



**Gamma-ray
Large Area Space
Telescope**



GLAST LAT PROJECT

Cost & Schedule Information
for the
GLAST LAT PDR/Baseline Review
January 8-11, 2001

4.1.5 Calorimeter
Subsystem Manager – N. Johnson

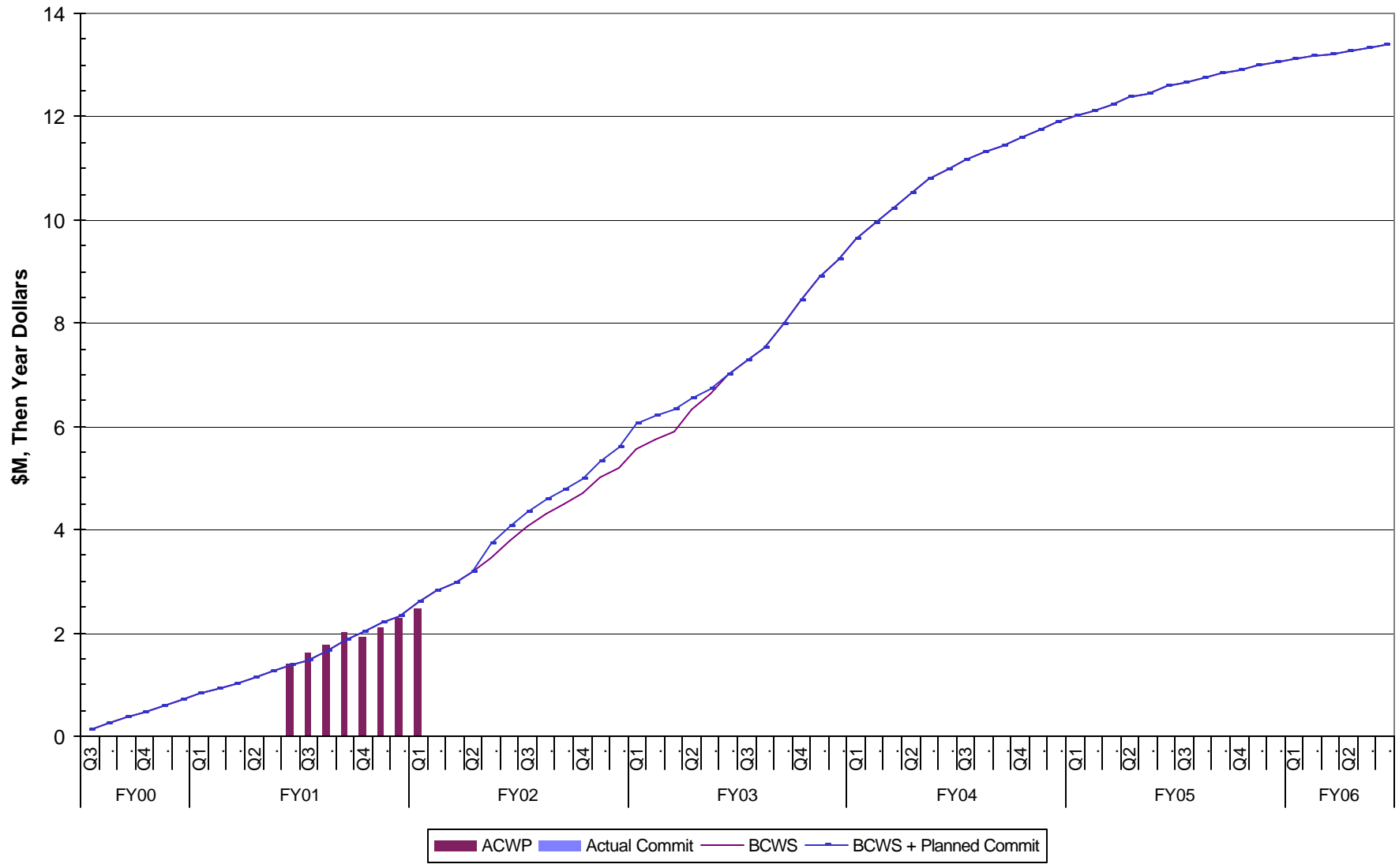


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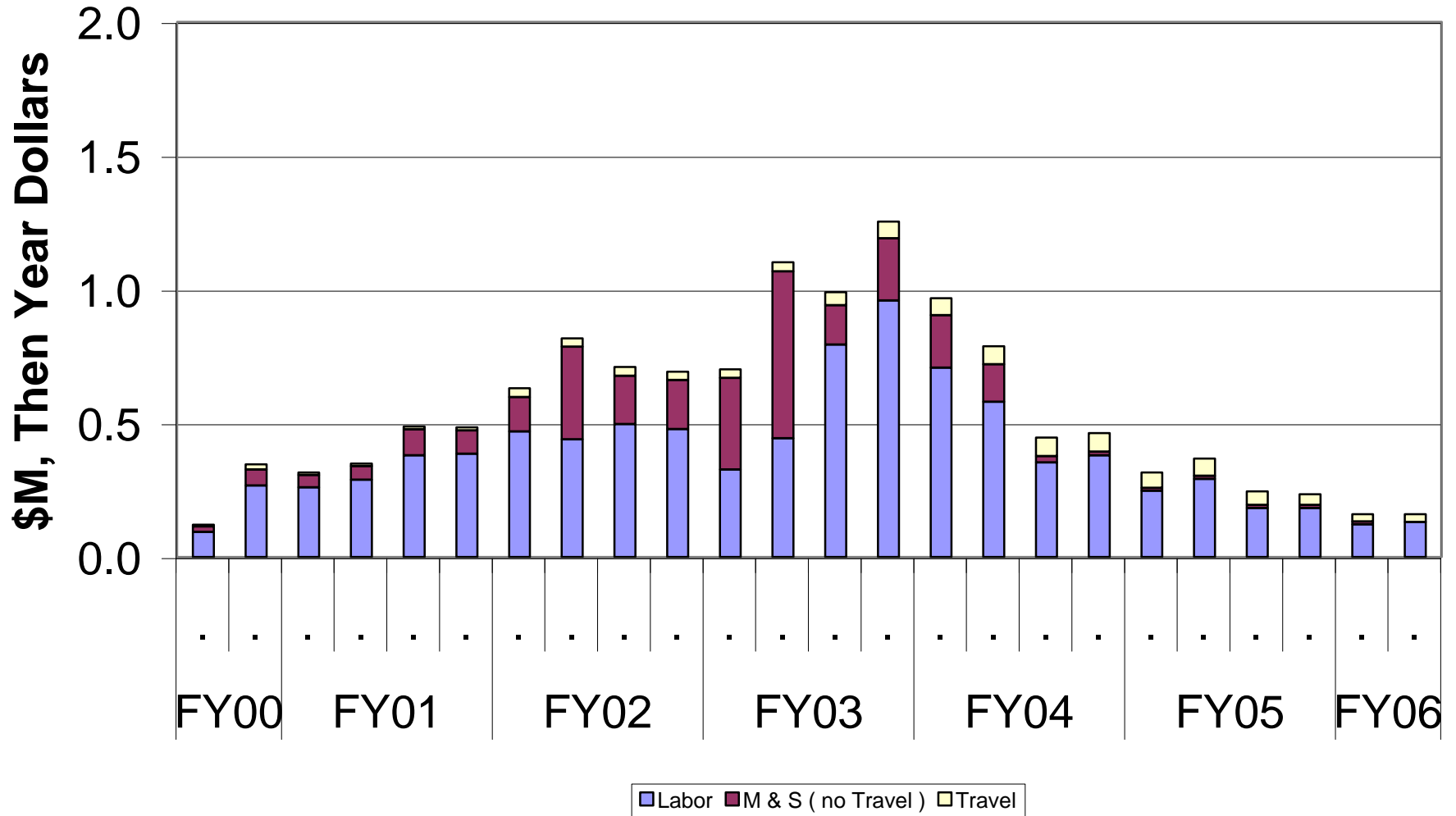


Cost & Commitment Profile

4.1.5 Calorimeter Costs and Commitments



4.1.5 Calorimeter Cost Type





**Gamma-ray
Large Area Space
Telescope**



Cost Detail @ Work Package Level

Program: 1001	Description: GLAST LAT Project	Approval: Program Manager Functional Manager Cost Account Manager	
Run Date: 12/12/01	Status Date: 10/31/01		

CAPW[4]	OBS	CPN[1]	WP	FY00	FY01	FY02	FY03	FY04	FY05	FY06	Cumulative	
4.1.5.1 CALORIMETER PROGRAM MANAGEMENT & ADMINISTRATION												
DN NRL												
GL51 4.1.5.1 GLAST CAL Program Management & Admini												
		CPN[1] Totals:	PLANNED	249	467	740	760	752	421	126	3,516	
			BUD+COM	249	467	740	760	752	421	126	3,516	
	OBS Totals:		PLANNED	249	467	740	760	752	421	126	3,516	
			BUD+COM	249	467	740	760	752	421	126	3,516	
CAPW[4] Totals:				PLANNED	249	467	740	760	752	421	126	3,516
				BUD+COM	249	467	740	760	752	421	126	3,516
4.1.5.2 SYSTEMS ENGINEERING												
DN NRL												
GL52 4.1.5.2 CAL System Engineering												
		CPN[1] Totals:	PLANNED	0	0	208	225	226	111	12	783	
			BUD+COM	0	0	208	225	226	111	12	783	
	OBS Totals:		PLANNED	0	0	208	225	226	111	12	783	
			BUD+COM	0	0	208	225	226	111	12	783	
CAPW[4] Totals:				PLANNED	0	0	208	225	226	111	12	783
				BUD+COM	0	0	208	225	226	111	12	783
4.1.5.3 RELIABILITY AND QUALITY ASSURANCE												
DN NRL												
GL53 4.1.5.3 CAL Reliability and Quality Assurance												
		CPN[1] Totals:	PLANNED	14	139	292	304	183	37	8	977	
			BUD+COM	14	139	292	304	183	37	8	977	
	OBS Totals:		PLANNED	14	139	292	304	183	37	8	977	
			BUD+COM	14	139	292	304	183	37	8	977	
CAPW[4] Totals:				PLANNED	14	139	292	304	183	37	8	977
				BUD+COM	14	139	292	304	183	37	8	977
4.1.5.4 CALORIMETER DESIGN												
DN NRL												
GL54 4.1.5.4 CAL Calorimeter Design												
		CPN[1] Totals:	PLANNED	286	498	105	0	0	0	0	889	
			BUD+COM	286	498	105	0	0	0	0	889	
	OBS Totals:		PLANNED	286	498	105	0	0	0	0	889	
			BUD+COM	286	498	105	0	0	0	0	889	
CAPW[4] Totals:				PLANNED	286	498	105	0	0	0	889	
				BUD+COM	286	498	105	0	0	0	889	
4.1.5.5 CSI DETECTOR ELEMENTS (CDE)												
FK Sweden												
FK41552 4.1.5.5.2 Csi(Tl) Scintillation Crystals												
		CPN[1] Totals:	PLANNED	0	0	0	0	0	0	0	0	
			BUD+COM	0	0	0	0	0	0	0	0	
	OBS Totals:		PLANNED	0	0	0	0	0	0	0	0	
			BUD+COM	0	0	0	0	0	0	0	0	
CAPW[4] Totals:				PLANNED	0	0	0	0	0	0	0	
				BUD+COM	0	0	0	0	0	0	0	
4.1.5.7 ANALOG FRONT END ELECTRONICS												
DL SU-SLAC												
2600040 4.1.5.7.2 CAL ASIC Development												
		CPN[1] Totals:	PLANNED	0	114	99	0	0	0	0	213	
			BUD+COM	0	114	99	0	0	0	0	213	
	OBS Totals:		PLANNED	0	114	99	0	0	0	0	213	
			BUD+COM	0	114	99	0	0	0	0	213	
DN NRL												
GL571 4.1.5.7.1 CAL AFEE Design												
		CPN[1] Totals:	PLANNED	148	166	217	6	4	0	0	540	
			BUD+COM	148	166	217	6	4	0	0	540	
GL572 4.1.5.7.2 CAL ASIC Development												
		CPN[1] Totals:	PLANNED	0	67	203	436	0	0	0	707	
			BUD+COM	0	67	344	295	0	0	0	707	
GL573 4.1.5.7.3 CAL AFEE GCFE Test Board												
		CPN[1] Totals:	PLANNED	0	109	29	0	0	0	0	138	
			BUD+COM	0	109	29	0	0	0	0	138	

