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			
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
4.1.1 INSTRUMENT MANAGEMENT	280	280	227	0	53	14,885	14,885	14,781	0	104	16,911	16,911	0
4.1.2 SYSTEM ENGINEERING	129	129	76	0	54	6,093	6,093	5,983	0	109	7,047	7,047	0
4.1.4 TRACKER	109	155	193	46	-38	16,393	15,338	16,610	-1,056	-1,273	17,126	17,126	0
4.1.5 CALORIMETER	204	525	543	321	-18	20,963	19,677	19,426	-1,285	251	22,022	22,022	0
4.1.6 ANTICOINCIDENCE DETECTOR	114	190	479	76	-289	15,351	14,890	15,583	-462	-694	15,595	15,595	0
4.1.7 ELECTRONICS	398	396	496	-2	-100	21,406	18,865	22,364	-2,541	-3,500	22,238	22,238	0
4.1.8 MECHANICAL SYSTEMS	147	166	476	19	-310	13,050	12,323	13,509	-727	-1,186	14,179	14,179	0
4.1.9 INTEGRATION & TEST	200	331	382	131	-51	6,144	5,661	5,958	-483	-297	8,013	8,013	0
4.1.A PERFORMANCE AND SAFETY ASSURANCE	115	115	164	0	-50	2,715	2,715	2,697	0	18	2,935	2,935	0
4.1.B LAT INSTRUMENT SCIENCE OPERATIONS CENTER	3	3	1	0	1	306	306	300	0	6	328	328	0
4.1.C EDUCATION AND PUBLIC OUTREACH	36	40	73	4	-33	2,115	2,115	1,760	0	355	2,448	2,448	0
4.1.D SCIENCE ANALYSIS SOFTWARE	63	63	58	0	5	2,525	2,525	2,316	0	209	3,019	3,019	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	1,799	2,393	3,167	594	-774	123,269	116,715	122,613	-6,554	-5,898	133,187	133,187	0
Contingency											2,798	2,798	0
Total	1,799	2,393	3,167	594	-774	123,269	116,715	122,613	-6,554	-5,898	135,985	135,985	0



Performance Analysis

	WBS	Description	BAC	BCWS	BCWP	ACWP	SV \$	CV \$	%BCWS	%BCWP	%ACWP	SPI	CPI	SPI	CPI	Cpi_Fcst	CpiSpi_Fcst
1	4.1	LAT	133,187	123,269	116,715	122,613	-6,554	-5,898	92.55	87.63	92.06	↔	↓	0.947	0.952	139,917	140,889
2	4.1.1	Instr Mgmt	16,911	14,885	14,885	14,781	0	104	88.02	88.02	87.41	↔	↑	1.000	1.007	16,793	16,793
3	4.1.2	System Engr	7,047	6,093	6,093	5,983	0	109	86.45	86.45	84.90	↔	↑	1.000	1.018	6,921	6,921
4	4.1.4	Tracker	17,126	16,393	15,338	16,610	-1,056	-1,273	95.72	89.56	96.99	↔	↔	0.936	0.923	18,547	18,681
5	4.1.5	Calorimeter	22,022	20,963	19,677	19,426	-1,285	251	95.19	89.36	88.21	↑	↔	0.939	1.013	21,740	21,891
6	4.1.6	ACD	15,595	15,351	14,890	15,583	-462	-694	98.43	95.47	99.92	↑	↓	0.970	0.955	16,322	16,345
7	4.1.7	Electronics	22,238	21,406	18,865	22,364	-2,541	-3,500	96.26	84.83	100.57	↔	↔	0.881	0.844	26,364	26,902
8	4.1.8	Mechanical	14,179	13,050	12,323	13,509	-727	-1,186	92.04	86.92	95.28	↔	↓	0.944	0.912	15,543	15,663
9	4.1.9	I&T	8,013	6,144	5,661	5,958	-483	-297	76.68	70.64	74.35	↑	↓	0.921	0.950	8,434	8,645
10	4.1.A	PSA	2,935	2,715	2,715	2,697	0	18	92.50	92.50	91.89	↔	↓	1.000	1.007	2,916	2,916
11	4.1.B	ISOC	328	306	306	300	0	6	93.10	93.10	91.39	↔	↑	1.000	1.019	322	322
12	4.1.C	EPO	2,448	2,115	2,115	1,760	0	355	86.37	86.37	71.89	↑	↓	1.000	1.202	2,038	2,038
13	4.1.D	SAS	3,019	2,525	2,525	2,316	0	209	83.61	83.61	76.69	↔	↔	1.000	1.090	2,770	2,770
14	4.1.E	Balloon Flight	1,325	1,325	1,325	1,325	0	0	100.00	100.00	99.98	↔	↔	1.000	1.000	1,325	1,325

