

GLAST Large Area Telescope: I & T Input to Monthly Technical/Cost/Schedule Review 01/05/06

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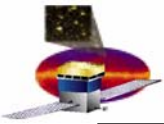
Last Month's Accomplishments (1 of 2)

- **Management**
 - **Supporting Environmental Test Planning**
 - **Maintaining Daily Planning/Hand-off Meetings**
- **IFCT**
 - **Integrated flight GASU**
 - **Completed fly-away instrumentation**
 - **Running Phase 0 LATTE 4 tests**

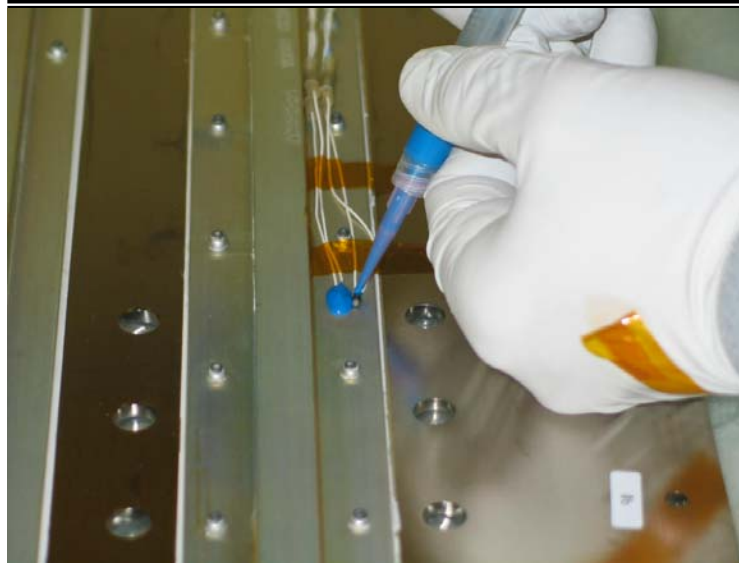


Last Month's Accomplishments (2 of 2)

- **SVAC**
 - Preparing for full LAT tests (Phase 1 and 2)
- **Online**
 - Troubleshooting full LAT NCR's
 - Developing LICOS scripts for system level test (Phase 1 and 2).