Program:	1001	Description:	GLAST LAT Project							
Run Date:	12/12/01	Status Date:	10/31/01							
Approval:			Program Manager Functional Manager Cost Account Manager							

CAPW[4]	OBS	CPN[1]	WP	FY00	FY01	FY02	FY03	FY04	FY05	FY06	Cumulative
			GL574 4.1.5.7.4 CAL AFEE VM Test Board								
		CPN[1] Totals:	PLANNED	0	12	43	0	0	0	0	54
			BUD+COM	0	12	43	0	0	0	0	54
			GL575 4.1.5.7.5 CAL AFEE EM Board								
		CPN[1] Totals:	PLANNED	0	0	198	0	0	0	0	198
			BUD+COM	0	0	198	0	0	0	0	198
			GL576 4.1.5.7.6 AFEE Flight Units								
		CPN[1] Totals:	PLANNED	0	0	100	440	9	0	0	549
			BUD+COM	0	0	374	166	9	0	0	549
			GL577 4.1.5.7.7 CAL AFEE GSE								
		CPN[1] Totals:	PLANNED	0	67	34	0	0	0	0	101
			BUD+COM	0	67	34	0	0	0	0	101
	OBS Totals:		PLANNED	148	420	825	882	12	0	0	2,287
			BUD+COM	148	420	1,240	467	12	0	0	2,287
CAPW[4] Totals:			PLANNED	148	534	924	882	12	0	0	2,500
			BUD+COM	148	534	1,339	467	12	0	0	2,500
4.1.5.8 CALORIMETER TOWER CONTROLLER											
DN NRL											
			GL58 4.1.5.8 CAL Tower Controller								
		CPN[1] Totals:	PLANNED	0	0	24	0	0	0	0	24
			BUD+COM	0	0	24	0	0	0	0	24
	OBS Totals:		PLANNED	0	0	24	0	0	0	0	24
			BUD+COM	0	0	24	0	0	0	0	24
CAPW[4] Totals:			PLANNED	0	0	24	0	0	0	0	24
			BUD+COM	0	0	24	0	0	0	0	24
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CALIBRATION											
DN NRL											
			GL591 4.1.5.9.1 CAL A&T Engineering Model								
		CPN[1] Totals:	PLANNED	0	0	0	467	0	0	0	467
			BUD+COM	0	0	0	467	0	0	0	467
			GL592 4.1.5.9.2 CAL A&T Flight Modules								
		CPN[1] Totals:	PLANNED	0	0	0	911	852	0	0	1,763
			BUD+COM	0	0	0	911	852	0	0	1,763
			GL593 4.1.5.9.3 CAL A&T Ground Support Equip								
		CPN[1] Totals:	PLANNED	0	0	399	227	0	0	0	626
			BUD+COM	0	0	399	227	0	0	0	626
			GL594 4.1.5.9.4 CAL A&T Ground Support Software								
		CPN[1] Totals:	PLANNED	0	0	121	204	124	0	0	450
			BUD+COM	0	0	121	204	124	0	0	450
			GL595 4.1.5.9.5 CAL A&T Facilities Support								
		CPN[1] Totals:	PLANNED	0	0	37	38	29	0	0	104
			BUD+COM	0	0	37	38	29	0	0	104
	OBS Totals:		PLANNED	0	0	557	1,846	1,005	0	0	3,409
			BUD+COM	0	0	557	1,846	1,005	0	0	3,409
CAPW[4] Totals:			PLANNED	0	0	557	1,846	1,005	0	0	3,409
			BUD+COM	0	0	557	1,846	1,005	0	0	3,409
4.1.5.A INSTRUMENT I&T SUPPORT											
DN NRL											
			GL5A 4.1.5.A CAL Instrument Int, Test and Calibration								
		CPN[1] Totals:	PLANNED	0	0	0	29	485	457	57	1,028
			BUD+COM	0	0	0	29	485	457	57	1,028
	OBS Totals:		PLANNED	0	0	0	29	485	457	57	1,028
			BUD+COM	0	0	0	29	485	457	57	1,028
CAPW[4] Totals:			PLANNED	0	0	0	29	485	457	57	1,028
			BUD+COM	0	0	0	29	485	457	57	1,028
4.1.5.B SPACE CRAFT (SC) INTEGRATION SUPPORT											
DN NRL											
			GL5B 4.1.5.B CAL S/C Integration Support								
		CPN[1] Totals:	PLANNED	0	0	0	0	0	137	115	252
			BUD+COM	0	0	0	0	0	137	115	252
	OBS Totals:		PLANNED	0	0	0	0	0	137	115	252
			BUD+COM	0	0	0	0	0	137	115	252
CAPW[4] Totals:			PLANNED	0	0	0	0	0	137	115	252
			BUD+COM	0	0	0	0	0	137	115	252



**Gamma-ray
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Telescope**



Work Package Planning (Resource Loaded Schedule @ Work Package Level)

Act ID	Activity Description	Dur	Start	Finish	PMT	Budgeted Cost	FY01	FY02	FY03	FY04	FY05	FY06	
5 4.1.5 CALORIMETER													
Subtotal		1,484	04/03/00A	03/31/06		13,377,524.05						13,377,524.05	
5 4.1.5 CALORIMETER													
Subtotal		1,237	01/01/01A	12/23/05	A	0.00						0.00	
FF French Collaborators													
Subtotal		1,237	01/01/01A	12/23/05	A	0.00						0.00	
+ FL5 4.1.5 French Labor													
		1,237	01/01/01A	12/23/05	A	0.00						0.00	
51 4.1.5.1 PROGRAM MANAGEMENT AND ADMINISTRATION													
Subtotal		1,484	04/03/00A	03/31/06	A	3,515,767.48						3,515,767.48	
DN NRL													
Subtotal		1,484	04/03/00A	03/31/06	A	3,515,767.48						3,515,767.48	
+ GL51 4.1.5.1 GLAST CAL Program Management & Admini													
		1,484	04/03/00A	03/31/06	A	3,515,767.48						3,515,767.48	
52 4.1.5.2 SYSTEMS ENGINEERING													
Subtotal		1,088	10/01/01A	03/01/06	A	782,598.29	782,598.29					782,598.29	
DN NRL													
Subtotal		1,088	10/01/01A	03/01/06	A	782,598.29	782,598.29					782,598.29	
+ GL52 4.1.5.2 CAL System Engineering													
		1,088	10/01/01A	03/01/06	A	782,598.29	782,598.29					782,598.29	
53 4.1.5.3 RELIABILITY AND QUALITY ASSURANCE													
Subtotal		1,484	04/03/00A	03/31/06	A	976,926.18						976,926.18	
DN NRL													
Subtotal		1,484	04/03/00A	03/31/06	A	976,926.18						976,926.18	
+ GL53 4.1.5.3 CAL Reliability and Quality Assurance													
		1,484	04/03/00A	03/31/06	A	976,926.18						976,926.18	
54 4.1.5.4 CALORIMETER DESIGN													
Subtotal		621	04/03/00A	09/30/02	A	889,447.15						889,447.15	

Act ID	Activity Description	Dur	Start	Finish	PMT	Budgeted Cost	FY01	FY02	FY03	FY04	FY05	FY06		
DN NRL														
Subtotal		621	04/03/00A	09/30/02	A	889,447.15			889,447.15					
+ GL54 4.1.5.4 CAL Calorimeter Design														
		621	04/03/00A	09/30/02	A	889,447.15			889,447.15					
55 4.1.5.5 Csi DETECTOR ELEMENTS (CDE)														
Subtotal		1,050	01/02/02	03/29/06	A	0.00					0.00			
FK Swedish Collaborators														
Subtotal		1,050	01/02/02	03/29/06	A	0.00					0.00			
+ FK41552 4.1.5.5.2 Csl(TI) Scintillation Crystals														
		1,050	01/02/02	03/29/06	A	0.00					0.00			
57 4.1.5.7 ANALOG FRONT END ELECTRONICS														
Subtotal		1,115	04/03/00A	09/29/04		2,499,861.00					2,499,861.00			
DL SU-SLAC														
Subtotal		458	11/20/00A	09/27/02	A	212,823.50			212,823.50					
+ 2600040 4.1.5.7.2 CAL ASIC Development														
		458	11/20/00A	09/27/02	A	212,823.50			212,823.50					
DN NRL														
Subtotal		1,115	04/03/00A	09/29/04		2,287,037.50					2,287,037.50			
+ GL571 4.1.5.7.1 CAL AFEE Design														
		1,115	04/03/00A	09/29/04	A	540,365.70					540,365.70			
+ GL572 4.1.5.7.2 CAL ASIC Development														
		596	05/07/01A	09/30/03		706,592.55			706,592.55					
+ GL573 4.1.5.7.3 CAL AFEE GCFE Test Board														
		125	05/09/01A	11/02/01		137,735.13			137,735.13					
+ GL574 4.1.5.7.4 CAL AFEE VM Test Board														
		201	07/16/01A	05/08/02	E	54,358.95			54,358.95					
+ GL575 4.1.5.7.5 CAL AFEE EM Board														
		209	10/10/01A	08/15/02		198,081.57			198,081.57					
+ GL576 4.1.5.7.6 AFEE Flight Units														
		415	02/20/02	10/16/03	E	549,171.12					549,171.12			
Run Date							12/12/01 15:24		GLAST - LAT PROJECT				Sheet 9	
									WorkPackagePlanningSummary (WBS4xOBSxWP)					
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Act ID	Activity Description	Dur	Start	Finish	PMT	Budgeted Cost	Fiscal Year					
							FY01	FY02	FY03	FY04	FY05	FY06
+ GL577 4.1.5.7.7 CAL AFEE GSE												
		134	05/29/01A	12/06/01	E	100,732.48		100,732.48				
58 4.1.5.8 CALORIMETER TOWER CONTROLLER												
Subtotal		88	11/06/01	03/22/02	E	23,952.72		23,952.72				
DN NRL												
Subtotal		88	11/06/01	03/22/02	E	23,952.72		23,952.72				
+ GL58 4.1.5.8 CAL Tower Controller												
		88	11/06/01	03/22/02	E	23,952.72		23,952.72				
59 4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL												
Subtotal		677	10/01/01A	06/29/04		3,408,579.93			3,408,579.93			
DN NRL												
Subtotal		677	10/01/01A	06/29/04		3,408,579.93			3,408,579.93			
+ GL591 4.1.5.9.1 CAL A&T Engineering Model												
		115	02/18/03	07/30/03	E	466,570.81			466,570.81			
+ GL592 4.1.5.9.2 CAL A&T Flight Modules												
		260	03/03/03	03/18/04	E	1,762,842.78			1,762,842.78			
+ GL593 4.1.5.9.3 CAL A&T Ground Support Equip												
		334	11/01/01	03/18/03		626,198.43		626,198.43				
+ GL594 4.1.5.9.4 CAL A&T Ground Support Software												
		506	03/14/02	03/30/04		449,482.08		449,482.08				
+ GL595 4.1.5.9.5 CAL A&T Facilities Support												
		677	10/01/01A	06/29/04	A	103,485.83		103,485.83				
5A 4.1.5.A INSTRUMENT I&T SUPPORT												
Subtotal		679	07/01/03	03/30/06		1,028,167.02		1,028,167.02				
DN NRL												
Subtotal		679	07/01/03	03/30/06		1,028,167.02		1,028,167.02				
+ GL5A 4.1.5.A CAL Instrument Int, Test and Calibration												
		679	07/01/03	03/30/06		1,028,167.02		1,028,167.02				
5B 4.1.5.B SPACE CRAFT (SC) INTEGRATION SUPPORT												
Subtotal		252	03/28/05	03/31/06	A	252,224.28				252,224.28		

Act ID	Activity Description	Dur	Start	Finish	PMT	Budgeted Cost	FY01	FY02	FY03	FY04	FY05	FY06
DN NRL												
	Subtotal	252	03/28/05	03/31/06	A	252,224.28					252,224.28	
+ GL5B 4.1.5.B CAL S/C Integration Support												
		252	03/28/05	03/31/06	A	252,224.28					252,224.28	



