

LCLS TPC Detailed Cost Estimate (FY05FY09)

5/5/2005

WBS Level						LCLA DCE March-2005 Description	Early Start	Early Finish	OBS	Fund Type	Res Code	Units	Budgeted Quantity		Fully Burdened and Escalated Cost		
Run Time: 4/22/05 8:43am													Hours	\$	Labor	M&S	Total (No Conting)
1	01					LCLS PROJECT MGMT, PLANNING & ADMN (TEC)							189,936	6,533,063	17,638,518	7,519,148	25,157,666
1	01	01				Environment, Safety & Health							12,590	260,938	1,164,058	298,853	1,462,911
1	01	01	01			Radiation Physics							3,812	-	353,401	-	353,401
1	01	01	01			Radiation Physics - PED	4-Oct-04	30-Sep-05	S	P	SL_PHH	Hrs	851		75,228		75,228
1	01	01	01			Radiation Physics- CONST	3-Oct-05	30-Mar-09	S	C	SL_PHH	Hrs	2,961		278,173		278,173
1	01	01	02			ESH Management & Coordination							8,778	206,250	810,657	236,357	1,047,014
1	01	01	02			ESH Management & Coordination - PED	4-Oct-04	30-Sep-05	S	P	SL_PHH	Hrs	1,323		117,075		117,075
1	01	01	02			ESH Management & Coordination - PED	4-Oct-04	30-Sep-05	S	P	SL_PHH	Hrs	210		18,564		18,564
1	01	01	02			ESH Management & Coordination - (Hislop)	1-Mar-05	30-Sep-05	S	P	SL_PHH	Hrs	1,323		118,672		118,672
1	01	01	02			ESH Management & Coordination - CONST	3-Oct-05	30-Mar-09	S	C	SL_PHH	Hrs	5,922		556,346		556,346
1	01	01	02			Hazard Analysis Consulting - PED	3-Jan-05	30-Sep-05	S	P	SL_MSPS	\$\$		37,500		40,875	40,875
1	01	01	02			Hazard Analysis Consulting - CONST	3-Oct-05	30-Mar-09	S	C	SL_MSPS	\$\$		168,750		195,482	195,482
1	01	01	03			Seismic & Engineering Support							-	54,688	-	62,496	62,496
1	01	01	03			Seismic & Engineering - PED	3-Jan-05	30-Sep-05	S	P	SL_MSPS	\$\$		12,500		13,625	13,625
1	01	01	03			Seismic & Engineering - CONST	3-Oct-05	30-Mar-09	S	C	SL_MSPS	\$\$		42,188		48,871	48,871
1	01	02				Project Management							78,212	5,362,791	6,908,374	6,188,276	13,096,650
1	01	02	01			SLAC Project Management Office							78,212	5,362,791	6,908,374	6,188,276	13,096,650
1	01	02	01	01		SLAC Project Office - General							47,663	-	4,633,070	-	4,633,070
1	01	02	01	01		Project Director - PED	4-Oct-04	30-Sep-05	S	P	SL_PM	Hrs	1,458		180,034		180,034
1	01	02	01	01		Project Director - CONST	3-Oct-05	30-Mar-09	S	C	SL_PM	Hrs	5,915		776,187		776,187
1	01	02	01	01		Chief Engineer - PED	4-Oct-04	30-Sep-05	S	P	SL_PM	Hrs	1,458		180,034		180,034
1	01	02	01	01		Chief Engineer - CONST	3-Oct-05	30-Mar-09	S	C	SL_PM	Hrs	5,915		776,187		776,187
1	01	02	01	01		E-Beam Systems Manager - PED	1-Mar-05	30-Sep-05	S	P	SL_TSM	Hrs	1,458		154,125		154,125
1	01	02	01	01		E-Beam Systems Manager - CONST	3-Oct-05	30-Mar-09	S	C	SL_TSM	Hrs	5,915		664,468		664,468
1	01	02	01	01		Budget/Finance Officer - PED	4-Oct-04	30-Sep-05	S	P	SL_FA	Hrs	1,458		114,832		114,832
1	01	02	01	01		Budget/Finance Officer - CONST	3-Oct-05	30-Mar-09	S	C	SL_FA	Hrs	5,915		495,077		495,077
1	01	02	01	01		Administrative Support - SLAC 1 - PED	4-Oct-04	30-Sep-05	S	P	SL_ADMN	Hrs	1,458		85,147		85,147
1	01	02	01	01		Administrative Support - SLAC 1 - CONST	3-Oct-05	30-Mar-09	S	C	SL_ADMN	Hrs	5,915		367,060		367,060