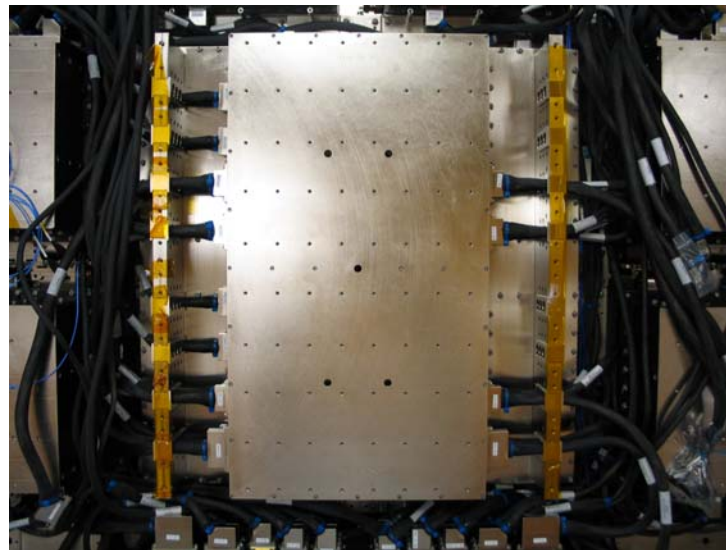
I&T Activities



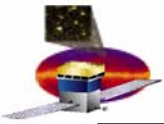
X-LAT Plate thermistor installation



Grid chiller bar installation

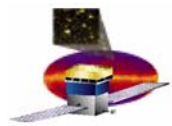


Flight GASU Installed



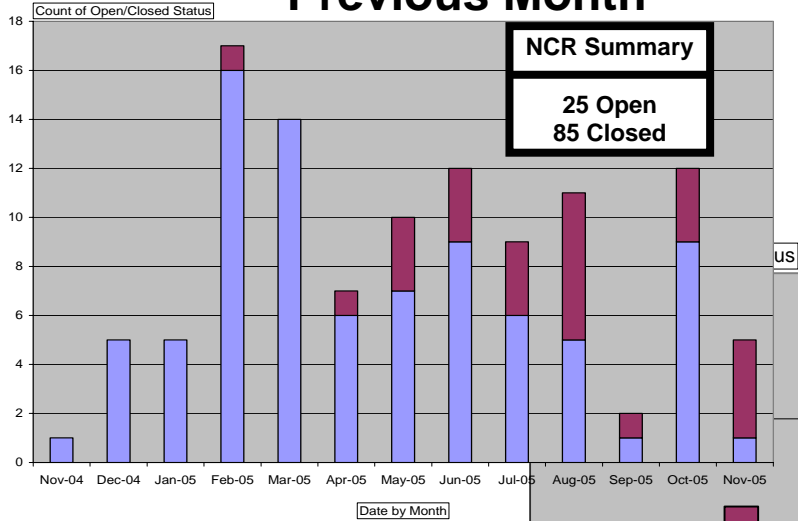
Steps to Ship to NRL

- Phase 0 – Hardware check out
 - Hardware
 - ACD
 - Flt PDU, Flt GASU (EM GASU), Flt Cables, EMI Skirt, no SIU/EPU
 - Software
 - LATTE 4
 - Exit
 - Successful LATTE 4 CPT
- Phase 1 – Software check out
 - Hardware
 - Flt PDU, Flt GASU (EM GASU), 2 (1) Flt SIU, 3 (2) Flt EPU, VSC, Control/Pwr Racks
 - Software
 - FSW, VSC, LICOS, Configuration Database
 - Exit
 - Successful LICOS CPT
- Phase 2 – Run for the record
 - Hardware
 - Full complement of flight hardware (See Above)
 - Software
 - Flight release of FSW, VSC, LICOS, Configuration Database
 - Exit
 - Successful LICOS CPT, SVAC, E2E, Verification w/SIIS