**Gamma-ray
Large Area Space
Telescope**



Subsystem Milestones

Act ID	Activity Description	Start	Finish	FY00	FY01	FY02	FY03	FY04	FY05	FY06	
4.1.5 CALORIMETER											
Subsystem Managers (Level 4)											
5C0243	Delivery VM Csl (24) to France		06/12/01A		▼						
5C0192	ratification of gluing concept		08/14/01A		▼						
5C0249	EM CRYSTALS - Csl Delivery to S (106 logs)		09/10/01A		▼						
5C0539	VM2 structure ready		09/14/01A		▼						
5C0432	Last 3 CDE ready for integration		11/19/01			▽					
5C0446	CDE ready for EM assembly		12/21/01			▽					
5C0607	EM start assy		01/10/02			▽					
5C0604	VM2 measurement ends		01/29/02			▽					
5C0841A	GCRC for EM Ready		03/20/02			▽					
5C0301	Diodes realization order		06/19/02			▽					
5C0453	FM A CDE ready		11/18/02				▽				
5C0851	Digital ASIC Parts Available - Flight		11/27/02				▽				
5C0833	GCFE ASIC Parts Available - Flight		02/19/03				▽				
5C1091	4 Boards Ready		10/16/03					▽			
5C0206	Compression test GSE		12/07/00A	▼							
5C0814	ASIC Design Review		02/01/01A	▼							
5C1093	EGSE Requirements review		03/22/01A	▼							
5C00000430	Interim Subsystem Review		03/28/01A	▼							
5C0234	Crystal PO issued by Sweden		04/09/01A	▼							
5C0267	Xtal Optical Test Bench ready at NRL		04/27/01A	▼							
5C0270	TB 1 delivered in S from NRL		05/04/01A	▼							
5C0236	1st EM crystal lot (12 logs) in S		05/08/01A	▼							
Run Date 12/12/01 14:43				GLAST LAT PROJECT Subsystem Milestones				Sheet 4			
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Act ID	Activity Description	Start	Finish	Fiscal Year																			
				FY00	FY01	FY02	FY03	FY04	FY05	FY06													
5C0272	Xtal Optical Test Bench ready in S		05/11/01A		▼																		
5C0274	Na22 sources at Kalmar		05/18/01A		▼																		
5C0237	1st EM crystal lot (12+12 logs) due in S		06/01/01A		▼																		
5C0220	Cosmic Bench ready for VM2 test		06/11/01A		▼																		
5C0789	CEA bench preparation VM2 (E25 from B25)		06/11/01A		▼																		
5C0293	Lot order (France)		06/20/01A		▼																		
5C0424	Crystal delivery		06/29/01A		▼																		
5C0584	tooling ready for VM2 structure		07/17/01A		▼																		
5C0820	ASIC #2 available (VM units)		07/20/01A		▼																		
5C0185	End of process study		07/24/01A		▼																		
5C0143	CAL PDR		07/27/01A		▼																		
5C0835	GCRC Design review		07/27/01A		▼																		
5C0515	updating bench spec		08/01/01A		▼																		
5C0795	Temporary PEM Test Bench		08/10/01A		▼																		
5C0805	Clean room ready for CDE assy (E30 goto D28)		08/17/01A		▼																		
5C0208	NRL DPD delivery		08/24/01A		▼																		
5C0294	NRL procurement delivery		08/24/01A		▼																		
5C0210	CEA DPD delivery		08/31/01A		▼																		
5C0295	CEA procurement delivery		08/31/01A		▼																		
5C0238	Csl Delivery to Sweden (106 logs)		09/10/01A		▼																		
5C0435	Begin Delivery from S (110)		09/19/01A		▼																		
5C0197	Glue ready		09/24/01A		▼																		
5C0422	Delivery VM Csl (24) to F		09/28/01A		▼																		
5C0380	VM2 DPD ready for CDE (C28 goto D28)		10/02/01A		▼																		

Act ID	Activity Description	Start	Finish	FY00	FY01	FY02	FY03	FY04	FY05	FY06
5C0428	PIN ready for gluing		10/02/01A			▼				
5C0382	EM DPD ready for CDE (C29 goto D29)		10/09/01A			▼				
5C0440	Assy of CDE parts		10/09/01A			▼				
5C0281	Kalmar TB 3,4 available		10/22/01A			▼				
5C0586	tooling ready for EM structure		10/26/01A			▼				
5C1146	Qual Readiness Review-CAL		10/31/01			▽				
5C1176	CAL Production Readiness Review		10/31/01			▽				
5C1512	Qual Review-CAL		10/31/01			▽				
5C0863	GCFE complete		11/02/01			▽				
5C1108A	ND: Receive VME TEM Sim & Doc from Elec to CAL		11/05/01*			▽				
5C0431	first 3 CDE ready for structure		11/13/01			▽				
5C0824	Parts Available Ver 3		11/16/01			▽				
5C0596	VM2 start assy (E1 comes from A1;D34)		11/19/01			▽				
5C1108C	EM AFEE GSE Available		12/06/01			▽				
5C0802	Clean room ready for PEM integration		01/02/02			▽				
5C0144	I-PDR		01/07/02			▽				
5C0873	AV: VM AFEE available		01/09/02			▽				
5C0554	Structure ready		01/10/02			▽				
5C0878	Design Review (Fab approval)		02/19/02			▽				
5C0612	End of EM light yield tests		03/11/02			▽				
5C0874	Digital ASIC subm 1 parts available		03/20/02			▽				
5C0255	FM CRYSTALS - Csl Delivery to S (110 logs)		03/29/02*			▽				
5C00000590	Engineering Model (EM) Assembly Complete		04/01/02*			▽				
5C0828	Parts Available Ver 4		04/23/02			▽				

Act ID	Activity Description	Start	Finish	FY00 FY01 FY02 FY03 FY04 FY05 FY06															
5C0146	CAL CDR		06/05/02																
5C0885	AV: AFEE EM available		06/12/02																
5C1118A	ND: Receive PreEM TEM from Elec to CAL		06/14/02																
5C00000630	EM Test Complete		06/28/02*																
5C0147	I-CDR		08/05/02																
5C0592	tool ready		08/20/02																
5C50000070	Resource Constraint, FY03 Funding		10/01/02*																
5C0564	Structure ready for CDE insertion (A3 goto E3)		10/22/02																
5C0384	FM A DPD ready for CDE		10/28/02																
5C0450	Delivery of the first tested diodes		10/28/02																
5C0887	Front End Electronics (Flight version) start		11/12/02																
5C0619	FM A Start Assy		11/18/02																
5C0386	FM B DPD ready for CDE		11/20/02																
5C0454	FM B Diodes delivery		11/20/02																
5C0572	Structure ready for CDE insertion (A4 goto E4)		11/20/02																
5C0388	FM 1 DPD ready for CDE		12/09/02																
5C0457	FM 1 Diodes delivery		12/09/02																
5C0390	FM 2 DPD ready for CDE		12/19/02																
5C0460	FM 2 Diodes delivery		12/19/02																
5C0456	FM B CDE ready		12/20/02																
5C0628	FM B Start Assy		12/20/02*																
5C0459	FM 1 CDE ready		01/07/03																
5C0637	FM 1 Start Assy		01/07/03*																
5C0462	FM 2 CDE ready		01/13/03																



**Gamma-ray
Large Area Space
Telescope**



Critical Activities with Total Float Less Than 80 Days

Act ID	Activity Description	Dur	Start	Finish	Total Float	Fiscal Year									
						FY01	FY02	FY03	FY04	FY05	FY06				
4.1.5 CALORIMETER															
1															
4.1.5.7 ANALOG FRONT END ELECTRONICS															
5C0811	AFEE Detailed Design (ICDR)	207	07/30/01A	06/04/02	1										
4.1.5.A INSTRUMENT I&T SUPPORT															
5C1509	Instrument Functional Testing - SLAC	60	07/08/04	09/30/04	1										
2															
4.1.5.A INSTRUMENT I&T SUPPORT															
5C1509A	Instrument Environmental Testing - NRL	59	10/01/04	01/03/05	2										
5C1509B	PreShip Review Support	15	01/04/05	01/25/05	2										
5C1509C	Schedule Contingency	40	01/26/05	03/23/05	2										
4															
4.1.5.4 CALORIMETER DESIGN															
5C0144	I-PDR	0		01/07/02	4										
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL															
5C1590	Handling Dolly Specification	1	01/08/02	01/08/02	4										
5C1593	Rotation Assy Stand	66	01/09/02	04/12/02	4										
5C1594	2nd Rotation Assy Stand	66	11/14/02	02/28/03	4										
5C1135	Receive Cal Mod A	0		02/28/03	4										
5C1136	Receipt inspection	1	03/03/03	03/03/03	4										
5C1157	Receipt inspection	1	03/24/03	03/24/03	4										
5C1179	Receipt inspection	1	05/19/03	05/19/03	4										
5C1199	Receipt inspection	1	06/10/03	06/10/03	4										
5C1219	Receipt inspection	1	07/01/03	07/01/03	4										
5C1239	Receipt inspection	1	07/16/03	07/16/03	4										
5C1259	Receipt inspection	1	07/30/03	07/30/03	4										
5C1279	Receipt inspection	1	08/13/03	08/13/03	4										

Act ID	Activity Description	Dur	Start	Finish	Total Float	FY01		FY02		FY03		FY04		FY05		FY06	
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL																	
5C1299	Receipt inspection	0	08/27/03	08/26/03	4												
5C1319	Receipt inspection	0	09/11/03	09/10/03	4												
5C1339	Receipt inspection	0	09/25/03	09/24/03	4												
5C1359	Receipt inspection	1	10/09/03	10/09/03	4												
5C1379	Receipt inspection	1	10/23/03	10/23/03	4												
5C1399	Receipt inspection	1	11/06/03	11/06/03	4												
5C1419	Receipt inspection	1	11/20/03	11/20/03	4												
5C1439	Receipt inspection	1	12/08/03	12/08/03	4												
5C1459	Receipt inspection	1	12/22/03	12/22/03	4												
5C1479	Receipt inspection	1	01/14/04	01/14/04	4												
5C1480	Mass properties measurement	1	01/15/04	01/15/04	4												
5C1481	PEM CES integration	1	01/16/04	01/16/04	4												
5C1482	Muon calibration #1	1	01/20/04	01/20/04	4												
5C1483	PEM-to-AFEE integration	5	01/21/04	01/27/04	4												
5C1483B	TEM & PS Functional Check	2	01/28/04	01/29/04	4												
5C1484	TEM & PS integration	1	01/30/04	01/30/04	4												
5C1485	Comprehensive State Functional test	2	02/02/04	02/03/04	4												
5C1486	Electronic calib	1	02/04/04	02/04/04	4												
5C1487	Muon calibration #2	2	02/05/04	02/06/04	4												
5C1488	Mass properties #2	1	02/09/04	02/09/04	4												
5C1470	Vibration test	3	02/19/04	02/23/04	4												
5C1490	Vibration test	3	02/19/04	02/23/04	4												
5C1471	Muon calibration #3	2	02/24/04	02/25/04	4												
5C1491	Muon calibration #3	2	02/24/04	02/25/04	4												