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

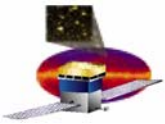
% BCWP: Percent Complete = BCWP/BAC

% ACWP: Percent Spent = ACWP/BAC

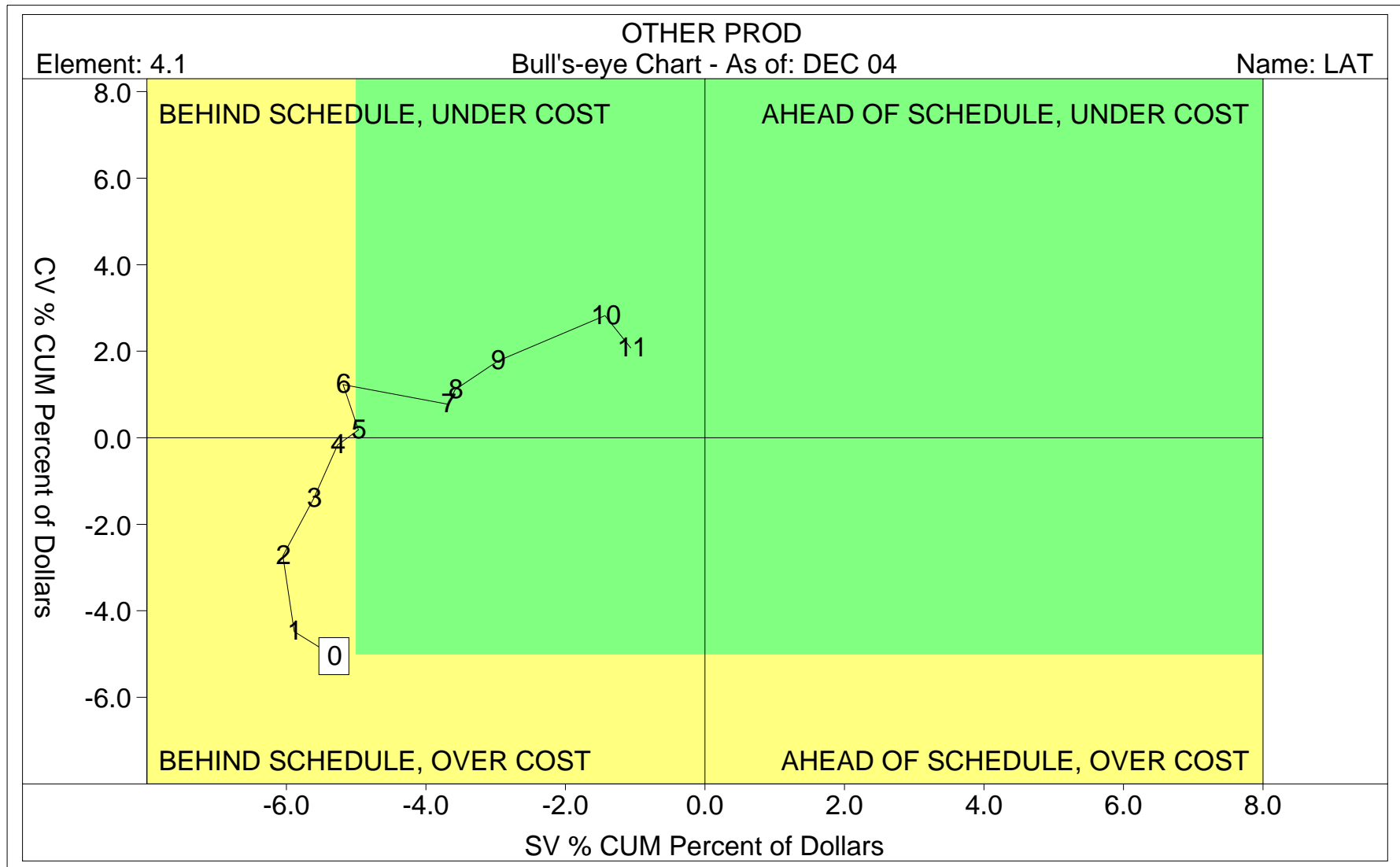
Cpi_Fcst: CPI (to date) EAC Forecast = BAC / CPI

CpiSpi_Fcst: Combination CPI and SPI EAC Forecast = ACWP + (BAC - BCWP) / (CPI * SPI)

CPI and SPI Change Thresholds	
■	Worse than 0.85
■	Between 0.95 and 1.10
■	Between 0.85 and 0.95
■	Better than 1.10