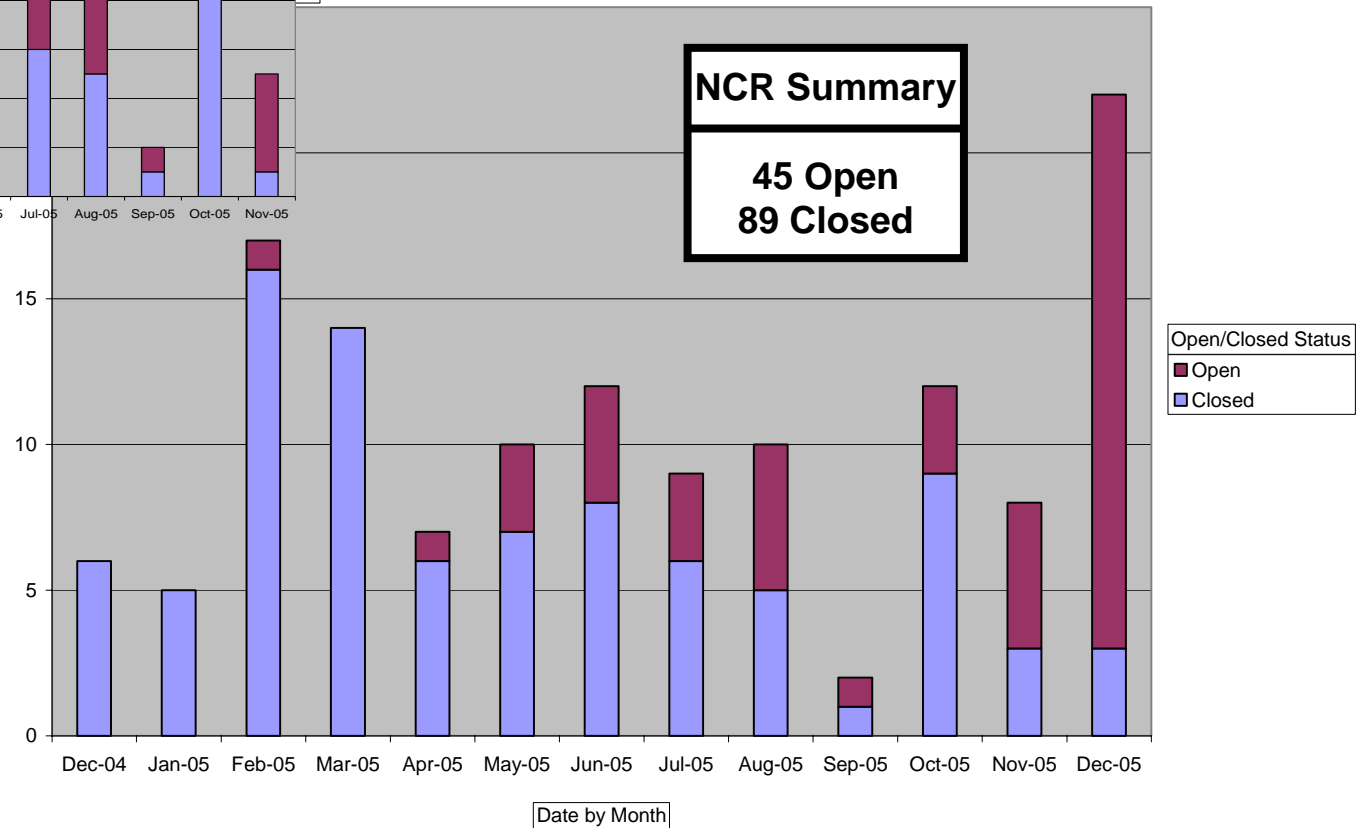


I&T NCRs by Month Open/Closed Status

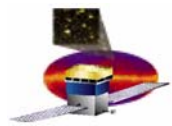
Previous Month



Current Status

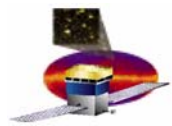


Month NCR Opened



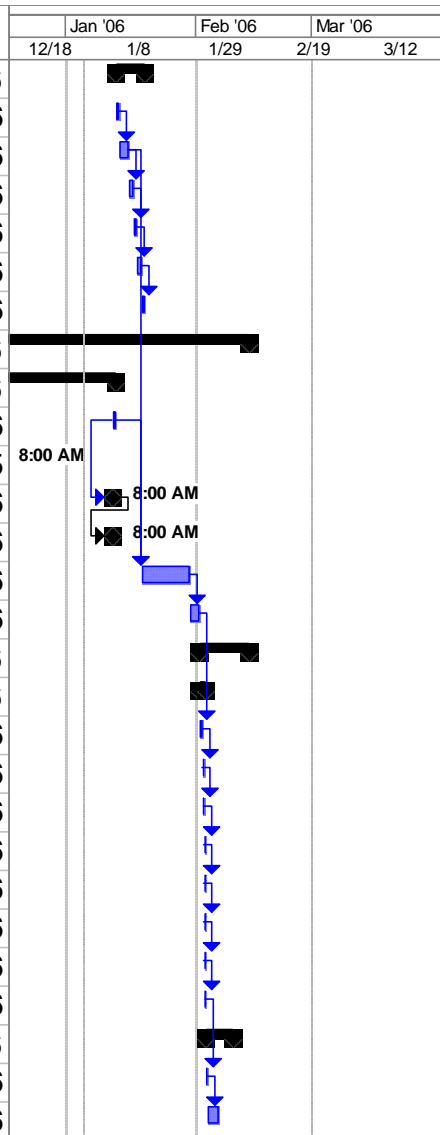
I&T Detail Schedule (1 of 2)