Act ID	Activity Description	Dur	Start	Finish	Total Float	Fiscal Year									
						FY01	FY02	FY03	FY04	FY05	FY06				
4.1.5.7 ANALOG FRONT END ELECTRONICS															
5C0901	man assy (4 boards)	5	04/16/03	04/22/03	9										
5C0902	functional test	1	04/23/03	04/23/03	9										
5C0903	workmanship test (TBR) EM & Qual units only	0		04/23/03	9										
5C0904	conformal coat	8	04/24/03	05/05/03	9										
5C0905	final functional test	1	05/06/03	05/06/03	9										
5C0906	burn-in on EM & Qual only	0		05/06/03	9										
5C0907	ready	0		05/06/03	9										
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL															
5C1140	PEM-to-AFEE integration	8	05/07/03	05/16/03	9										
5C1140B	EM2 TEM Functional Check	10	05/19/03	06/02/03	9										
5C1141	TEM & PS Integration	5	06/03/03	06/09/03	9										
5C1142	Comprehensive State Functional test	4	06/10/03	06/13/03	9										
5C1143	Electronic calib	2	06/16/03	06/17/03	9										
5C1144	Muon calibration #2	3	06/18/03	06/20/03	9										
10															
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL															
5C1147	Vibration test	5	07/01/03	07/08/03	10										
5C1168	Vibration test	5	07/01/03	07/08/03	10										
5C1148	EMC/EMI test	2	07/09/03	07/10/03	10										
5C1169	EMC/EMI test	2	07/09/03	07/10/03	10										
5C1149	Muon calibration #3	1	07/11/03	07/11/03	10										
5C1170	Muon calibration #3	2	07/11/03	07/14/03	10										
5C1150	Comprehensive Functional Test #2	3	07/14/03	07/16/03	10										
5C1171	Comprehensive Functional Test #2	3	07/15/03	07/17/03	10										
5C1151	Preship review and signoff	2	07/17/03	07/18/03	10										
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Act ID	Activity Description	Dur	Start	Finish	Total Float	Fiscal Year									
						FY01	FY02	FY03	FY04	FY05	FY06				
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL															
5C1172	Preship review and signoff	2	07/18/03	07/21/03	10										
5C1152	margin	3	07/21/03	07/23/03	10										
5C1173	margin	3	07/22/03	07/24/03	10										
5C1153	AV: Calorimeter Modules A RFI (for Calibration)	7	07/24/03	08/01/03	10										
5C1174	AV: Calorimeter Modules B RFI (for Calibration)	6	07/25/03	08/01/03	10										
5C1522	Sub System CAL RFI's--1st Article	0		08/01/03	10										
13															
4.1.5.A INSTRUMENT I&T SUPPORT															
5C1506	Integrate FM 1 & 2	10	11/04/03	11/17/03	13										
5C1507	SLAC Beam Test Support	43	03/15/04*	05/12/04	13										
14															
4.1.5.7 ANALOG FRONT END ELECTRONICS															
5C0909	man assy (4 boards)	5	04/23/03	04/29/03	14										
5C0910	functional test	1	04/30/03	04/30/03	14										
5C0911	workmanship test (TBR) EM & Qual units only	0		04/30/03	14										
5C0912	conformal coat	8	05/01/03	05/12/03	14										
5C0913	final functional test	1	05/13/03	05/13/03	14										
5C0914	burn-in on EM & Qual only	0		05/13/03	14										
5C0915	ready	0		05/13/03	14										
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL															
5C1600	EGSE Design and Specification	66	11/01/01	02/14/02	14										
5C1610	EGSE Hardware Procurements - 1st 2 units	22	02/15/02	03/19/02	14										
5C1630	Muon Telescope #2	22	01/14/03	02/13/03	14										
5C1620	EGSE Hardware Procurements - remaining units	44	01/14/03	03/18/03	14										
5C1161	PEM-to-AFEE integration	8	05/14/03	05/23/03	14										
5C1161B	TEM & PS Functional Check	2	05/27/03	05/28/03	14										

Act ID	Activity Description	Dur	Start	Finish	Total Float	FY01		FY02		FY03		FY04		FY05		FY06	
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL																	
5C1162	TEM & PS integration	2	05/29/03	05/30/03	14												
5C1163	Comprehensive State Functional test	4	06/02/03	06/05/03	14												
5C1164	Electronic calib	2	06/06/03	06/09/03	14												
5C1165	Muon calibration #2	3	06/10/03	06/12/03	14												
5C1166	Mass properties #2	1	06/13/03	06/13/03	14												
5C1460	Mass properties measurement	1	12/23/03	12/23/03	14												
5C1461	PEM CES integration	1	01/02/04	01/02/04	14												
5C1462	Muon calibration #1	1	01/05/04	01/05/04	14												
5C1463	PEM-to-AFEE integration	5	01/06/04	01/12/04	14												
5C1463B	TEM & PS Functional Check	2	01/13/04	01/14/04	14												
5C1464	TEM & PS integration	1	01/15/04	01/15/04	14												
5C1465	Comprehensive State Functional test	2	01/16/04	01/20/04	14												
5C1466	Electronic calib	1	01/21/04	01/21/04	14												
5C1467	Muon calibration #2	2	01/22/04	01/23/04	14												
5C1468	Mass properties #2	1	01/26/04	01/26/04	14												
15																	
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL																	
5C1145	Mass properties #2	1	06/23/03	06/23/03	15												
5C1167	A & B Thermal vac functional test	10	06/21/03	06/30/03	15												
5C1440	Mass properties measurement	1	12/09/03	12/09/03	15												
5C1441	PEM CES integration	1	12/10/03	12/10/03	15												
5C1442	Muon calibration #1	1	12/11/03	12/11/03	15												
5C1443	PEM-to-AFEE integration	5	12/12/03	12/18/03	15												
5C1443B	TEM & PS Functional Check	2	12/19/03	12/22/03	15												
5C1444	TEM & PS integration	1	12/23/03	12/23/03	15												

Act ID	Activity Description	Dur	Start	Finish	Total Float	Fiscal Year									
						FY01	FY02	FY03	FY04	FY05	FY06				
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL															
5C1445	Comprehensive State Functional test	2	01/02/04	01/05/04	15										
5C1446	Electronic calib	1	01/06/04	01/06/04	15										
5C1447	Muon calibration #2	2	01/07/04	01/08/04	15										
5C1448	Mass properties #2	1	01/09/04	01/09/04	15										
16															
4.1.5.5 Csi DETECTOR ELEMENTS (CDE)															
5C0298	call for tender	122	10/31/01A	05/03/02	16										
5C0299	Ordering	32	05/06/02	06/19/02	16										
5C0301	Diodes realization order	0		06/19/02	16										
5C0302	First 300 diodes	72	06/20/02	10/01/02	16										
5C0360	FM A soldering	13	10/03/02	10/21/02	16										
5C0383	FM A DPD + kapton acceptance test	5	10/22/02	10/28/02	16										
5C0384	FM A DPD ready for CDE	0		10/28/02	16										
5C0450	Delivery of the first tested diodes	0		10/28/02	16										
5C0321	FM A diodes tests and packing	20	10/02/02	10/29/02	16										
5C0451	manufacturing of FM A CDE in a company	15	10/29/02	11/18/02	16										
5C0452	FM A CDE receipt on test benches	10	11/05/02	11/18/02	16										
5C0453	FM A CDE ready	0		11/18/02	16										
4.1.5.6 PRE-ELECTRONICS MODULE (PEM)															
5C0619	FM A Start Assy	0		11/18/02	16										
5C0620	CDE insertion in structure	10	11/19/02*	12/04/02	16										
5C0621	PEM assembly	5	12/05/02	12/11/02	16										
5C0623	vibrations, temperature on FMA	17	12/12/02	01/14/03	16										
5C0624	Optical Test on FMA bench	15	01/15/03	02/05/03	16										
5C0625	Shipment of FMA PEM to NRL	4	02/06/03	02/11/03	16										

Act ID	Activity Description	Dur	Start	Finish	Total Float	Fiscal Year									
						FY01	FY02	FY03	FY04	FY05	FY06				
17															
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL															
5C1430	Vibration test	3	01/20/04	01/22/04	17										
5C1450	Vibration test	3	01/20/04	01/22/04	17										
5C1431	Muon calibration #3	2	01/23/04	01/26/04	17										
5C1451	Muon calibration #3	2	01/23/04	01/26/04	17										
5C1432	Comprehensive Functional Test #2	2	01/27/04	01/28/04	17										
5C1452	Comprehensive Functional Test #2	2	01/27/04	01/28/04	17										
5C1433	Preship review and signoff	1	01/29/04	01/29/04	17										
5C1453	Preship review and signoff	1	01/29/04	01/29/04	17										
5C1434	margin	4	01/30/04	02/04/04	17										
5C1454	margin	4	01/30/04	02/04/04	17										
5C1435	AV: Flight Calorimeter Tower 13 RFI	7	02/05/04	02/13/04	17										
5C1455	AV: Flight Calorimeter Tower 14 RFI	7	02/05/04	02/13/04	17										
18															
4.1.5.5 Csi DETECTOR ELEMENTS (CDE)															
5C0303	300 diodes 2nd delivery	20	10/02/02	10/29/02	18										
5C0304	300 diodes 3rd delivery	18	10/30/02	11/26/02	18										
5C0305	300 diodes 4th delivery	19	11/27/02	12/23/02	18										
5C0306	300 diodes 5th delivery	13	01/02/03	01/21/03	18										
5C0307	300 diodes 6th delivery	19	01/22/03	02/18/03	18										
5C0308	300 diodes 7th delivery	20	02/19/03	03/18/03	18										
5C0309	300 diodes 8th delivery	20	03/19/03	04/15/03	18										
5C0310	300 diodes 9th delivery	20	04/16/03	05/13/03	18										
5C0311	300 diodes 10th delivery	19	05/14/03	06/10/03	18										
5C0312	300 diodes 11th delivery	19	06/11/03	07/08/03	18										
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Act ID	Activity Description	Dur	Start	Finish	Total Float	Fiscal Year													
						FY01	FY02	FY03	FY04	FY05	FY06								
4.1.5.5 Csi DETECTOR ELEMENTS (CDE)																			
5C0313	300 diodes 12th delivery	20	07/09/03	08/05/03	18														
5C0338	FM 16 diodes tests and packing	15	08/20/03	09/10/03	18														
5C0377	FM 16 soldering	10	09/11/03	09/24/03	18														
5C0417	FM 16 DPD + kapton acceptance test	4	09/25/03	09/30/03	18														
5C0418	FM 16 DPD ready for CDE	0		09/30/03	18														
5C0502	FM 16 Diodes delivery	0		09/30/03	18														
5C0503	FM 16 CDE Assembly	15	10/01/03	10/21/03	18														
5C0504	FM 16 CDE ready	0		10/21/03	18														
4.1.5.6 PRE-ELECTRONICS MODULE (PEM)																			
5C0772	FM 16 Start Assy	0		10/21/03	18														
5C0773	CDE insertion in structure	5	10/22/03*	10/28/03	18														
5C0774	PEM assembly	5	10/29/03	11/04/03	18														
5C0776	vibrations, temperature	13	11/05/03	11/21/03	18														
5C0777	Optical Test on bench	10	11/24/03	12/09/03	18														
5C0778	Shipment of PEM to NRL	5	12/10/03	12/16/03	18														
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL																			
5C1478	Receive Cal Mod 16	0		12/16/03	18														
22																			
4.1.5.7 ANALOG FRONT END ELECTRONICS																			
5C0829B	Initiate Procurement for Flt Test, Qual & Burn In	1	10/02/02	10/02/02	22														
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL																			
5C1625	Muon Telescope #1	22	02/15/02	03/19/02	22														
5C1114	Receipt inspection	2	02/18/03	02/19/03	22														
5C1115	Mass properties measurement #1	2	02/20/03	02/21/03	22														
5C1116	PEM CES integration	5	02/24/03	02/28/03	22														
5C1117	Muon calibration #1	5	03/03/03	03/07/03	22														
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Act ID	Activity Description	Dur	Start	Finish	Total Float	FY01		FY02		FY03		FY04		FY05		FY06			
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL																			
5C1118	PEM-to-AFEE integration	15	03/10/03	03/28/03	22														
5C1119	TEM Integration	5	03/31/03	04/04/03	22														
5C1120	Comprehensive State Functional test	5	04/07/03	04/11/03	22														
5C1121	Electronic calib	5	04/14/03	04/18/03	22														
5C1122	Muon calibration #2	5	04/21/03	04/25/03	22														
5C1123	Mass properties #2	2	04/28/03	04/29/03	22														
5C1124	Thermal vac/ functional test	14	04/30/03	05/19/03	22														
5C1125	Vibration test	10	05/20/03	06/03/03	22														
5C1126	EMC/EMI test	3	06/04/03	06/06/03	22														
5C1127	Muon calibration #3	3	06/09/03	06/11/03	22														
5C1128	Comprehensive Functional Test #2	5	06/12/03	06/18/03	22														
5C1129	Ship to beam test	5	06/19/03	06/25/03	22														
5C1130	Hadronic bean test	20	06/26/03	07/24/03	22														
5C1131	Ship to SLAC	4	07/25/03	07/30/03	22														
5C1132	AV: EM from Calorimeter to I&T	0		07/30/03	22														
24																			
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL																			
5C1390	Vibration test	3	12/15/03	12/17/03	24														
5C1391	Muon calibration #3	2	12/18/03	12/19/03	24														
5C1392	Comprehensive Functional Test #2	2	12/22/03	12/23/03	24														
5C1393	Preship review and signoff	1	01/02/04	01/02/04	24														
5C1394	margin	4	01/05/04	01/08/04	24														
5C1449	13 & 14 Thermal vac functional test	9	01/10/04	01/18/04	24														
5C1395	AV: Flight Calorimeter Tower 11 RFI	9	01/09/04	01/22/04	24														
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Act ID	Activity Description	Dur	Start	Finish	Total Float	FY01		FY02		FY03		FY04		FY05		FY06	
25																	
4.1.5.5 Csi DETECTOR ELEMENTS (CDE)																	
5C0361	FM B soldering	10	11/01/02	11/14/02	25												
5C0322	FM B diodes tests and packing	15	10/30/02	11/19/02	25												
5C0385	FM B DPD + kapton acceptance test	4	11/15/02	11/20/02	25												
5C0386	FM B DPD ready for CDE	0		11/20/02	25												
5C0454	FM B Diodes delivery	0		11/20/02	25												
5C0455	FM B CDE Assembly	20	11/25/02	12/20/02	25												
5C0456	FM B CDE ready	0		12/20/02	25												
4.1.5.6 PRE-ELECTRONICS MODULE (PEM)																	
5C0628	FM B Start Assy	0		12/20/02*	25												
5C0629	CDE insertion in structure	5	12/23/02	01/07/03	25												
5C0630	PEM assembly	2	01/08/03	01/09/03	25												
5C0632	vibrations, temperature	15	01/10/03	01/31/03	25												
5C0633	Optical Test on bench	10	02/03/03	02/14/03	25												
5C0634	Shipment of PEM to NRL	4	02/18/03	02/21/03	25												
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL																	
5C1156	Receive Cal Mod B	0		02/21/03	25												
5C1400	Mass properties measurement	1	11/07/03	11/07/03	25												
5C1401	PEM CES integration	1	11/10/03	11/10/03	25												
5C1402	Muon calibration #1	1	11/11/03	11/11/03	25												
5C1403	PEM-to-AFEE integration	5	11/12/03	11/18/03	25												
5C1403B	TEM & PS Functional Check	2	11/19/03	11/20/03	25												
5C1404	TEM & PS integration	1	11/21/03	11/21/03	25												
5C1420	Mass properties measurement	1	11/21/03	11/21/03	25												
5C1421	PEM CES integration	1	11/24/03	11/24/03	25												

