

GLAST Large Area Telescope:

Project Status

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Rebaseline Plan

- Rebaseline proposal is for \$24.6M with \$21.8M in FY05
- Capital Equipment Project is capped at \$45M (currently \$42M)
 - On-going operating funds are limited to \$5M per year
 - Previously \$8.6M for FY06
- Cost plus commitments January 31 on DOE funds are \$39.6M.
- Office of Science requested that the project identify specific activities which are funded by DOE alone and stay within the \$45M cap
 - This proposal identifies the fabrication of flight electronics boxes, system engineering & project controls for these activities
 - The period of performance will be the remainder of FY05
- The DOE \$3M plus the \$17M from NASA gives an additional \$20M in funding for the LAT for FY05
 - The work in the rebaseline has been descoped to reduce FY05 costs by \$1.8M

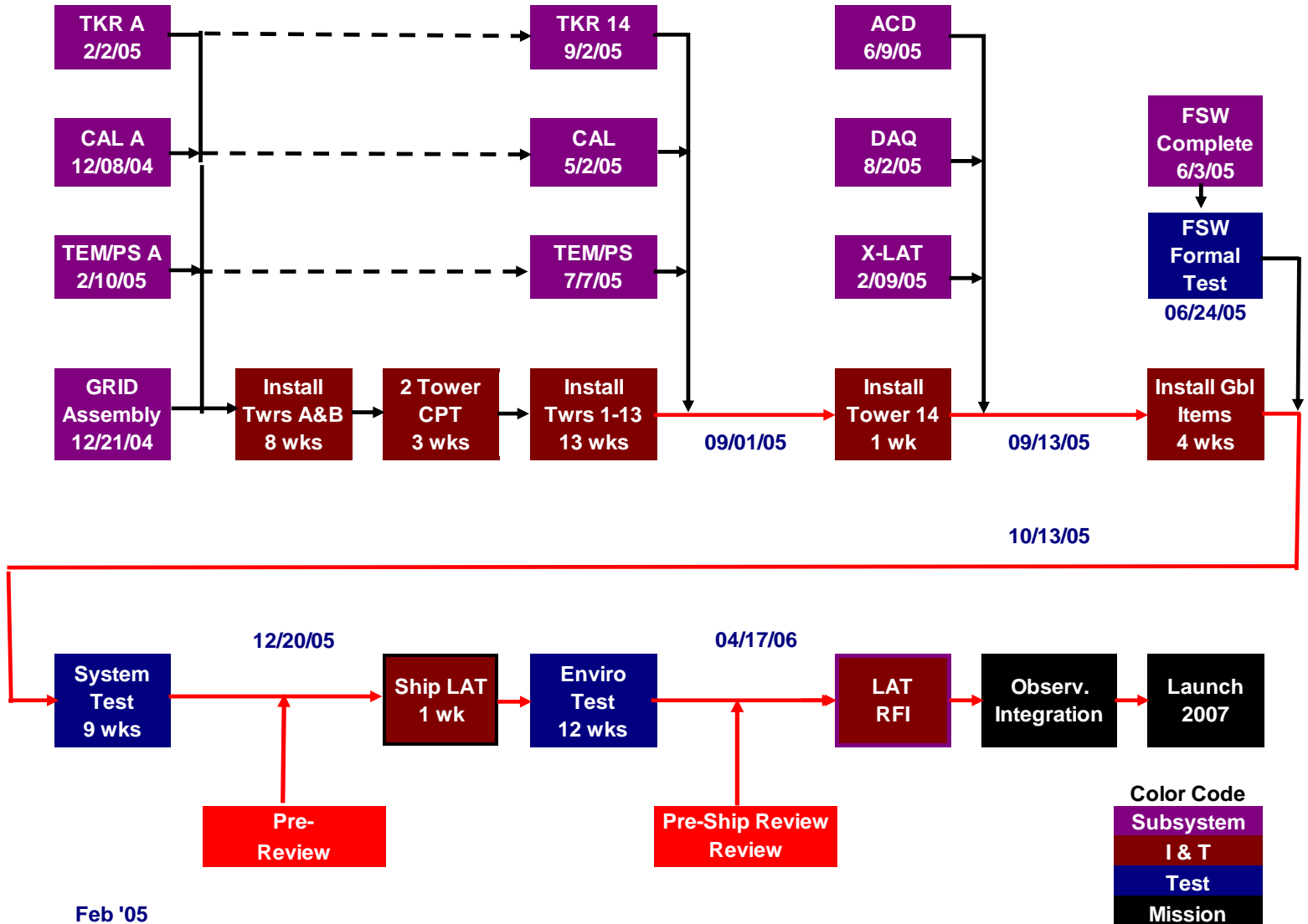


Instrument Status – Overview

- Two Tracker flight towers at SLAC
 - Need to demonstrate production rate in Italy
- Five flight Calorimeters at SLAC
- Two flight Tower Electronic Modules and Power Supplies at SLAC
- Grid in I&T
- Instrument simulator shipped to Spectrum Astro
- Cost and schedule issues dominated by vendor performance
 - Lockheed Martin Thermal control system
 - Teledyne MCM Production
 - Parlex Tracker cables and pitch adapters
 - General Technologies TEM and TEM PS fabrication
- I&T of the instrument is just starting
 - Need to demonstrate integration and test rate



LAT Schedule



Feb '05



Project Rebaseline

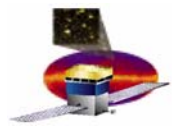


Status of FY05 Rebaseline

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	

Components of the DOE closeout project

Subsystem	Cost (K\$)	Conting. %	Conting. \$
4.1.1.2 Project Controls	\$498	10%	\$50
4.1.2 System Engineering	\$884	10%	\$88
4.1.7 Electronics DAQ	\$3,058	25%	\$764
4.1.7.1 Management	273		
4.1.7.4.3.4 TEMs	134		
4.1.7.4.5.4 LCB	186		
4.1.7.4.4.4 & 4.1.7.4.8.4 GASU	475		
4.1.7.4.9 Test Bed	699		
4.1.7.5 SIU	585		
4.1.7.6 Power Conditioning	306		
4.1.7.A EGSE	68		
4.1.7.C I&T Support	332		
TOTAL	\$5,822	20%	\$903



Status of GLAST Mission office rebaseline

- Current LAT plan based on a NASA planning number of \$17M additional funds for FY05
- DOE funding for FY06 reduced from \$8.6M to \$5.0M
- NASA funding for FY06 increased from \$9.4M to \$12.2M
 - \$2.8M increase from the rebaseline proposal
- This leaves a \$3.6M gap relative to the rebaseline proposal
- NASA management is investigating descope options
 - The configuration being investigated is:
 - 16 Calorimeters
 - 12 Tracker towers
 - Remaining instrument per the current baseline
 - Saves approximately 1 month of schedule
 - Mission management making presentation to Anne Kinney on February 24



Summary

- **GLAST is a major tool for understanding the basic physics of some of the most extreme phenomena in the Universe**
 - **Strong scientific interest and support**
- **The flight instrument is beginning to come together**
- **The primary challenge is to execute the end game on schedule**
- **The major technical issues are behind us**
 - **Examples of all the flight components exist and have been tested**
- **This is a complex instrument and a challenge to integrate and test**
 - **I&T is just beginning**
- **NASA continues its commitment to executing the GLAST mission**