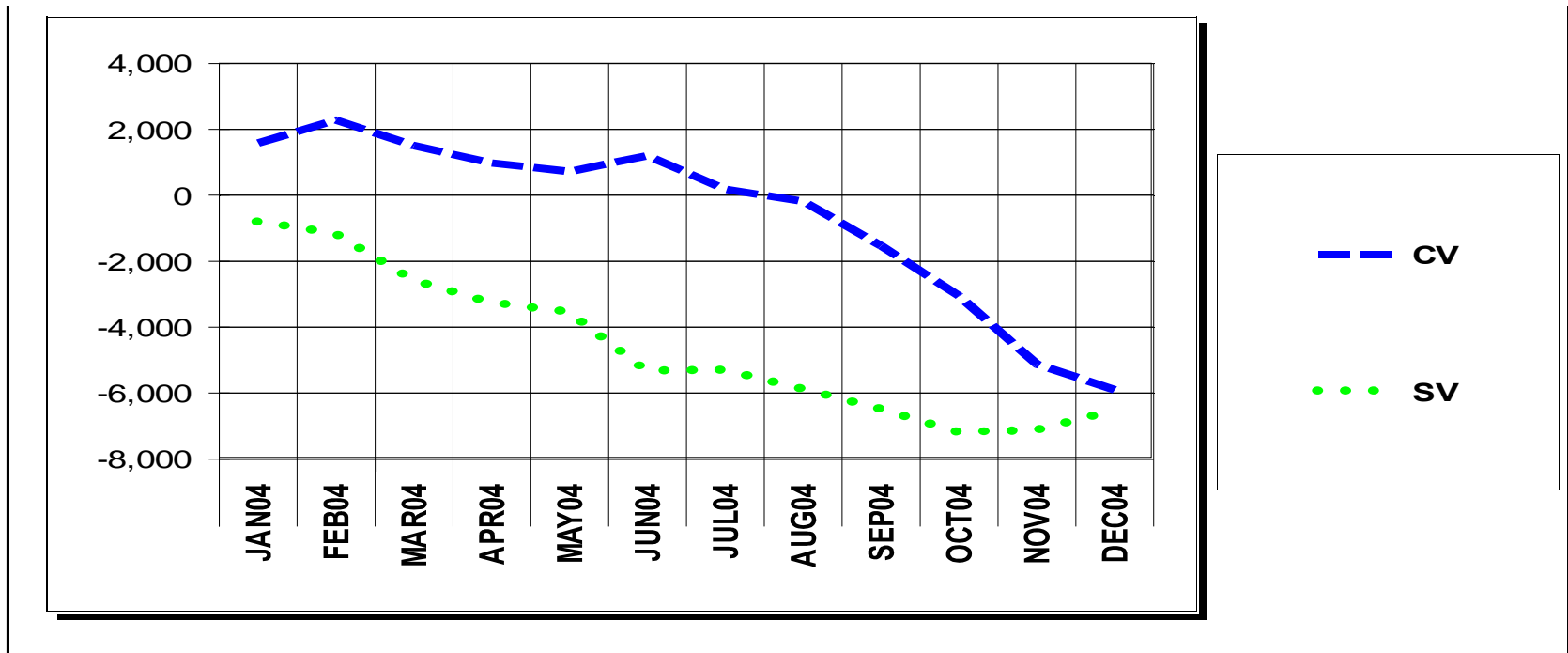


Variance Analysis

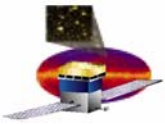




CV and SV Chart



	JAN04	FEB04	MAR04	APR04	MAY04	JUN04	JUL04	AUG04	SEP04	OCT04	NOV04	DEC04
BCWS	77,394	81,916	87,277	91,518	96,621	103,131	107,062	111,988	115,928	119,051	121,471	123,269
BCWP	76,574	80,742	84,687	88,243	93,063	97,784	101,746	106,092	109,429	111,850	114,323	116,715
ACWP	74,989	78,460	83,184	87,264	92,340	96,584	101,567	106,275	110,961	114,903	119,446	122,613
CV	1,585	2,281	1,503	979	723	1,199	179	-183	-1,532	-3,053	-5,124	-5,898
SV	-820	-1,175	-2,590	-3,274	-3,558	-5,348	-5,316	-5,895	-6,499	-7,201	-7,148	-6,554



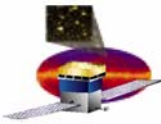
Lockheed/Martin Contract

- L/M is designing, fabricating, and testing the radiators, cross-LAT plate and heat pipes.
- Currently DOE has approved a contract value of \$7.5M
 - Fixed price, time and materials contract
- Project needs to add \$1M to this contract to complete work
 - Directed L/M to stop work on test planning and fixtures and complete the hardware within current funding
 - Needs to be sole sourced for continuity
- Acting Stanford Site Office Manager is providing support for getting the \$1M addition through the DOE system.