Act ID	Activity Description	Dur	Start	Finish	Total Float	Fiscal Year									
						FY01	FY02	FY03	FY04	FY05	FY06				
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL															
5C1405	Comprehensive State Functional test	2	11/24/03	11/25/03	25										
5C1422	Muon calibration #1	1	11/25/03	11/25/03	25										
5C1406	Electronic calib	1	11/26/03	11/26/03	25										
5C1407	Muon calibration #2	2	12/01/03	12/02/03	25										
5C1408	Mass properties #2	1	12/03/03	12/03/03	25										
5C1423	PEM-to-AFEE integration	5	11/26/03	12/04/03	25										
5C1423B	TEM & PS Functional Check	2	12/05/03	12/08/03	25										
5C1424	TEM & PS integration	1	12/09/03	12/09/03	25										
5C1425	Comprehensive State Functional test	2	12/10/03	12/11/03	25										
5C1426	Electronic calib	1	12/12/03	12/12/03	25										
5C1427	Muon calibration #2	2	12/15/03	12/16/03	25										
5C1428	Mass properties #2	1	12/17/03	12/17/03	25										
26															
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL															
5C1410	Vibration test	2	12/15/03	12/16/03	26										
5C1411	Muon calibration #3	1	12/17/03	12/17/03	26										
5C1412	Comprehensive Functional Test #2	2	12/18/03	12/19/03	26										
5C1413	Preship review and signoff	1	12/22/03	12/22/03	26										
5C1414	margin	6	12/23/03	01/08/04	26										
5C1415	AV: Flight Calorimeter Tower 12 RFI	7	01/09/04	01/20/04	26										
28															
4.1.5.5 Csl DETECTOR ELEMENTS (CDE)															
5C0344	Specifications & studies	58	09/28/01A	12/20/01	28										
5C0345	Procurement	52	12/21/01*	03/15/02	28										
5C0346	Assembly	15	03/18/02*	04/05/02	28										
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Act ID	Activity Description	Dur	Start	Finish	Total Float	Fiscal Year														
						FY01	FY02	FY03	FY04	FY05	FY06									
4.1.5.5 Csi DETECTOR ELEMENTS (CDE)																				
5C0347	Tests & receipt of PIN bench	59	04/08/02*	06/28/02	28															
5C0348	Measurement training	53	07/01/02*	09/13/02	28															
5C0376	FM 15 soldering	10	08/11/03	08/22/03	28															
5C0337	FM 15 diodes tests and packing	15	08/06/03	08/26/03	28															
5C0415	FM 15 DPD + kapton acceptance test	4	08/25/03	08/28/03	28															
5C0416	FM 15 DPD ready for CDE	0		08/28/03	28															
5C0499	FM 15 Diodes delivery	0		08/28/03	28															
5C0500	FM 15 CDE Assembly	15	08/29/03	09/19/03	28															
5C0501	FM 15 CDE ready	0		09/19/03	28															
4.1.5.6 PRE-ELECTRONICS MODULE (PEM)																				
5C0763	FM 15 Start Assy	0		09/19/03	28															
5C0764	CDE insertion in structure	5	09/22/03*	09/26/03	28															
5C0765	PEM assembly	5	09/29/03	10/03/03	28															
5C0767	vibrations, temperature	15	10/06/03	10/24/03	28															
5C0768	Optical Test on bench	10	10/27/03	11/07/03	28															
5C0769	Shipment of PEM to NRL	5	11/10/03	11/14/03	28															
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL																				
5C1458	Receive Cal Mod 15	0		11/14/03	28															
29																				
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL																				
5C1591	Handling Dolly Fabrication - EM	66	01/09/02	04/12/02	29															
5C1592	Handling Dollies - Flight Units	66	10/10/02	01/23/03	29															
34																				
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL																				
5C1350	Vibration test	3	11/14/03	11/18/03	34															
5C1370	Vibration test	3	11/14/03	11/18/03	34															

Act ID	Activity Description	Dur	Start	Finish	Total Float	Fiscal Year									
						FY01	FY02	FY03	FY04	FY05	FY06				
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL															
5C1351	Muon calibration #3	2	11/19/03	11/20/03	34										
5C1371	Muon calibration #3	2	11/19/03	11/20/03	34										
5C1352	Comprehensive Functional Test #2	2	11/21/03	11/24/03	34										
5C1372	Comprehensive Functional Test #2	2	11/21/03	11/24/03	34										
5C1353	Preship review and signoff	1	11/25/03	11/25/03	34										
5C1373	Preship review and signoff	1	11/25/03	11/25/03	34										
5C1354	margin	6	11/26/03	12/05/03	34										
5C1374	margin	6	11/26/03	12/05/03	34										
5C1355	AV: Flight Calorimeter Tower 9 RFI	7	12/08/03	12/16/03	34										
5C1375	AV: Flight Calorimeter Tower 10 RFI	7	12/08/03	12/16/03	34										
35															
4.1.5.5 Csi DETECTOR ELEMENTS (CDE)															
5C0373	FM 12 soldering	10	06/16/03	06/27/03	35										
5C0334	FM 12 diodes tests and packing	15	06/11/03	07/01/03	35										
5C0409	FM 12 DPD + kapton acceptance test	4	06/30/03	07/03/03	35										
5C0410	FM 12 DPD ready for CDE	0		07/03/03	35										
5C0490	FM 12 Diodes delivery	0		07/03/03	35										
5C0491	FM 12 CDE Assembly	15	07/07/03	07/25/03	35										
5C0492	FM 12 CDE ready	0		07/25/03	35										
4.1.5.6 PRE-ELECTRONICS MODULE (PEM)															
5C0558	Material supplies	50	06/24/02*	09/03/02	35										
5C0561	enclosure plate	30	08/13/02*	09/24/02	35										
5C0559	Manufacturing structures	15	09/04/02*	09/24/02	35										
5C0560	Structure elements realization	15	09/04/02*	09/24/02	35										
5C0563	Structure qualification	20	09/25/02	10/22/02	35										

Act ID	Activity Description	Dur	Start	Finish	Total Float	Fiscal Year													
						FY01	FY02	FY03	FY04	FY05	FY06								
4.1.5.6 PRE-ELECTRONICS MODULE (PEM)																			
5C0564	Structure ready for CDE insertion (A3 goto E3)	0		10/22/02	35														
5C0736	FM 12 Start Assy	0		07/25/03	35														
5C0737	CDE insertion in structure	7	07/28/03*	08/05/03	35														
5C0738	PEM assembly	5	08/06/03	08/12/03	35														
5C0740	vibrations, temperature	15	08/13/03	09/03/03	35														
5C0741	Optical Test on bench	10	09/04/03	09/17/03	35														
5C0742	Shipment of PEM to NRL	5	09/18/03	09/24/03	35														
4.1.5.7 ANALOG FRONT END ELECTRONICS																			
5C0823	Test Ver 3	13	10/31/01A	11/16/01	35														
5C0825	Redesign 3 for Ver 4	20	11/19/01	12/17/01	35														
5C0826	Submission 4	66	12/18/01	04/01/02	35														
5C0827	Test Ver 4	16	04/02/02	04/23/02	35														
5C0881	EM PCB X Assembly	10	04/24/02	05/07/02	35														
5C0881A	EM PCB Y Assembly	10	04/24/02	05/07/02	35														
5C0882	EM PCB Test	5	05/08/02	05/14/02	35														
5C0883	Functional test	10	05/15/02	05/29/02	35														
5C0884	Environmental test	10	05/30/02	06/12/02	35														
5C0885	AV: AFEE EM available	0		06/12/02	35														
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL																			
5C1398	Receive Cal Mod 12	0		09/24/03	35														
5C1360	Mass properties measurement	1	10/10/03	10/10/03	35														
5C1361	PEM CES integration	1	10/13/03	10/13/03	35														
5C1362	Muon calibration #1	1	10/14/03	10/14/03	35														
5C1363	PEM-to-AFEE integration	5	10/15/03	10/21/03	35														
5C1363B	TEM & PS Functional Check	2	10/22/03	10/23/03	35														
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						FY01	FY02	FY03	FY04	FY05	FY06												
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL																							
5C1364	TEM & PS integration	1	10/24/03	10/24/03	35																		
5C1380	Mass properties measurement	1	10/24/03	10/24/03	35																		
5C1381	PEM CES integration	1	10/27/03	10/27/03	35																		
5C1365	Comprehensive State Functional test	2	10/27/03	10/28/03	35																		
5C1382	Muon calibration #1	1	10/28/03	10/28/03	35																		
5C1366	Electronic calib	1	10/29/03	10/29/03	35																		
5C1367	Muon calibration #2	2	10/30/03	10/31/03	35																		
5C1368	Mass properties #2	1	11/03/03	11/03/03	35																		
5C1383	PEM-to-AFEE integration	5	10/29/03	11/04/03	35																		
5C1383B	TEM & PS Functional Check	2	11/05/03	11/06/03	35																		
5C1384	TEM & PS integration	1	11/07/03	11/07/03	35																		
5C1385	Comprehensive State Functional test	2	11/10/03	11/11/03	35																		
5C1386	Electronic calib	1	11/12/03	11/12/03	35																		
5C1387	Muon calibration #2	2	11/13/03	11/14/03	35																		
5C1388	Mass properties #2	1	11/17/03	11/17/03	35																		
37																							
4.1.5.5 Csi DETECTOR ELEMENTS (CDE)																							
5C0374	FM 13 soldering	10	06/25/03	07/09/03	37																		
5C0411	FM 13 DPD + kapton acceptance test	4	07/10/03	07/15/03	37																		
5C0412	FM 13 DPD ready for CDE	0		07/15/03	37																		
5C0493	FM 13 Diodes delivery	0		07/15/03	37																		
5C0335	FM 13 diodes tests and packing	15	06/25/03	07/16/03	37																		
5C0494	FM 13 CDE Assembly	15	07/16/03	08/05/03	37																		
5C0495	FM 13 CDE ready	0		08/05/03	37																		
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Act ID	Activity Description	Dur	Start	Finish	Total Float	Fiscal Year									
						FY01	FY02	FY03	FY04	FY05	FY06				
4.1.5.6 PRE-ELECTRONICS MODULE (PEM)															
5C0745	FM 13 Start Assy	0		08/05/03	37										
5C0746	CDE insertion in structure	8	08/06/03*	08/15/03	37										
5C0747	PEM assembly	5	08/18/03	08/22/03	37										
5C0749	vibrations, temperature	15	08/25/03	09/15/03	37										
5C0750	Optical Test on bench	10	09/16/03	09/29/03	37										
5C0751	Shipment of PEM to NRL	5	09/30/03	10/06/03	37										
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL															
5C1418	Receive Cal Mod 13	0		10/06/03	37										
39															
4.1.5.5 Csi DETECTOR ELEMENTS (CDE)															
5C0375	FM 14 soldering	10	07/11/03	07/24/03	39										
5C0336	FM 14 diodes tests and packing	15	07/09/03	07/29/03	39										
5C0413	FM 14 DPD + kapton acceptance test	4	07/25/03	07/30/03	39										
5C0414	FM 14 DPD ready for CDE	0		07/30/03	39										
5C0496	FM 14 Diodes delivery	0		07/30/03	39										
5C0497	FM 14 CDE Assembly	15	07/31/03	08/20/03	39										
5C0498	FM 14 CDE ready	0		08/20/03	39										
4.1.5.6 PRE-ELECTRONICS MODULE (PEM)															
5C0754	FM 14 Start Assy	0		08/20/03	39										
5C0755	CDE insertion in structure	5	08/21/03*	08/27/03	39										
5C0756	PEM assembly	5	08/28/03	09/04/03	39										
5C0758	vibrations, temperature	15	09/05/03	09/25/03	39										
5C0759	Optical Test on bench	10	09/26/03	10/09/03	39										
5C0760	Shipment of PEM to NRL	5	10/10/03	10/16/03	39										
4.1.5.7 ANALOG FRONT END ELECTRONICS															
5C0837	ASIC Synthesis	18	10/22/01A	11/14/01	39										