1	01	02	01	01		Administrative Support - SLAC 2 - PED	3-Jan-05	30-Sep-05	S	P	SL_ADMN	Hrs	1,330		77,672		77,672
1	01	02	01	01		Administrative Support - SLAC 2 - CONST	3-Oct-05	30-Mar-09	S	C	SL_ADMN	Hrs	5,915		367,060		367,060
1	01	02	01	01		Photon System Manager - PED	1-Feb-05	30-Sep-05	S	P	SL_TSM	Hrs	595		62,897		62,897
1	01	02	01	01		Photon System Manager - CONST	3-Oct-05	30-Mar-09	S	C	SL_TSM	Hrs	2,958		332,290		332,290
1	01	02	01	02		SLAC Project Support							27,508	4,074,253	2,033,751	4,651,712	6,685,463
1	01	02	01	02		PMCS Support - Maintenance - PED	4-Oct-04	30-Sep-05	S	P	SA_MSPS	\$\$		1,035,864		1,129,092	1,129,092
1	01	02	01	02		PMCS Support - Maintenance - CONST	3-Oct-05	30-Mar-09	S	C	SA_MSPS	\$\$		2,828,710		3,276,818	3,276,818
1	01	02	01	02		Website Support - PED	3-Jan-05	30-Sep-05	S	P	SL_CRA	Hrs	380		17,757		17,757
1	01	02	01	02		Website Support - CONST	3-Oct-05	30-Mar-09	S	C	SL_CRA	Hrs	1,692		84,023		84,023
1	01	02	01	02		Relational Database Support - PED	3-Jan-05	30-Sep-05	S	P	SL_CRA	Hrs	1,330		62,151		62,151
1	01	02	01	02		Relational Database Support - CONST	3-Oct-05	30-Mar-09	S	C	SL_CRA	Hrs	5,922		294,080		294,080
1	01	02	01	02		Procurement Support - PED	3-Jan-05	30-Sep-05	S	P	SL_PEX	Hrs	441		34,733		34,733
1	01	02	01	02		Procurement Support - PED	3-Jan-05	30-Sep-05	S	P	SL_MSPS	\$\$		50,000		54,500	54,500
1	01	02	01	02		Procurement Support - CONST	3-Oct-05	30-Mar-09	S	C	SL_PEX	Hrs	11,844		991,325		991,325
1	01	02	01	02		Procurement Support - CONST	3-Oct-05	30-Mar-09	S	C	SL_MSPS	\$\$		56,250		65,161	65,161
1	01	02	01	02		QA/QC Support - PED	3-Jan-05	30-Sep-05	S	P	SL_QAO	Hrs	760		80,340		80,340
1	01	02	01	02		QA/QC Support - CONST	3-Oct-05	30-Mar-09	S	C	SL_QAO	Hrs	2,961		332,627		332,627
1	01	02	01	02		Software Licenses - PED	4-Oct-04	30-Sep-05	S	P	SL_MSEG	\$\$		15,762		17,181	17,181
1	01	02	01	02		Software Licenses - CONST	3-Oct-05	30-Mar-09	S	C	SL_MSEG	\$\$		32,977		38,201	38,201
1	01	02	01	02		Computing Support - PED	4-Oct-04	30-Sep-05	S	P	SL_CRM	Hrs	486		29,092		29,092
1	01	02	01	02		Computing Support - CONST	3-Oct-05	30-Mar-09	S	C	SL_CRM	Hrs	1,692		107,623		107,623
1	01	02	01	02		Recruiting/Relocation Support - PED	3-Jan-05	30-Sep-05	S	P	SL_MSTR	\$\$		12,477		15,347	15,347
1	01	02	01	02		Recruiting/Relocation Support - CONST	3-Oct-05	30-Mar-09	S	C	SL_MSTR	\$\$		42,213		55,412	55,412
1	01	02	01	03		SLAC Project Office M&S							-	1,288,538	-	1,536,564	1,536,564
1	01	02	01	03		Physics Programmatic Travel (R&D)	3-Jan-05	30-Sep-05		P	SL_MSTR	\$\$		150,000		184,500	184,500
1	01	02	01	03		SAC/FAC Travel - PED	4-Oct-04	30-Sep-05		P	SL_MSTR	\$\$		100,000		123,000	123,000
1	01	02	01	03		SLAC Project Office M&S - PED	4-Oct-04	30-Sep-05		P	SL_MSCS	\$\$		20,000		21,800	21,800
1	01	02	01	03		SLAC Project Office M&S - CONST	3-Oct-05	30-Mar-09		C	SL_MSCS	\$\$		219,480		254,249	254,249
1	01	02	01	03		Tele/Video Conferencing - PED	4-Oct-04	30-Sep-05		P	SL_MSEG	\$\$		2,448		2,668	2,668
1	01	02	01	03		Tele/Video Conferencing - CONST	3-Oct-05	30-Mar-09		C	SL_MSEG	\$\$		7,682		8,899	8,899