Level 1 & 2 Milestones

Activity ID	Activity Description	Baseline Finish	Bsln Var	Early Finish	Timeline											
					FY01	FY02	FY03	FY04	FY05	FY06						
DOE/NASA Joint Oversight Group (Level 1)																
1M1P000000	DOE Critical Decision (CD) 0 Approval	06/25/01A	0	06/25/01A	▼											
1M1P000010	CD-1 Approval	07/23/02A	0	07/23/02A		▼										
1M1P000020	CD-2 Approval	11/08/02A	0	11/08/02A			▼									
1M1P000030	CD-3 Approval	09/03/03A	0	09/03/03A				▼								
1M1P000060	Flight GRID Complete	09/15/04*	-38	11/08/04A					▼							
1M1P000040	CD-4 Approval	03/15/06*	0	03/15/06*										▼		
DOE/NASA Federal Project Managers (Level 2)																
1M1BF00000	Launch Balloon Flight	08/01/01A	0	08/01/01A	▼											
1M1000100	Instrument Preliminary Design Review	01/08/02A	0	01/08/02A		▼										
1M1000110	I-CDR (Critical Design Review)	05/16/03A	0	05/16/03A			▼									
1M1000740	Start LAT Integration	08/24/04*	-99	01/24/05						▼						
1M1000700	Pre Environmental Testing Review	07/14/05*	-85	11/11/05							▼					
1M1000120	PSR-(Instrument Pre-Ship Review)	12/01/05*	-60	03/07/06								▼				
Run Date: 01/25/05 15:06					GLAST LAT PROJECT					LT-T1: Level 1 && 2 Milestones					Sheet 1	
Data Date: 01/01/05					Level 1&&2 Milestones					FL-T1: Level 1 && 2 Milestones						
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Level 3 Milestones Completed in December 2004

AV	Activity ID	ND	Activity Description	Baseline Finish	Bsln Var	Early Finish	FY04			FY05						
							JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB		
Instrument Project Office (Level 3)																
4.1.5 Calorimeter																
5	1M1000210	9	Calorimeter Modules A RFI	07/09/04	-105	12/08/04A							▼			
4.1.6 ACD																
6	1M1000990	9	ACD Calibration Test Unit at SLAC, Tested & RFI	01/18/05	11	12/23/04A							▼		◆	
4.1.7 Electronics																
7	1M79100		Demo: 1553 Service	10/01/04	-43	12/03/04A				◆			▼			
Run Date							01/25/05 16:38		GLAST LAT PROJECT Completed Level 3 Milestones in Reporting Month Sort by Subsystem				LT-TC: Completed Level 3 by Subsystem		Sheet 1	
Data Date							01/01/05						FL-TC: Level 3 Milestones compl. last month			
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Remaining Level 3 Milestones

AV	Activity ID	ND	Activity Description	Baseline Finish	Bsn Var	Early Finish	FY04		FY05				FY06		
							Q3	Q4	Q1	Q2	Q3	Q4	Q1		
Instrument Project Office (Level 3)															
4.1.1 Instrument Management															
1	1M1001920		Pre-Environmental Test Review	06/07/05	-111	11/11/05								▽	
4.1.4 Tracker															
4	1M1000200	9	Tracker Modules A RFI	07/28/04	-114	01/18/05		◆		▽					
4	1M1000201	9	Tracker Modules B RFI	08/18/04	-122	02/18/05		◆		▽					
4	1M1000220	9	Tracker Modules 1 RFI	08/18/04	-133	03/08/05		◆		▽					
4	1M1000221	9	Tracker Modules 2 RFI	09/08/04	-124	03/15/05		◆		▽					
4	1M1000250	9	Flight Tracker Tower 3 RFI	09/08/04	-144	04/12/05		◆			▽				
4	1M1000251	9	Flight Tracker Tower 4 RFI	10/14/04	-123	04/19/05			◆			▽			
4	1M1000260	9	Flight Tracker Tower 5 RFI	10/14/04	-139	05/11/05			◆				▽		
4	1M1000261	9	Flight Tracker Tower 6 RFI	11/05/04	-126	05/16/05			◆					▽	
4	1M1000270	9	Flight Tracker Tower 7 RFI	11/05/04	-135	05/27/05			◆					▽	
4	1M1000271	9	Flight Tracker Tower 8 RFI	11/24/04	-126	06/03/05			◆					▽	
4	1M1000280	9	Flight Tracker Tower 9 RFI	11/24/04	-136	06/17/05			◆					▽	
4	1M1000281	9	Flight Tracker Tower 10 RFI	12/17/04	-125	06/23/05			◆					▽	
4	1M1000290	9	Flight Tracker Tower 11 RFI	12/17/04	-131	07/01/05			◆					▽	
Run Date 01/25/05 16:29							GLAST LAT PROJECT							LT-T3: Remaining Level 3 by Subsystem	
Data Date 01/01/05							Remaining Level 3 Milestones							FL-T3: Remaining L3 Milestones	
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Remaining Level 3 Milestones