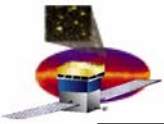
ID	Task Name	Start	% Complete	Finish	Gantt Chart				
					Jan '06	Feb '06	Mar '06		
					12/18	1/8	1/29	2/19	3/12
1	Tracker Towers	1/14/05	0%	11/7/05	[Gantt bar]				
56	Electronics Receiving	3/19/04	0%	12/9/05	[Gantt bar]				
123	MGSE	10/4/05	97%	1/13/06	[Gantt bar]				
231	Install LAT hardware	11/3/05	86%	1/19/06	[Gantt bar]				
243	Grid Mechanical Part Integration	11/3/05	11%	1/19/06	[Gantt bar]				
244	Heater Control Box (HCB) Integrations	1/13/06	0%	1/16/06	[Gantt bar]				
245	Install Temp Sensor Brackets	1/16/06	0%	1/16/06	[Gantt bar]				
246	Fit check Blanket Bars	1/16/06	0%	1/17/06	[Gantt bar]				
247	Mount Blanket Bar Brackets	1/17/06	0%	1/18/06	[Gantt bar]				
248	Grid Box Electrical Connection	11/3/05	33%	1/19/06	[Gantt bar]				
250	Check Grid heaters, thermal sensors	1/18/06	0%	1/19/06	[Gantt bar]				
279	ACD Installation & Test with 16 Towers	11/2/05	66%	1/13/06	[Gantt bar]				
287	LATTE 4.x/ACD/16 tower testing	11/28/05	62%	1/13/06	[Gantt bar]				
295	ACD Channel Uniformity	12/19/05	50%	1/6/06	[Gantt bar]				
301	CAL FLE Muon Scan	1/4/06	0%	1/4/06	[Gantt bar]				
302	CAL, TKR TREQ Alignment	1/4/06	0%	1/5/06	[Gantt bar]				
303	ACD TREQ with TKR trigger	1/5/06	0%	1/5/06	[Gantt bar]				
304	ACD, CAL, TKR TACK Scan	1/5/06	0%	1/6/06	[Gantt bar]				
305	Trigger Efficiency	1/6/06	0%	1/6/06	[Gantt bar]				
306	ACD Veto Mode Run	1/6/06	0%	1/6/06	[Gantt bar]				
307	CalibDac (CAL discriminator scans)	1/9/06	0%	1/9/06	[Gantt bar]				
308	CalibGen (CAL charge injection scan)	1/9/06	0%	1/9/06	[Gantt bar]				
309	MuTrig (CAL muon data)****	1/9/06	0%	1/9/06	[Gantt bar]				
310	TE601 (TKR threshold scan)	1/9/06	0%	1/10/06	[Gantt bar]				
311	TE602 (TKR full range charge inj. scan)	1/10/06	0%	1/10/06	[Gantt bar]				
312	TE604 (TKR charge scan at threshold)	1/10/06	0%	1/10/06	[Gantt bar]				
313	TE702 (TKR trigger jitter)	1/10/06	0%	1/11/06	[Gantt bar]				
314	e2e B-2, B-10, B-13 (1 minute ea.)	1/11/06	0%	1/11/06	[Gantt bar]				
315	e2e B-13 (15 min)	1/11/06	0%	1/11/06	[Gantt bar]				
316	e2e B-10 (15 hours)	1/11/06	0%	1/12/06	[Gantt bar]				
317	e2e B-2 (4 hours)	1/12/06	0%	1/13/06	[Gantt bar]				
318	ACD CPT (pending MRB)	12/15/05	50%	1/13/06	[Gantt bar]				
319	AEM/ACD Clock Phase Bit Test per STR 19 (pending MRB)	12/19/05	50%	1/13/06	[Gantt bar]				



I&T Detail Schedule (2 of 2)

ID	Task Name	Start	% Complete	Finish	Timeline				
					Jan '06	Feb '06	Mar '06		
					12/18	1/8	1/29	2/19	3/12
320	Phase 1 Hardware installation	1/13/06	0%	1/19/06					
321	Install two SIUs	1/13/06	0%	1/13/06					
322	Install three EPUs	1/13/06	0%	1/16/06					
323	SIU/EPU Flight Cable routing	1/16/06	0%	1/17/06					
324	SIU/EPU Safe to Mate tests	1/17/06	0%	1/18/06					
325	Power Rack Cable routing & Safe to mate	1/18/06	0%	1/19/06					
326	Control Rack Cable Routing	1/19/06	0%	1/19/06					
327	FSW/LICOS Installation	12/14/05	3%	2/13/06					
328	Phase 1 - Software Checkout	12/14/05	50%	1/12/06					
329	FSW V6.0	1/12/06	0%	1/12/06					
332	VSC	12/14/05	0%	12/14/05					
333	LICOS	1/12/06	0%	1/12/06					
334	Configuration Database	1/12/06	0%	1/12/06					
335	FSW Install and Checkout	1/19/06	0%	1/30/06					
336	LICOS Installation	1/30/06	0%	2/2/06					
337	LICOS LAT CPT, trigger, SVAC	2/2/06	0%	2/13/06					
338	Sub-series Back Door	2/2/06	0%	2/3/06					
339	LAT301 (LICOS ACD CPT-primary)	2/2/06	0%	2/2/06					
340	LAT501 (LICOS TKR CPT-primary)	2/2/06	0%	2/2/06					
341	LAT401 (LICOS CAL CPT-primary)	2/2/06	0%	2/2/06					
342	LAT511 (LICOS TKR LPT-primary)*	2/2/06	0%	2/2/06					
343	LAT211 ACD Hitmap Latching ***	2/2/06	0%	2/2/06					
344	LAT211 ACD CI Circuit Retriggering*	2/2/06	0%	2/2/06					
345	LAT071(LICOS calibration scans)*	2/3/06	0%	2/3/06					
346	LAT701 (LICOS e2e B-2, 15 min)	2/3/06	0%	2/3/06					
347	Sub-series Front Door	2/3/06	0%	2/9/06					
348	LAT001 (power on - primary)	2/3/06	0%	2/3/06					
349	LAT011 (power off -primary)	2/3/06	0%	2/6/06					