1	01	02	01	03		Computer M&S - PED	4-Oct-04	30-Sep-05		P	SL_MSEG	\$\$		26,667		29,067	29,067
1	01	02	01	03		Computer M&S - CONST	3-Oct-05	30-Mar-09		C	SL_MSEG	\$\$		197,531		228,823	228,823
1	01	02	01	03		Misc. Shipping/Storage Costs - PED	3-Jan-05	30-Sep-05		P	SL_MSTR	\$\$		11,657		14,338	14,338
1	01	02	01	03		Misc. Shipping/Storage Costs CONST	3-Oct-05	30-Mar-09		C	SL_MSTR	\$\$		36,580		48,018	48,018
1	01	02	01	03		Project Related Travel - PED	3-Jan-05	30-Sep-05		P	SL_MSTR	\$\$		20,000		24,600	24,600
1	01	02	01	03		Project Related Travel - CONST	3-Oct-05	30-Mar-09		C	SL_MSTR	\$\$		166,804		218,961	218,961

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Run Time: 4/22/05 8:43am													Hours	\$	Labor	M&S	Total (No Conting)
1	01	02	01	03	6	Building Refurb/Remodeling @ SLAC - PED	3-Jan-05	30-Sep-05	S	P	SL_MSEG	\$\$		50,000		54,500	54,500
1	01	02	01	03		Building Refurb/Remodeling @ SLAC - CONST	3-Oct-05	30-Mar-09	S	C	SL_MSEG	\$\$		225,000		260,643	260,643
1	01	02	01	03		Review Committee Support - PED	4-Oct-04	30-Sep-05	S	P	SL_MSCS	\$\$		12,487		13,611	13,611
1	01	02	01	03		Review Committee Support - CONST	3-Oct-05	30-Mar-09	S	C	SL_MSCS	\$\$		42,202		48,887	48,887
1	01	02	01	04		SSRL Physics Support							3,041	-	241,553	-	241,553
1	01	02	01	04		SSRL Physics Support	1-Feb-05	16-Jun-05	S	P	SL_PHSS	Hrs	1,014		93,967		93,967
1	01	02	01	04		SSRL Physics Support	1-Feb-05	16-Jun-05	S	P	SL_PHS	Hrs	2,027		147,586		147,586
1	01	03				Technical Integration							99,134	876,675	9,566,086	990,735	10,556,821
1	01	03	01			Global Controls											
1	01	03	02			Global Alignment Coordination							13,737	78,000	1,417,169	87,360	1,504,529
1	01	03	02			Global Laser Coordination - PED	1-Feb-05	30-Sep-05	S	P	SL_LPM	Hrs	1,190		125,795		125,795
1	01	03	02			Global Laser Coordination - CONST	3-Oct-05	30-Mar-09	S	C	SL_LPM	Hrs	5,922		665,254		665,254
1	01	03	02			Global Alignment Coordination - PED	3-Jan-05	30-Sep-05	S	P	SL_MES	Hrs	760		68,658		68,658
1	01	03	02			Global Alignment Coordination - CONST	3-Oct-05	30-Mar-09	S	C	SL_MES	Hrs	2,961		284,268		284,268
1	01	03	02			Surface Network Oversight and Integration	3-Oct-05	28-Sep-07	S	C	SL_MES	Hrs	968		91,065		91,065
1	01	03	02			Procure Surface Network Components	3-Oct-05	7-Apr-06	S	C	SL_MSEG	\$\$		78,000		87,360	87,360
1	01	03	02			Install and Measure Surface Network	3-Oct-05	28-Sep-07	S	C	SL_MES	Hrs	1,936		182,129		182,129
1	01	03	03			System Integration							21,027	-	2,019,100	-	2,019,100
1	01	03	03			Installation Coordination - PED	3-Jan-05	30-Sep-05	S	P	SL_IPM	Hrs	1,330		140,594		140,594
1	01	03	03			Installation Coordination - PED	3-Jan-05	30-Sep-05	S	P	SL_IPM	Hrs	762		80,551		80,551
1	01	03	03			Installation Coordination - CONST	3-Oct-05	30-Mar-09	S	C	SL_IPM	Hrs	11,830		1,328,936		1,328,936
1	01	03	03			Design Supervisor - PED	1-Feb-05	30-Sep-05	S	P	SL_MDD	Hrs	1,190		74,661		74,661
1	01	03	03			Design Supervisor - CONST	3-Oct-05	30-Mar-09	S	C	SL_MDD	Hrs	5,915		394,358		394,358