AV	Activity ID	ND	Activity Description	Baseline Finish	Bsn Var	Early Finish	FY04		FY05				FY06
							Q3	Q4	Q1	Q2	Q3	Q4	Q1
4.1.4 Tracker													
4	1M1000291	9	Flight Tracker Tower 12 RFI	01/11/05	-125	07/11/05				◆		▽	
4	1M1000300	9	Flight Tracker Tower 13 RFI	01/11/05	-134	07/22/05				◆		▽	
4	1M1000301	9	Flight Tracker Tower 14 RFI	01/25/05	-130	07/29/05				◆		▽	
4	1M1000310	9	Flight Tracker Tower 15 RFI	01/25/05	-155	09/02/05				◆		▽	
4	1M1000311	9	Flight Tracker Tower 16 RFI	02/08/05	-151	09/13/05				◆		▽	
4.1.5 Calorimeter													
5	1M1500	9	Calorimeter Modules B RFI	07/09/04	-129	01/20/05	◆			▽			
5	1M1000400	9	Flight Calorimeter Tower 3 RFI	08/17/04	-104	01/24/05		◆		▽			
5	1M1000230	9	Calorimeter Modules 1 RFI	07/30/04	-119	01/27/05		◆		▽			
5	1M1510	9	Calorimeter Modules 2 RFI	08/02/04	-118	01/27/05		◆		▽			
5	1M1000390	9	Flight Calorimeter Tower 5 RFI	09/15/04	-106	02/24/05			◆		▽		
5	1M1520	9	Flight Calorimeter Tower 4 RFI	08/17/04	-126	02/24/05			◆		▽		
5	1M1000380	9	Flight Calorimeter Tower 7 RFI	10/11/04	-107	03/23/05				◆		▽	
5	1M1530	9	Flight Calorimeter Tower 6 RFI	09/15/04	-125	03/23/05				◆		▽	
5	1M1000370	9	Flight Calorimeter Tower 9 RFI	11/02/04	-97	03/31/05					◆		▽
5	1M1540	9	Flight Calorimeter Tower 8 RFI	10/11/04	-113	03/31/05					◆		▽
Run Date 01/25/05 16:29							GLAST LAT PROJECT				LT-T3: Remaining Level 3 by Subsystem		Sheet 2
Data Date 01/01/05							Remaining Level 3 Milestones				FL-T3: Remaining L3 Milestones		
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Remaining Level 3 Milestones

AV	Activity ID	ND	Activity Description	Baseline Finish	Bsln Var	Early Finish	FY04		FY05				FY06	
							Q3	Q4	Q1	Q2	Q3	Q4	Q1	
4.1.5 Calorimeter:														
5	1M1000360	9	Flight Calorimeter Tower 11 RFI	11/16/04	-97	04/14/05			◆		▽			
5	1M1550	9	Flight Calorimeter Tower 10 RFI	11/02/04	-107	04/14/05			◆		▽			
5	1M1000350	9	Flight Calorimeter Tower 13 RFI	12/02/04	-93	04/22/05			◆		▽			
5	1M1560	9	Flight Calorimeter Tower 12 RFI	11/15/04	-104	04/22/05			◆		▽			
5	1M1000340	9	Flight Calorimeter Tower 15 RFI (Spare)	01/06/05	-79	04/29/05				◆	▽			
5	1M1570	9	Flight Calorimeter Tower 14 RFI	12/02/04	-98	04/29/05			◆		▽			
5	1M1580	9	Flight Calorimeter Tower 16 RFI (Spare)	01/06/05	-91	05/17/05				◆	▽			
4.1.6 ACD														
6	1M1001000	9	ACD Test Scripts (from ACD to I&T)	07/01/04	-131	01/14/05	◆			▽				
6	1M1000410	9	ACD Flight Unit at SLAC, Tested/Inspected & RFI	11/03/04	-138	05/31/05			◆		▽			
4.1.7 Electronics:														
7	1M79110		Demo: ISIS FQT	10/08/04	-57	01/07/05			◆	▽				
7	1M79230		Demo: Housekeeping	01/28/05	0	01/28/05				▽	◆			
7	1M79240		Demo: Event Integrity and Delivery	01/28/05	0	01/28/05				▽	◆			
7	1M79250		Demo: Event Filtering	01/28/05	0	01/28/05				▽	◆			
7	1M79260		Demo: GRB Detection and Response	01/28/05	0	01/28/05				▽	◆			
Run Date 01/25/05 16:29							GLAST LAT PROJECT				LT-T3: Remaining Level 3 by Subsystem		Sheet 3	
Data Date 01/01/05							Remaining Level 3 Milestones				FL-T3: Remaining L3 Milestones			
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Remaining Level 3 Milestones