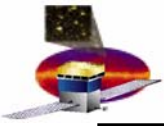




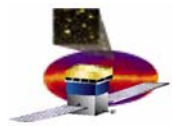
Issues & Concerns

ISSUES

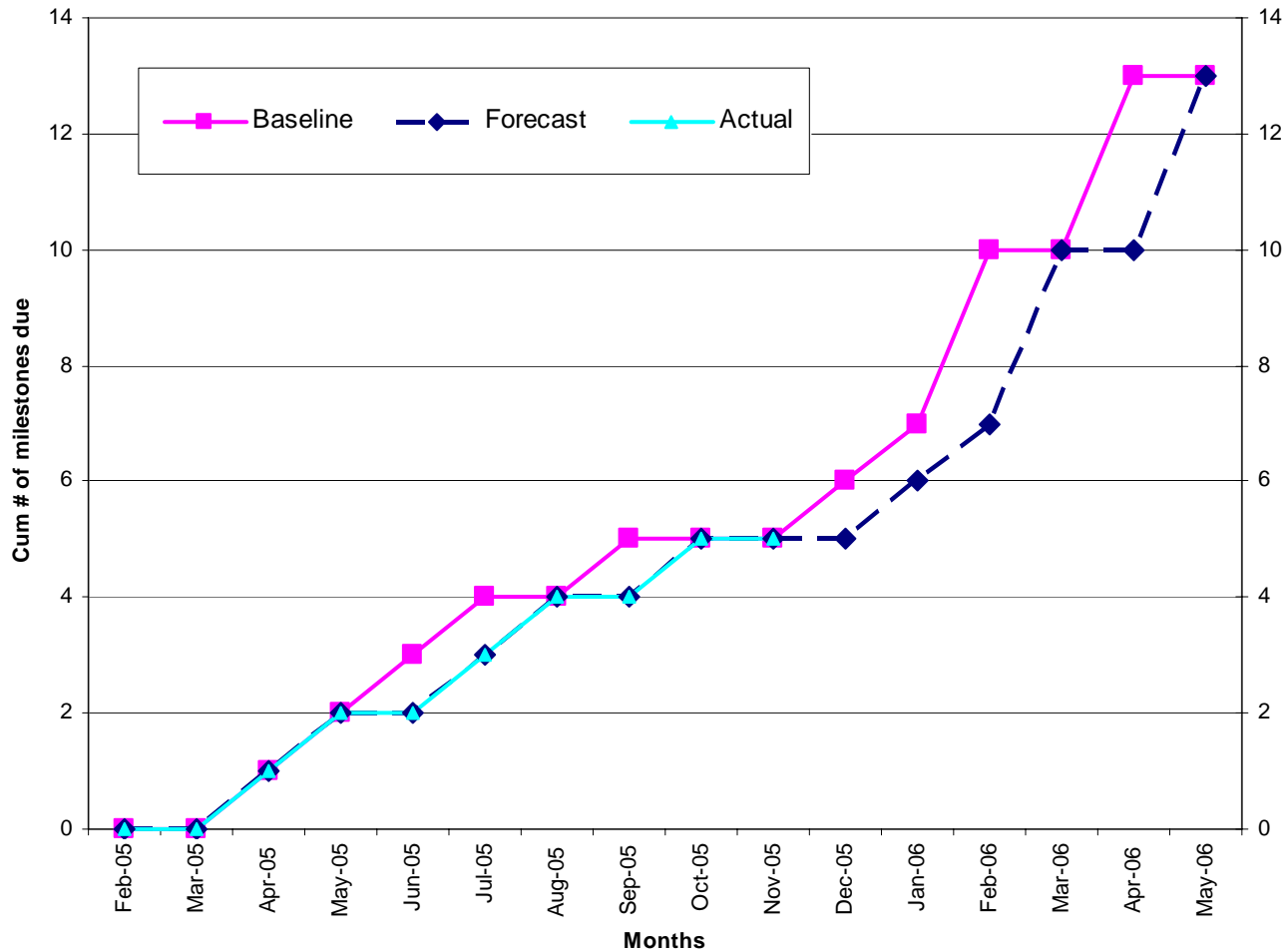
- Test durations for LAT LATTE 4 testing have been longer than anticipated.
 - Planning extended shifts and 24/7 coverage.
 - Rapid turnaround on NCR disposition and resolution.
- LICOS test script development is delayed.
- Test procedures for LAT System Test delayed by script completion.