Act ID	Activity Description	Dur	Start	Finish	Total Float	Fiscal Year																	
						FY01	FY02	FY03	FY04	FY05	FY06												
4.1.5.5 Csi DETECTOR ELEMENTS (CDE)																							
5C0406	FM 10 DPD ready for CDE	0		05/22/03	41																		
5C0484	FM 10 Diodes delivery	0		05/22/03	41																		
5C0482	FM 9 CDE Assembly	15	05/08/03	05/29/03	41																		
5C0483	FM 9 CDE ready	0		05/29/03	41																		
5C0485	FM 10 CDE Assembly	15	05/23/03	06/13/03	41																		
5C0486	FM 10 CDE ready	0		06/13/03	41																		
4.1.5.6 PRE-ELECTRONICS MODULE (PEM)																							
5C0709	FM 9 Start Assy	0		05/29/03	41																		
5C0710	CDE insertion in structure	10	05/30/03*	06/12/03	41																		
5C0718	FM 10 Start Assy	0		06/13/03	41																		
5C0711	PEM assembly	5	06/13/03	06/19/03	41																		
5C0719	CDE insertion in structure	10	06/16/03*	06/27/03	41																		
5C0720	PEM assembly	5	06/30/03	07/07/03	41																		
5C0713	vibrations, temperature	15	06/20/03	07/11/03	41																		
5C0714	Optical Test on bench	10	07/14/03	07/25/03	41																		
5C0722	vibrations, temperature	15	07/08/03	07/28/03	41																		
5C0715	Shipment of PEM to NRL	5	07/28/03	08/01/03	41																		
5C0723	Optical Test on bench	10	07/29/03	08/11/03	41																		
5C0724	Shipment of PEM to NRL	5	08/12/03	08/18/03	41																		
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL																							
5C1338	Receive Cal Mod 9	0		08/01/03	41																		
5C1358	Receive Cal Mod 10	0		08/18/03	41																		
42																							
4.1.5.7 ANALOG FRONT END ELECTRONICS																							
5C0838	FPGA GCRC Simulation	20	10/22/01A	11/16/01	42																		

Act ID	Activity Description	Dur	Start	Finish	Total Float	Fiscal Year																
						FY01	FY02	FY03	FY04	FY05	FY06											
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL																						
5C1158	Mass properties measurement	1	03/25/03	03/25/03	42																	
5C1159	PEM CES integration	3	03/26/03	03/28/03	42																	
5C1160	Muon calibration #1	4	03/31/03	04/03/03	42																	
5C1200	Mass properties measurement	1	06/11/03	06/11/03	42																	
5C1201	PEM CES integration	2	06/12/03	06/13/03	42																	
5C1202	Muon calibration #1	4	06/16/03	06/19/03	42																	
5C1203	PEM-to-AFEE integration	8	06/20/03	07/01/03	42																	
5C1203B	TEM & PS Functional Check	2	07/02/03	07/03/03	42																	
5C1204	TEM & PS integration	2	07/07/03	07/08/03	42																	
5C1205	Comprehensive State Functional test	4	07/09/03	07/14/03	42																	
5C1206	Electronic calib	2	07/15/03	07/16/03	42																	
5C1207	Muon calibration #2	3	07/17/03	07/21/03	42																	
5C1208	Mass properties #2	1	07/22/03	07/22/03	42																	
5C1210	Vibration test	5	08/01/03	08/07/03	42																	
5C1211	Muon calibration #3	2	08/08/03	08/11/03	42																	
5C1212	Comprehensive Functional Test #2	3	08/12/03	08/14/03	42																	
5C1213	Preship review and signoff	2	08/15/03	08/18/03	42																	
5C1214	margin	5	08/19/03	08/25/03	42																	
5C1215	AV: Calorimeter Modules 2 RFI (for Calibration)	7	08/26/03	09/04/03	42																	
43																						
4.1.5.7 ANALOG FRONT END ELECTRONICS																						
5C1108B	VME GSE Software Development	47	10/01/01A	12/06/01	43																	
5C1108C	EM AFEE GSE Available	0		12/06/01	43																	
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL																						
5C1700	EGSE Software - Release 1	66	03/14/02	06/14/02	43																	

Act ID	Activity Description	Dur	Start	Finish	Total Float	Fiscal Year									
						FY01	FY02	FY03	FY04	FY05	FY06				
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL															
5C1710	Software Release 2	66	06/17/02	09/18/02	43										
5C1720	Beam Test Support - Release 3	22	09/19/02	10/18/02	43										
5C1190	Vibration test	5	08/01/03	08/07/03	43										
5C1191	Muon calibration #3	2	08/08/03	08/11/03	43										
5C1192	Comprehensive Functional Test #2	2	08/12/03	08/13/03	43										
5C1193	Preship review and signoff	2	08/14/03	08/15/03	43										
5C1194	margin	5	08/18/03	08/22/03	43										
5C1195	AV: Calorimeter Modules 1 RFI (for Calibration)	7	08/25/03	09/03/03	43										
44															
4.1.5.5 Csi DETECTOR ELEMENTS (CDE)															
5C0372	FM 11 soldering	10	05/19/03	06/02/03	44										
5C0333	FM 11 diodes tests and packing	15	05/14/03	06/04/03	44										
5C0407	FM 11 DPD + kapton acceptance test	4	06/03/03	06/06/03	44										
5C0408	FM 11 DPD ready for CDE	0		06/06/03	44										
5C0487	FM 11 Diodes delivery	0		06/06/03	44										
5C0488	FM 11 CDE Assembly	15	06/09/03	06/27/03	44										
5C0489	FM 11 CDE ready	0		06/27/03	44										
4.1.5.6 PRE-ELECTRONICS MODULE (PEM)															
5C0588	Design	10	05/06/02*	05/17/02	44										
5C0589	procurement	15	05/20/02*	06/10/02	44										
5C0590	fabrication	40	06/11/02*	08/06/02	44										
5C0591	acceptance tests	10*	08/07/02*	08/20/02	44										
5C0592	tool ready	0		08/20/02	44										
5C0727	FM 11 Start Assy	0		06/27/03	44										
5C0728	CDE insertion in structure	10	06/30/03*	07/14/03	44										

Act ID	Activity Description	Dur	Start	Finish	Total Float	FY													
						FY01	FY02	FY03	FY04	FY05	FY06								
4.1.5.6 PRE-ELECTRONICS MODULE (PEM)																			
5C0729	PEM assembly	3	07/15/03	07/17/03	44														
5C0731	vibrations, temperature	14	07/18/03	08/06/03	44														
5C0732	Optical Test on bench	10	08/07/03	08/20/03	44														
5C0733	Shipment of PEM to NRL	5	08/21/03	08/27/03	44														
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL																			
5C1378	Receive Cal Mod 11	0		08/27/03	44														
5C1310	Vibration test	3	10/17/03	10/21/03	44														
5C1330	Vibration test	3	10/17/03	10/21/03	44														
5C1311	Muon calibration #3	2	10/22/03	10/23/03	44														
5C1331	Muon calibration #3	2	10/22/03	10/23/03	44														
5C1312	Comprehensive Functional Test #2	2	10/24/03	10/27/03	44														
5C1332	Comprehensive Functional Test #2	2	10/24/03	10/27/03	44														
5C1313	Preship review and signoff	1	10/28/03	10/28/03	44														
5C1333	Preship review and signoff	1	10/28/03	10/28/03	44														
5C1314	margin	6	10/29/03	11/05/03	44														
5C1334	margin	6	10/29/03	11/05/03	44														
5C1315	AV: Flight Calorimeter Tower 7 RFI	7	11/06/03	11/14/03	44														
5C1335	AV: Flight Calorimeter Tower 8 RFI	7	11/06/03	11/14/03	44														
45																			
4.1.5.6 PRE-ELECTRONICS MODULE (PEM)																			
5C0567	Manufacturing structures	15	09/26/02*	10/16/02	45														
5C0571	Structure qualification	25	10/17/02	11/20/02	45														
5C0572	Structure ready for CDE insertion (A4 goto E4)	0		11/20/02	45														
4.1.5.7 ANALOG FRONT END ELECTRONICS																			
5C0848B	Flt Parts Package Test	22	11/14/02	12/17/02	45														