AV	Activity ID	ND	Activity Description	Baseline Finish	Bsln Var	Early Finish	FY04		FY05				FY06	
							Q3	Q4	Q1	Q2	Q3	Q4	Q1	
4.1.7 Electronics:														
7	1M79090		Demo: Command and Telemetry	10/01/04	-81	02/04/05								
7	1M79160		Demo: File and Memory Management	12/03/04	-38	02/04/05								
7	1M79170		Demo: Spacecraft Interfaces	12/03/04	-38	02/04/05								
7	1M79180		Demo: Inter-task Communications	12/03/04	-38	02/04/05								
7	1M79190		Demo: Command and Telemetry Data Dictionary	01/07/05	-19	02/04/05								
7	1M79200		Demo: Thermal Control	01/07/05	-19	02/04/05								
7	1M79210		Demo: Watchdog	01/07/05	-19	02/04/05								
7	1M79220		Demo: Charge Injection Calibration	01/07/05	-19	02/04/05								
7	1M79001010	9	Flight TEM Assy A: Elec to I&T	06/07/04	-167	02/10/05								
7	1M79001020	9	Flight TEM Assy B: Elec to I&T	06/14/04	-162	02/10/05								
7	1M79002010	9	Flight TEM PS Assy A: Elec to I&T	05/12/04	-184	02/10/05								
7	1M79002020	9	Flight TEM PS Assy B: Elec to I&T	05/19/04	-179	02/10/05								
7	1M79270		Demo: Mode Control	02/25/05	0	02/25/05								
7	1M79280		Demo: Diagnostics	02/25/05	0	02/25/05								
7	1M79003010	9	Flight Cables Assy A: Elec to I&T	05/10/04	-198	03/01/05								
7	1M79003020	9	Flight Cables Assy B: Elec to I&T	05/10/04	-200	03/03/05								

Run Date 01/25/05 16:29
 Data Date 01/01/05
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Remaining Level 3 Milestones
Sort by Subsystem

LT-T3: Remaining Level 3 by Subsystem
 FL-T3: Remaining L3 Milestones

Sheet 4



Remaining Level 3 Milestones

AV	Activity ID	ND	Activity Description	Baseline Finish	Bsln Var	Early Finish	FY04		FY05				FY06	
							Q3	Q4	Q1	Q2	Q3	Q4	Q1	
4.1.7 Electronics														
7	1M79003030	9	Flight Cables Assy 1: Elec to I&T	06/10/04	-180	03/07/05	◆				▽			
7	1M79003040	9	Flight Cables Assy 2: Elec to I&T	06/10/04	-182	03/09/05	◆				▽			
7	1M79003050	9	Flight Cables Assy 3: Elec to I&T	06/10/04	-184	03/11/05	◆				▽			
7	1M79003060	9	Flight Cables Assy 4: Elec to I&T	06/10/04	-186	03/15/05	◆				▽			
7	1M79003070	9	Flight Cables Assy 5: Elec to I&T	06/28/04	-176	03/17/05	◆				▽			
7	1M79003080	9	Flight Cables Assy 6: Elec to I&T	06/28/04	-178	03/21/05	◆				▽			
7	1M79003090	9	Flight Cables Assy 7: Elec to I&T	06/28/04	-180	03/23/05	◆				▽			
7	1M79003100	9	Flight Cables Assy 8: Elec to I&T	06/28/04	-182	03/25/05	◆				▽			
7	1M79003110	9	Flight Cables Assy 9: Elec to I&T	06/28/04	-184	03/29/05	◆				▽			
7	1M7941440	9	Final EGSE incl S/C Sim, FSW-Elec to I&T	12/13/04	-68	03/29/05			◆		▽			
7	1M79003120	9	Flight Cables Assy 10: Elec to I&T	06/28/04	-186	03/31/05	◆				▽			
7	1M79003130	9	Flight Cables Assy 11: Elec to I&T	07/15/04	-176	04/04/05	◆				▽			
7	1M79003140	9	Flight Cables Assy 12: Elec to I&T	07/15/04	-178	04/06/05	◆				▽			
7	1M79003150	9	Flight Cables Assy 13: Elec to I&T	07/15/04	-180	04/08/05	◆				▽			
7	1M79003160	9	Flight Cables Assy 14: Elec to I&T	07/15/04	-182	04/12/05	◆				▽			
7	1M79003170	9	Flight Cables Assy 15: Elec to I&T	07/15/04	-184	04/14/05	◆				▽			