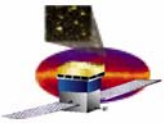


Cost/Schedule Reports for Presentation 4.1.9 Integration & Test November 2005 Month End



Level 3 Milestone Count





Level 3 Milestone List

Activity ID	Activity Description	Target Finish Date	Variance	Scheduled Finish Date	AV	ND	Timeline																	
							Q1	Q2	FY05		Q4	Q1	FY06		Q4	FY07								
4.1.9 I&T																								
Instrument Project Office (Level 3)																								
1M99030	Start 8 Tower Comprehensive Performance	06/20/05	-33	08/05/05A	9	9																		
1M1001740	Online FU S/W Final Release-I&T to ISOC	07/14/05	0	07/14/05A	9	B																		
1M99040	Start 16 Tower Comprehensive Performance	09/07/05	-30	10/19/05A	9	9																		
1M1000130	LAT Ready to Ship to NRL for Env Test	12/20/05	-23	01/31/06	9	9																		
1M19010	Ship LAT to NRL for Env Test	12/26/05	-36	02/03/06	9	9																		
1M19020	LAT EMI/EMC Test	02/01/06	-44	03/17/06	9	9																		
1M19030	LAT Sine Vibe	02/14/06	-16	03/02/06	9	9																		
1M19040	LAT Acoustic Test	02/26/06	-30	03/28/06	9	9																		
1M19050	LAT TVAC	04/15/06	-32	05/17/06	9	9																		
1M19060	LAT Weight & CG	04/17/06	-39	05/26/06	9	9																		
1M19070	Ship LAT to Spectrum Astro	04/23/06	-35	05/28/06	9	9																		

Run Date 12/20/05 15:32

GLAST LAT PROJECT
Project Milestones (Level 3)
1 Year View (+/- 6mo)

1219
LT - MS (L3)

Sheet 3 of 3

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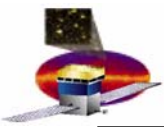


Milestone Variance Explanation

- **Schedule Impact**
 - **Delay in delivery to NRL**
- **Cost Impact**
 - **Currently underrun**
- **Corrective Action**
 - **None required**

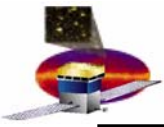
Cost Report

Reporting Category	Cost Incurred/Hours Worked				Est Cost/Hours to Complete			Estimated Final Cost/Hours		Unfilled Orders Out standing
	During Month		Cum. to Date		Detail		Balance of Contract	Contractor Estimate	Contract Value	
	Actual	Planned	Actual	Planned	DEC05	JAN06				
4.1.9 INTEGRATION & TEST										
4.1.9.1 I&T MANAGEMENT	31	52	1,369	1,457	33	67	338	1,806	1,806	1
4.1.9.3 INSTR OPS COORDINATOR	0	0	31	31	0	0	1	31	31	0
4.1.9.4 MECH GROUND SUPT EQUIP	17	24	2,137	2,151	0	0	14	2,151	2,151	99
4.1.9.5 ONLINE SOFTWARE	0	0	654	654	0	0	0	654	654	0
4.1.9.6 INTEG, FACILITIES, CONFIG & TEST	198	154	3,912	4,523	104	97	1,045	5,159	5,159	13
4.1.9.7 PARTICLE TEST	2	0	46	48	0	0	2	48	48	4
4.1.9.8 ENVIRONMENTAL TEST	153	273	821	1,234	165	252	1,008	2,246	2,246	26
4.1.9.9 SCIENCE VERIFICATION, ANALYSIS & CALIBRATION	0	0	300	300	0	0	0	300	300	0
4.1.9.A I&T MISSION SUPPORT	0	0	0	0	0	0	1,623	1,623	1,623	0
CAPW[3]Totals:	400	502	9,269	10,397	302	415	4,032	14,018	14,018	140