Act ID	Activity Description	Dur	Start	Finish	Total Float	Fiscal Year									
						FY01	FY02	FY03	FY04	FY05	FY06				
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL															
5C1340	Mass properties measurement	0		09/24/03	45										
5C1341	PEM CES integration	2	09/25/03	09/26/03	45										
5C1342	Muon calibration #1	2	09/29/03	09/30/03	45										
5C1343	PEM-to-AFEE integration	5	10/01/03	10/07/03	45										
5C1343B	TEM & PS Functional Check	2	10/08/03	10/09/03	45										
5C1344	TEM & PS integration	1	10/10/03	10/10/03	45										
5C1345	Comprehensive State Functional test	2	10/13/03	10/14/03	45										
5C1346	Electronic calib	1	10/15/03	10/15/03	45										
5C1347	Muon calibration #2	2	10/16/03	10/17/03	45										
5C1348	Mass properties #2	1	10/20/03	10/20/03	45										
5C1409	11 & 12 Thermal vac functional test	10	12/04/03	12/13/03	45										
46															
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL															
5C1320	Mass Properties Measurement	0		09/10/03	46										
5C1321	PEM CES integration	2	09/11/03	09/12/03	46										
5C1322	Muon calibration #1	2	09/15/03	09/16/03	46										
5C1323	PEM-to-AFEE integration	5	09/17/03	09/23/03	46										
5C1323B	TEM & PS Functional Check	2	09/24/03	09/25/03	46										
5C1324	TEM & PS integration	1	09/26/03	09/26/03	46										
5C1325	Comprehensive State Functional test	2	09/29/03	09/30/03	46										
5C1326	Electronic calib	1	10/01/03	10/01/03	46										
5C1327	Muon calibration #2	2	10/02/03	10/03/03	46										
5C1328	Mass properties #2	1	10/06/03	10/06/03	46										
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						FY01	FY02	FY03	FY04	FY05	FY06		
48													
4.1.5.5 Csi DETECTOR ELEMENTS (CDE)													
5C0330	FM 8 diodes tests and packing	15	03/19/03	04/08/03	48								
5C0369	FM 8 soldering	13	03/21/03	04/08/03	48								
5C0401	FM 8 DPD + kapton acceptance test	4	04/09/03	04/14/03	48								
5C0402	FM 8 DPD ready for CDE	0		04/14/03	48								
5C0478	FM 8 Diodes delivery	0		04/14/03	48								
5C0479	FM 8 CDE Assembly	15	04/15/03	05/05/03	48								
5C0480	FM 8 CDE ready	0		05/05/03	48								
4.1.5.6 PRE-ELECTRONICS MODULE (PEM)													
5C0700	FM 8 Start Assy	0		05/05/03	48								
5C0701	CDE insertion in structure	10	05/06/03*	05/19/03	48								
5C0702	PEM assembly	5	05/20/03	05/27/03	48								
5C0704	vibrations, temperature	15	05/28/03	06/17/03	48								
5C0705	Optical Test on bench	10	06/18/03	07/01/03	48								
5C0706	Shipment of PEM to NRL	5	07/02/03	07/09/03	48								
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL													
5C1137	Mass properties measurement	1	03/04/03	03/04/03	48								
5C1138	PEM CES integration	2	03/05/03	03/06/03	48								
5C1139	Muon calibration #1	4	03/07/03	03/12/03	48								
5C1318	Receive Cal Mod 8	0		07/09/03	48								
50													
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL													
5C1290	Vibration test	2	09/29/03	09/30/03	50								
5C1270	Vibration test	3	09/29/03	10/01/03	50								
5C1291	Muon calibration #3	2	10/01/03	10/02/03	50								
5C1271	Muon calibration #3	2	10/02/03	10/03/03	50								
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Act ID	Activity Description	Dur	Start	Finish	Total Float	Fiscal Year									
						FY01	FY02	FY03	FY04	FY05	FY06				
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL															
5C1292	Comprehensive Functional Test #2	2	10/03/03	10/06/03	50										
5C1272	Comprehensive Functional Test #2	2	10/06/03	10/07/03	50										
5C1293	Preship review and signoff	1	10/07/03	10/07/03	50										
5C1273	Preship review and signoff	1	10/08/03	10/08/03	50										
5C1294	margin	6	10/08/03	10/15/03	50										
5C1274	margin	5	10/09/03	10/15/03	50										
5C1275	AV: Flight Calorimeter Tower 5 RFI	7	10/16/03	10/24/03	50										
5C1295	AV: Flight Calorimeter Tower 6 RFI	7	10/16/03	10/24/03	50										
51															
4.1.5.5 Csi DETECTOR ELEMENTS (CDE)															
5C0368	FM 7 soldering	10	03/07/03	03/20/03	51										
5C0329	FM 7 diodes tests and packing	15	03/05/03	03/25/03	51										
5C0399	FM 7 DPD + kapton acceptance test	4	03/21/03	03/26/03	51										
5C0400	FM 7 DPD ready for CDE	0		03/26/03	51										
5C0475	FM 7 Diodes delivery	0		03/26/03	51										
5C0476	FM 7 CDE Assembly	15	03/27/03	04/16/03	51										
5C0477	FM 7 CDE ready	0		04/16/03	51										
4.1.5.6 PRE-ELECTRONICS MODULE (PEM)															
5C0691	FM 7 Start Assy	0		04/16/03	51										
5C0692	CDE insertion in structure	10	04/17/03*	04/30/03	51										
5C0693	PEM assembly	5	05/01/03	05/07/03	51										
5C0695	vibrations, temperature	15	05/08/03	05/29/03	51										
5C0696	Optical Test on bench	10	05/30/03	06/12/03	51										
5C0697	Shipment of PEM to NRL	5	06/13/03	06/19/03	51										

Act ID	Activity Description	Dur	Start	Finish	Total Float	Fiscal Year									
						FY01	FY02	FY03	FY04	FY05	FY06				
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL															
5C1298	Receive Cal Mod 7	0		06/19/03	51										
5C1280	Mass properties measurement	1	08/14/03	08/14/03	51										
5C1281	PEM CES integration	2	08/15/03	08/18/03	51										
5C1282	Muon calibration #1	3	08/19/03	08/21/03	51										
5C1283	PEM-to-AFEE integration	6	08/22/03	08/29/03	51										
5C1283B	TEM & PS Functional Check	2	09/02/03	09/03/03	51										
5C1284	TEM & PS integration	1	09/04/03	09/04/03	51										
5C1285	Comprehensive State Functional test	3	09/05/03	09/09/03	51										
5C1286	Electronic calib	2	09/10/03	09/11/03	51										
5C1287	Muon calibration #2	2	09/12/03	09/15/03	51										
5C1288	Mass properties #2	1	09/16/03	09/16/03	51										
52															
4.1.5.5 Csi DETECTOR ELEMENTS (CDE)															
5C0367	FM 6 soldering	10	02/21/03	03/06/03	52										
5C0328	FM 6 diodes tests and packing	15	02/19/03	03/11/03	52										
5C0397	FM 6 DPD + kapton acceptance test	4	03/07/03	03/12/03	52										
5C0398	FM 6 DPD ready for CDE	0		03/12/03	52										
5C0472	FM 6 Diodes delivery	0		03/12/03	52										
5C0473	FM 6 CDE Assembly	15	03/13/03	04/02/03	52										
5C0474	FM 6 CDE ready	0		04/02/03	52										
4.1.5.6 PRE-ELECTRONICS MODULE (PEM)															
5C0682	FM 6 Start Assy	0		04/02/03	52										
5C0683	CDE insertion in structure	10	04/03/03*	04/16/03	52										
5C0684	PEM assembly	5	04/17/03	04/23/03	52										
5C0686	vibrations, temperature	15	04/24/03	05/14/03	52										

Act ID	Activity Description	Dur	Start	Finish	Total Float	Fiscal Year									
						FY01	FY02	FY03	FY04	FY05	FY06				
4.1.5.6 PRE-ELECTRONICS MODULE (PEM)															
5C0687	Optical Test on bench	10	05/15/03	05/29/03	52										
5C0688	Shipment of PEM to NRL	5	05/30/03	06/05/03	52										
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL															
5C1278	Receive Cal Mod 6	0		06/05/03	52										
53															
4.1.5.5 Csi DETECTOR ELEMENTS (CDE)															
5C0362	FM 1 soldering	10	11/18/02	12/03/02	53										
5C0323	FM 1 diodes tests and packing	14	11/13/02	12/04/02	53										
5C0387	FM 1 DPD + kapton acceptance test	4	12/04/02	12/09/02	53										
5C0388	FM 1 DPD ready for CDE	0		12/09/02	53										
5C0457	FM 1 Diodes delivery	0		12/09/02	53										
5C0458	FM 1 CDE Assembly	14	12/10/02	01/07/03	53										
5C0459	FM 1 CDE ready	0		01/07/03	53										
4.1.5.6 PRE-ELECTRONICS MODULE (PEM)															
5C0568	Structure elements realization	15	09/16/02*	10/04/02	53										
5C0637	FM 1 Start Assy	0		01/07/03*	53										
5C0638	CDE insertion in structure	10	01/08/03	01/22/03	53										
5C0639	PEM assembly	5	01/23/03	01/29/03	53										
5C0641	vibrations, temperature	15	01/30/03	02/20/03	53										
5C0642	Optical Test on bench	9	02/21/03	03/05/03	53										
5C0643	Shipment of PEM to NRL	4	03/06/03	03/11/03	53										
4.1.5.7 ANALOG FRONT END ELECTRONICS															
5C0877	PCB -Y design	62	11/09/01	02/19/02	53										
5C0879A	EM PCB Y Layout	64	11/27/01	03/07/02	53										
5C0880A	EM PCB Y Fabrication	15	03/08/02	03/28/02	53										

Act ID	Activity Description	Dur	Start	Finish	Total Float	Fiscal Year														
						FY01	FY02	FY03	FY04	FY05	FY06									
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL																				
5C1186	Electronic calib	2	06/23/03	06/24/03	57															
5C1187	Muon calibration #2	3	06/25/03	06/27/03	57															
5C1188	Mass properties #2	1	06/30/03	06/30/03	57															
58																				
4.1.5.7 ANALOG FRONT END ELECTRONICS																				
5C0917	man assy (4 boards)	5	04/30/03	05/06/03	58															
5C0925	man assy (4 boards)	5	05/07/03	05/13/03	58															
5C0926	functional test	1	05/14/03	05/14/03	58															
5C0927	workmanship test (TBR) EM & Qual units only	0		05/14/03	58															
5C0928	conformal coat	8	05/15/03	05/27/03	58															
5C0929	final functional test	1	05/28/03	05/28/03	58															
5C0930	burn-in on EM & Qual only	0		05/28/03	58															
5C0931	ready	0		05/28/03	58															
59																				
4.1.5.7 ANALOG FRONT END ELECTRONICS																				
5C0841A	GCRC for EM Ready	0		03/20/02	59															
60																				
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL																				
5C1230	Vibration test	3	08/29/03	09/03/03	60															
5C1250	Vibration test	3	08/29/03	09/03/03	60															
5C1231	Muon calibration #3	2	09/04/03	09/05/03	60															
5C1251	Muon calibration #3	2	09/04/03	09/05/03	60															
5C1232	Comprehensive Functional Test #2	2	09/08/03	09/09/03	60															
5C1252	Comprehensive Functional Test #2	2	09/08/03	09/09/03	60															
5C1233	Preship review and signoff	1	09/10/03	09/10/03	60															
5C1253	Preship review and signoff	1	09/10/03	09/10/03	60															
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						FY01	FY02	FY03	FY04	FY05	FY06				
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL															
5C1234	margin	6	09/11/03	09/18/03	60										
5C1254	margin	6	09/11/03	09/18/03	60										
5C1235	AV: Flight Calorimeter Tower 3 RFI	7	09/19/03	09/29/03	60										
5C1255	AV: Flight Calorimeter Tower 4 RFI	7	09/19/03	09/29/03	60										
61															
4.1.5.5 Csi DETECTOR ELEMENTS (CDE)															
5C0448	call for tender	136	01/14/02*	07/26/02	61										
5C0449	order	20	07/29/02*	08/23/02	61										
5C0366	FM 5 soldering	10	01/24/03	02/06/03	61										
5C0327	FM 5 diodes tests and packing	15	01/22/03	02/11/03	61										
5C0395	FM 5 DPD + kapton acceptance test	4	02/07/03	02/12/03	61										
5C0396	FM 5 DPD ready for CDE	0		02/12/03	61										
5C0469	FM 5 Diodes delivery	0		02/12/03	61										
5C0470	FM 5 CDE Assembly	15	02/13/03	03/06/03	61										
5C0471	FM 5 CDE ready	0		03/06/03	61										
4.1.5.6 PRE-ELECTRONICS MODULE (PEM)															
5C0673	FM 5 Start Assy	0		03/06/03	61										
5C0674	CDE insertion in structure	10	03/07/03*	03/20/03	61										
5C0675	PEM assembly	5	03/21/03	03/27/03	61										
5C0677	vibrations, temperature	15	03/28/03	04/17/03	61										
5C0678	Optical Test on bench	10	04/18/03	05/01/03	61										
5C0679	Shipment of PEM to NRL	5	05/02/03	05/08/03	61										
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL															
5C1258	Receive Cal Mod 5	0		05/08/03	61										
5C1209	1& 2 Thermal vac functional test	9	07/23/03	07/31/03	61										
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						FY01	FY02	FY03	FY04	FY05	FY06									
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL																				
5C1260	Mass properties measurement	1	07/31/03	07/31/03	61															
5C1261	PEM CES integration	2	08/01/03	08/04/03	61															
5C1262	Muon calibration #1	3	08/05/03	08/07/03	61															
5C1263	PEM-to-AFEE integration	6	08/08/03	08/15/03	61															
5C1263B	TEM & PS Functional Check	2	08/18/03	08/19/03	61															
5C1264	TEM & PS integration	1	08/20/03	08/20/03	61															
5C1265	Comprehensive State Functional test	3	08/21/03	08/25/03	61															
5C1266	Electronic calib	2	08/26/03	08/27/03	61															
5C1267	Muon calibration #2	2	08/28/03	08/29/03	61															
5C1268	Mass properties #2	1	09/02/03	09/02/03	61															
5C1369	9 & 10 Thermal vac functional test	10	11/04/03	11/13/03	61															
62																				
4.1.5.7 ANALOG FRONT END ELECTRONICS																				
5C0933	man assy (4 boards)	5	05/14/03	05/20/03	62															
5C0941	man assy (4 boards)	5	05/21/03	05/28/03	62															
5C0949	man assy (4 boards)	5	05/29/03	06/04/03	62															
5C0957	man assy (4 boards)	5	06/05/03	06/11/03	62															
5C0965	man assy (4 boards)	5	06/12/03	06/18/03	62															
5C0973	man assy (4 boards)	5	06/19/03	06/25/03	62															
5C0981	man assy (4 boards)	5	06/26/03	07/02/03	62															
5C0989	man assy (4 boards)	5	07/03/03	07/10/03	62															
5C0997	man assy (4 boards)	5	07/11/03	07/17/03	62															
5C1005	man assy (4 boards)	5	07/18/03	07/24/03	62															
5C1013	man assy (4 boards)	5	07/25/03	07/31/03	62															
5C1021	man assy (4 boards)	5	08/01/03	08/07/03	62															