Run Date 01/25/05 16:29
 Data Date 01/01/05
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Remaining Level 3 Milestones
 Sort by Subsystem

LT-T3: Remaining Level 3 by Subsystem
 FL-T3: Remaining L3 Milestones

Sheet 5



Remaining Level 3 Milestones

AV	Activity ID	ND	Activity Description	Baseline Finish	Bsn Var	Early Finish	FY04		FY05				FY06
							Q3	Q4	Q1	Q2	Q3	Q4	Q1
4.1.7 Electronics													
7	1M79003180	9	Flight Cables Assy 16: Elec to I&T	07/15/04	-186	04/18/05		◆				▽	
7	1M79001030	9	Flight TEM Assy 1: Elec to I&T	08/03/04	-177	04/22/05			◆			▽	
7	1M79002030	9	Flight TEM PS Assy 1: Elec to I&T	07/01/04	-199	04/22/05		◆				▽	
7	1M79001040	9	Flight TEM Assy 2: Elec to I&T	08/10/04	-176	04/28/05			◆			▽	
7	1M79002040	9	Flight TEM PS Assy 2: Elec to I&T	07/09/04	-198	04/28/05		◆				▽	
7	1M79001050	9	Flight TEM Assy 3: Elec to I&T	08/17/04	-175	05/04/05			◆			▽	
7	1M79002050	9	Flight TEM PS Assy 3: Elec to I&T	07/16/04	-197	05/04/05		◆				▽	
7	1M79001060	9	Flight TEM Assy 4: Elec to I&T	08/24/04	-174	05/10/05			◆			▽	
7	1M79002060	9	Flight TEM PS Assy 4: Elec to I&T	07/23/04	-196	05/10/05		◆				▽	
7	1M79001070	9	Flight TEM Assy 5: Elec to I&T	08/31/04	-173	05/16/05			◆			▽	
7	1M79002070	9	Flight TEM PS Assy 5: Elec to I&T	07/30/04	-195	05/16/05		◆				▽	
7	1M79001080	9	Flight TEM Assy 6: Elec to I&T	09/08/04	-172	05/20/05			◆			▽	
7	1M79002080	9	Flight TEM PS Assy 6: Elec to I&T	08/06/04	-194	05/20/05		◆				▽	
7	1M79001090	9	Flight TEM Assy 7: Elec to I&T	09/15/04	-171	05/26/05			◆			▽	
7	1M79002090	9	Flight TEM PS Assy 7: Elec to I&T	08/13/04	-193	05/26/05		◆				▽	
7	1M7941110	9	Flight Harness-Elec to I&T	10/20/04	-149	06/01/05				◆		▽	

Run Date 01/25/05 16:29
 Data Date 01/01/05
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GLAST LAT PROJECT
Remaining Level 3 Milestones
Sort by Subsystem

LT-T3: Remaining Level 3 by Subsystem
 FL-T3: Remaining L3 Milestones

Sheet 6



Remaining Level 3 Milestones

AV	Activity ID	ND	Activity Description	Baseline Finish	Bsn Var	Early Finish	FY04		FY05				FY06	
							Q3	Q4	Q1	Q2	Q3	Q4	Q1	
4.1.7 Electronics														
7	1M79001100	9	Flight TEM Assy 8: Elec to I&T	09/22/04	-170	06/02/05			◆				▽	
7	1M79002100	9	Flight TEM PS Assy 8: Elec to I&T	08/20/04	-192	06/02/05		◆					▽	
7	1M79001110	9	Flight TEM Assy 9: Elec to I&T	09/29/04	-169	06/08/05			◆				▽	
7	1M79002110	9	Flight TEM PS Assy 9: Elec to I&T	08/25/04	-193	06/08/05		◆					▽	
7	1M79001120	9	Flight TEM Assy 10: Elec to I&T	10/06/04	-168	06/14/05			◆				▽	
7	1M79002120	9	Flight TEM PS Assy 10: Elec to I&T	08/30/04	-194	06/14/05		◆					▽	
7	1M79001130	9	Flight TEM Assy 11: Elec to I&T	10/13/04	-167	06/20/05			◆				▽	
7	1M79002130	9	Flight TEM PS Assy 11: Elec to I&T	09/02/04	-195	06/20/05		◆					▽	
7	1M79001140	9	Flight TEM Assy 12: Elec to I&T	10/20/04	-166	06/24/05			◆				▽	
7	1M79002140	9	Flight TEM PS Assy 12: Elec to I&T	09/08/04	-196	06/24/05		◆					▽	
7	1M79001150	9	Flight TEM Assy 13: Elec to I&T	10/27/04	-165	06/30/05			◆				▽	
7	1M79002150	9	Flight TEM PS Assy 13: Elec to I&T	09/13/04	-197	06/30/05		◆					▽	
7	1M7941070	9	Flight GASU Box-Elec to I&T	11/01/04*	-163	07/01/05			◆				▽	
7	1M7942000	9	Flight PDU Box-Elec to I&T	10/13/04	-176	07/01/05			◆				▽	
7	1M79001160	9	Flight TEM Assy 14: Elec to I&T	11/03/04	-164	07/07/05			◆				▽	
7	1M79002160	9	Flight TEM PS Assy 14: Elec to I&T	09/16/04	-198	07/07/05		◆					▽	