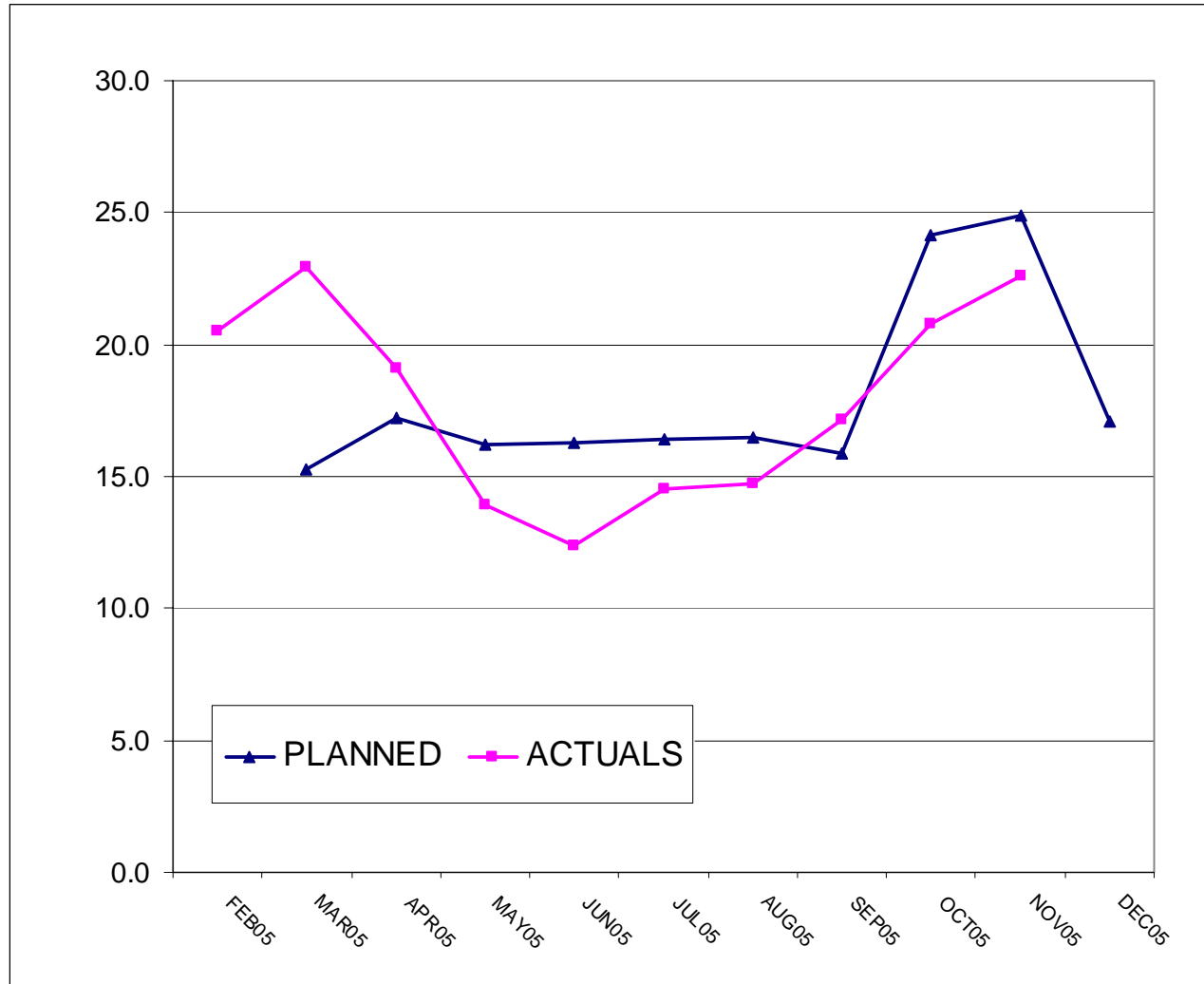
Cost Variance Explanation

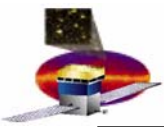
- **Why overrun/underrun?**
 - **Underrun due to schedule delay.**
- **What will be done to correct?**
 - **Adding resources for LAT test.**



FTE Report

(DOE/NASA-funded only)





FTE Variance Explanation

- **Why overrun/underrun?**
 - **Level of support has been adequate for current tasks**
- **What is the impact?**
 - **Some schedule delay.**
- **What will be done to correct?**
 - **Additional manpower has been identified and will be added.**