Act ID	Activity Description	Dur	Start	Finish	Total Float	FY01		FY02		FY03		FY04		FY05		FY06	
4.1.5.7 ANALOG FRONT END ELECTRONICS																	
5C1029	man assy (4 boards)	5	08/08/03	08/14/03	62												
5C1037	man assy (4 boards)	5	08/15/03	08/21/03	62												
5C1045	man assy (4 boards)	5	08/22/03	08/28/03	62												
5C1053	man assy (4 boards)	5	08/29/03	09/05/03	62												
5C1061	man assy (4 boards)	4	09/08/03	09/11/03	62												
5C1069	man assy (4 boards)	5	09/12/03	09/18/03	62												
5C1077	man assy (4 boards)	5	09/19/03	09/25/03	62												
5C1085	man assy (4 boards)	5	09/26/03	10/02/03	62												
5C1086	functional test	1	10/03/03	10/03/03	62												
5C1087	workmanship test (TBR) EM & Qual units only	0		10/03/03	62												
5C1088	conformal coat	8	10/06/03	10/15/03	62												
5C1089	final functional test	1	10/16/03	10/16/03	62												
5C1090	burn-in on EM & Qual only	0		10/16/03	62												
5C1091	4 Boards Ready	0		10/16/03	62												
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL																	
5C1240	Mass properties measurement	1	07/17/03	07/17/03	62												
5C1241	PEM CES integration	3	07/18/03	07/22/03	62												
5C1242	Muon calibration #1	2	07/23/03	07/24/03	62												
5C1243	PEM-to-AFEE integration	6	07/25/03	08/01/03	62												
5C1243B	TEM & PS Functional Check	2	08/04/03	08/05/03	62												
5C1244	TEM & PS integration	1	08/06/03	08/06/03	62												
5C1245	Comprehensive State Functional test	3	08/07/03	08/11/03	62												
5C1246	Electronic calib	2	08/12/03	08/13/03	62												
5C1247	Muon calibration #2	2	08/14/03	08/15/03	62												
5C1248	Mass properties #2	1	08/18/03	08/18/03	62												
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						FY01	FY02	FY03	FY04	FY05	FY06
64											
4.1.5.7 ANALOG FRONT END ELECTRONICS											
5C0885A	Revisions to Layouts	10	06/13/02	06/26/02	64						
5C0885B	AFEE Rev 2 Fabrication	15	06/27/02	07/18/02	64						
5C0885C	AFEE Rev 2 Assembly	10	07/19/02	08/01/02	64						
5C0885D	AFEE Rev 2 Test	10	08/02/02	08/15/02	64						
5C0886B	Initiate PCB Fab Contract	1	08/16/02	08/16/02	64						
5C0886C	Qualify PCB Manufacturer	22	10/21/02	11/19/02	64						
5C0918	functional test	1	05/07/03	05/07/03	64						
5C0919	workmanship test (TBR) EM & Qual units only	0		05/07/03	64						
5C0920	conformal coat	8	05/08/03	05/19/03	64						
5C0921	final functional test	1	05/20/03	05/20/03	64						
5C0922	burn-in on EM & Qual only	0		05/20/03	64						
5C0923	ready	0		05/20/03	64						
65											
4.1.5.5 Csi DETECTOR ELEMENTS (CDE)											
5C0365	FM 4 soldering	6	01/09/03	01/16/03	65						
5C0393	FM 4 DPD + kapton acceptance test	4	01/17/03	01/23/03	65						
5C0394	FM 4 DPD ready for CDE	0		01/23/03	65						
5C0466	FM 4 Diodes delivery	0		01/23/03	65						
5C0326	FM 4 diodes tests and packing	15	01/08/03	01/29/03	65						
5C0467	FM 4 CDE Assembly	15	01/24/03	02/13/03	65						
5C0468	FM 4 CDE ready	0		02/13/03	65						
4.1.5.6 PRE-ELECTRONICS MODULE (PEM)											
5C0664	FM 4 Start Assy	0		02/13/03	65						
5C0665	CDE insertion in structure	10	02/14/03*	02/28/03	65						

Act ID	Activity Description	Dur	Start	Finish	Total Float	Fiscal Year													
						FY01	FY02	FY03	FY04	FY05	FY06								
4.1.5.6 PRE-ELECTRONICS MODULE (PEM)																			
5C0666	PEM assembly	5	03/03/03	03/07/03	65														
5C0668	vibrations, temperature	15	03/10/03	03/28/03	65														
5C0669	Optical Test on bench	10	03/31/03	04/11/03	65														
5C0670	Shipment of PEM to NRL	5	04/14/03	04/18/03	65														
4.1.5.7 ANALOG FRONT END ELECTRONICS																			
5C0871	VM AFEE + CDE test	10	12/18/01	01/09/02	65														
5C0873	AV: VM AFEE available	0		01/09/02	65														
5C0870	VM PCB Test	22	12/04/01	01/11/02	65														
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL																			
5C1238	Receive Cal Mod 4	0		04/18/03	65														
66																			
4.1.5.5 Csl DETECTOR ELEMENTS (CDE)																			
5C0325	FM 3 diodes tests and packing	9	01/02/03	01/14/03	66														
5C0364	FM 3 soldering	10	01/02/03	01/15/03	66														
5C0391	FM 3 DPD + kapton acceptance test	4	01/16/03	01/22/03	66														
5C0392	FM 3 DPD ready for CDE	0		01/22/03	66														
5C0463	FM 3 Diodes delivery	0		01/22/03	66														
5C0464	FM 3 CDE Assembly	7	01/23/03	01/31/03	66														
5C0465	FM 3 CDE ready	0		01/31/03	66														
4.1.5.6 PRE-ELECTRONICS MODULE (PEM)																			
5C0655	FM 3 Start Assy	0		01/31/03	66														
5C0656	CDE insertion in structure	9	02/03/03*	02/13/03	66														
5C0657	PEM assembly	5	02/14/03	02/21/03	66														
5C0659	vibrations, temperature	14	02/24/03	03/13/03	66														
5C0660	Optical Test on bench	10	03/14/03	03/27/03	66														
5C0661	Shipment of PEM to NRL	5	03/28/03	04/03/03	66														

Act ID	Activity Description	Dur	Start	Finish	Total Float	Fiscal Year									
						FY01	FY02	FY03	FY04	FY05	FY06				
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL															
5C1218	Receive Cal Mod 3	0		04/03/03	66										
5C1329	7 & 8 Thermal vac functional test	10	10/07/03	10/16/03	66										
67															
4.1.5.6 PRE-ELECTRONICS MODULE (PEM)															
5C0569	enclosure plate	25	08/12/02*	09/16/02	67										
4.1.5.7 ANALOG FRONT END ELECTRONICS															
5C1078	functional test	1	09/26/03	09/26/03	67										
5C1079	workmanship test (TBR) EM & Qual units only	0		09/26/03	67										
5C1080	conformal coat	8	09/29/03	10/08/03	67										
5C1081	final functional test	1	10/09/03	10/09/03	67										
5C1082	burn-in on EM & Qual only	0		10/09/03	67										
5C1083	ready	0		10/09/03	67										
68															
4.1.5.A INSTRUMENT I&T SUPPORT															
5C1505	Integrate FM A & B	10	08/18/03	08/29/03	68										
69															
4.1.5.5 Csi DETECTOR ELEMENTS (CDE)															
5C0363	FM 2 soldering	10	12/02/02	12/13/02	69										
5C0389	FM 2 DPD + kapton acceptance test	4	12/16/02	12/19/02	69										
5C0390	FM 2 DPD ready for CDE	0		12/19/02	69										
5C0460	FM 2 Diodes delivery	0		12/19/02	69										
5C0324	FM 2 diodes tests and packing	19	11/27/02	12/23/02	69										
5C0461	FM 2 CDE Assembly	10	12/20/02	01/13/03	69										
5C0462	FM 2 CDE ready	0		01/13/03	69										
4.1.5.6 PRE-ELECTRONICS MODULE (PEM)															
5C0646	FM 2 Start Assy	0		01/13/03	69										

Act ID	Activity Description	Dur	Start	Finish	Total Float	Fiscal Year														
						FY01	FY02	FY03	FY04	FY05	FY06									
4.1.5.6 PRE-ELECTRONICS MODULE (PEM)																				
5C0647	CDE insertion in structure	5	01/14/03*	01/21/03	69															
5C0648	PEM assembly	5	01/22/03	01/28/03	69															
5C0650	vibrations, temperature	15	01/29/03	02/19/03	69															
5C0651	Optical Test on bench	9	02/20/03	03/04/03	69															
5C0652	Shipment of PEM to NRL	4	03/05/03	03/10/03	69															
4.1.5.7 ANALOG FRONT END ELECTRONICS																				
5C0887	Front End Electronics (Flight version) start	0		11/12/02	69															
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL																				
5C1198	Receive Cal Mod 2	0		03/10/03	69															
72																				
4.1.5.7 ANALOG FRONT END ELECTRONICS																				
5C1070	functional test	1	09/19/03	09/19/03	72															
5C1071	workmanship test (TBR) EM & Qual units only	0		09/19/03	72															
5C1072	conformal coat	8	09/22/03	10/01/03	72															
5C1073	final functional test	1	10/02/03	10/02/03	72															
5C1074	burn-in on EM & Qual only	0		10/02/03	72															
5C1075	ready	0		10/02/03	72															
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL																				
5C1220	Mass properties measurement	1	07/02/03	07/02/03	72															
5C1221	PEM CES integration	3	07/03/03	07/08/03	72															
5C1222	Muon calibration #1	3	07/09/03	07/11/03	72															
5C1223	PEM-to-AFEE integration	6	07/14/03	07/21/03	72															
5C1223B	TEM & PS Functional Check	2	07/22/03	07/23/03	72															
5C1224	TEM & PS integration	1	07/24/03	07/24/03	72															
5C1225	Comprehensive State Functional test	2	07/25/03	07/28/03	72															
5C1226	Electronic calib	2	07/29/03	07/30/03	72															

Act ID	Activity Description	Dur	Start	Finish	Total Float	Fiscal Year									
						FY01	FY02	FY03	FY04	FY05	FY06				
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL															
5C1227	Muon calibration #2	2	07/31/03	08/01/03	72										
5C1228	Mass properties #2	1	08/04/03	08/04/03	72										
74															
4.1.5.9 CALORIMETER MODULE ASSEMBLY, TEST & CAL															
5C1289	5 & 6 Thermal vac functional test	10	09/17/03	09/26/03	74										
75															
4.1.5.7 ANALOG FRONT END ELECTRONICS															
5C0879	EM PCB X Layout	64	10/24/01A	02/04/02	75										
5C0880	EM PCB X Fabrication	15	02/05/02	02/26/02	75										
77															
4.1.5.7 ANALOG FRONT END ELECTRONICS															
5C1062	functional test	1	09/12/03	09/12/03	77										
5C1063	workmanship test (TBR) EM & Qual units only	0		09/12/03	77						▼				
5C1064	conformal coat	8	09/15/03	09/24/03	77										
5C1065	final functional test	1	09/25/03	09/25/03	77										
5C1066	burn-in on EM & Qual only	0		09/25/03	77						▼				
5C1067	ready	0		09/25/03	77						▼				



**Gamma-ray
Large Area Space
Telescope**



FTEs

Program: 1001	Description: GLAST LAT Project	Approval: Program Manager Functional Manager Cost Account Manager
Run Date: 12/13/01	Status Date: 10/31/01	

CAPW[3]	OBS[3]		START	FY00	FY01	FY02	FY03	FY04	FY05	FY06	Cumulative
4.1.5	CALORIMETER										
	DL SU-SLAC										
		FY_FTE	PLANNED	0.0	0.0	0.9	0.7	0.0	0.0	0.0	1.6
	DN NRL										
		FY_FTE	PLANNED	0.0	2.8	6.7	9.4	13.2	10.2	4.0	47.4
	FF France										
		FY_FTE	PLANNED	0.0	0.0	21.0	31.7	29.3	15.6	8.6	108.1
	FK Sweden										
		FY_FTE	PLANNED	0.0	0.0	0.0	3.4	4.9	3.9	3.5	16.6
CAPW[3] Totals:			PLANNED	0.0	2.8	28.5	45.3	47.3	29.7	16.1	173.8