Run Date 01/25/05 16:29
 Data Date 01/01/05
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GLAST LAT PROJECT
Remaining Level 3 Milestones
Sort by Subsystem

LT-T3: Remaining Level 3 by Subsystem
 FL-T3: Remaining L3 Milestones
 Sheet 7



Remaining Level 3 Milestones

AV	Activity ID	ND	Activity Description	Baseline Finish	Bsln Var	Early Finish	FY04		FY05				FY06		
							Q3	Q4	Q1	Q2	Q3	Q4	Q1		
4.1.7 Electronics															
7	1M79001170	9	Flight TEM Assy 15: Elec to I&T	11/10/04	-163	07/13/05			◆				▽		
7	1M79002170	9	Flight TEM PS Assy 15: Elec to I&T	09/21/04	-199	07/13/05			◆				▽		
7	1M79001180	9	Flight TEM Assy 16: Elec to I&T	11/17/04	-162	07/19/05				◆			▽		
7	1M79002180	9	Flight TEM PS Assy 16: Elec to I&T	09/24/04	-200	07/19/05			◆				▽		
7	1M7941080	9	Flight SIU-Elec to I&T	10/13/04	-197	08/02/05				◆			▽		
7	1M7941090	9	Flight Event Processor Units-Elec to I&T	11/01/04	-184	08/02/05				◆			▽		
4.1.8 Mechanical															
8	1M1000240	9	Flight Grid RFI-Mech to I&T	07/22/04	-122	01/24/05		◆			▽				
8	1M941710	9	X-LAT Thermal Plate RFI from Mech to I&T	08/12/04	-119	02/09/05			◆		▽				
8	1M941720	9	Radiators ready for I&T (from Mech to I&T)	03/17/05	-25	04/21/05						▽			
4.1.9 I&T															
9	1M1001790	5	EM2 TEM/PS (return FMA) from I&T to CAL	07/23/04	-130	02/04/05*		◆			▽				
9	1M1001820	5	EM2 TEM/PS (return FM2) from I&T to CAL	08/16/04	-118	02/10/05*			◆		▽				
9	1M1001800	5	EM2 TEM/PS (return FMB)from I&T to CAL	07/23/04	-135	02/11/05*		◆			▽				
9	1M1001830	5	EM2 TEM/PS (return FM3) from I&T to CAL	08/31/04	-108	02/11/05*			◆		▽				
9	1M1001810	5	EM2 TEM/PS (return FM1) from I&T to CAL	08/13/04	-125	02/18/05*			◆		▽				
Run Date							01/25/05 16:29		GLAST LAT PROJECT				LT-T3: Remaining Level 3 by Subsystem		Sheet 8
Data Date							01/01/05		Remaining Level 3 Milestones				FL-T3: Remaining L3 Milestones		
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Remaining Level 3 Milestones

AV	Activity ID	ND	Activity Description	Baseline Finish	Bsln Var	Early Finish	FY04		FY05				FY06	
							Q3	Q4	Q1	Q2	Q3	Q4	Q1	
4.1.9 I&T														
9	1M1001840	5	EM2 TEM/PS (return FM4) from I&T to CAL	08/31/04	-126	03/10/05*		◆		▽				
9	1M1001850	5	EM2 TEM/PS (return FM5) from I&T to CAL	09/29/04	-106	03/10/05*		◆		▽				
9	1M1001860	5	EM2 TEM/PS (return FM6) from I&T to CAL	09/29/04	-125	04/06/05*		◆		▽				
9	1M1000130	2	LAT Ready to Ship to NRL for Env Test	06/08/05	-110	11/11/05					◆		▽	
4.1.B ISOC														
B	1M1000112	B	Mission Operations Review (L-21mo.)	11/10/04	-157	07/05/05			◆				▽	
B	1M7941270	B	Ground System Interface Test start	11/10/04	-157	07/05/05			◆				▽	

Run Date 01/25/05 16:29
 Data Date 01/01/05
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Remaining Level 3 Milestones
 Sort by Subsystem

LT-T3: Remaining Level 3 by Subsystem
 FL-T3: Remaining L3 Milestones
 Sheet 9



Current Critical Path to Pre-Environmental Test Review