1	01	03	05			Global Controls NRE							64,370	798,675	6,129,817	903,375	7,033,192
1	01	03	05	01		EPICS Controls Modules											
1	01	03	05	02		LLRF Controls							8,956	-	941,617	-	941,617
1	01	03	05	02		Design LLRF - Combined	1-Feb-05	29-Jul-05	P		SL_PHS	Hrs	13		947		947
1	01	03	05	02		Design LLRF - Combined	1-Feb-05	29-Jul-05	P		SL_PCEF	Hrs	127		7,826		7,826
1	01	03	05	02		Design LLRF - Combined	1-Feb-05	29-Jul-05	P		SL_CP	Hrs	1,019		92,698		92,698
1	01	03	05	02		Design LLRF - Combined	1-Feb-05	29-Jul-05	P		SL_CE	Hrs	1,733		194,980		194,980
1	01	03	05	02		Design LLRF - Combined	1-Feb-05	29-Jul-05	P		SL_CCA	Hrs	64		4,194		4,194
1	01	03	05	02		Build RF Boards - Rev .B.C.D	8-Aug-05	8-May-06	S	L	SL_CE	Hrs	3,960		455,311		455,311
1	01	03	05	02		Write First Article RF S/W Documentation	8-Aug-05	6-Jun-06	L		SL_CP	Hrs	1,880		174,883		174,883
1	01	03	05	02		Build First Article Hardware	9-May-06	3-Aug-06	C		SL_CCA	Hrs	160		10,778		10,778
1	01	03	05	03		E-Beam Diagnostics & Controls							12,807	35,000	1,227,016	38,914	1,265,930
1	01	03	05	03	01	Controls - Wire Scanners							1,186	-	120,166	-	120,166
1	01	03	05	03	01	Design Linac Wire Scanners	1-Jul-05	13-Oct-05	P		SL_CP	Hrs	456		41,626		41,626
1	01	03	05	03	01	Design Linac Wire Scanners	1-Jul-05	13-Oct-05	P		SL_CE	Hrs	530		59,836		59,836
1	01	03	05	03	01	Write First Article SW	14-Oct-05	10-Nov-05	P		SL_CP	Hrs	200		18,704		18,704
1	01	03	05	03	02	Controls - Toroids							1,570	-	152,520	-	152,520
1	01	03	05	03	02	Design Toroid Controls	2-May-05	18-Aug-05	P		SL_CP	Hrs	540		49,124		49,124
1	01	03	05	03	02	Design Toroid Controls	2-May-05	18-Aug-05	P		SL_CE	Hrs	502		56,480		56,480
1	01	03	05	03	02	Design Toroid Controls	2-May-05	18-Aug-05	P		SL_CCA	Hrs	88		5,767		5,767
1	01	03	05	03	02	Write First Article SW - Toroid	3-Oct-05	8-Dec-05	C		SL_CP	Hrs	440		41,149		41,149
1	01	03	05	03	03	Controls - Faraday Cups							1,162	-	114,543	-	114,543
1	01	03	05	03	03	Design Faraday Cup Controls	1-Jul-05	22-Sep-05	P		SL_CP	Hrs	360		32,749		32,749
1	01	03	05	03	03	Design Faraday Cup Controls	1-Jul-05	22-Sep-05	P		SL_CE	Hrs	362		40,729		40,729
1	01	03	05	03	03	Write First Article SW - Faraday Cups	23-Sep-05	1-Feb-06	L		SL_CP	Hrs	440		41,065		41,065
1	01	03	05	03	04	Controls - Tune-up Dump							112	-	11,395	-	11,395
1	01	03	05	03	04	Design Tune-up Dump Controls	1-Apr-05	17-Jun-05	P		SL_CP	Hrs	56		5,094		5,094
1	01	03	05	03	04	Design Tune-up Dump Controls	1-Apr-05	17-Jun-05	P		SL_CE	Hrs	56		6,301		6,301
1	01	03	05	03	05	Controls - Profile Monitors							1,450	-	133,607	-	133,607
1	01	03	05	03	05	Design Profile Monitors	1-Jul-05	22-Sep-05	P		SL_CP	Hrs	360		32,749		32,749
1	01	03	05	03	05	Design Profile Monitors	1-Jul-05	22-Sep-05	P		SL_CE	Hrs	362		40,729		40,729
1	01	03	05	03	05	Design Profile Monitors	1-Jul-05	22-Sep-05	P		SL_CCA	Hrs	288		18,873		18,873
1	01	03	05	03	05	Write First Article S/W for Profile Monitors	31-Jan-06	26-Oct-06	C		SL_CP	Hrs	440		41,256		41,256
1	01	03	05	03	06	Controls - E/O Beam Diagnostics							2,977	5,000	282,394	5,600	287,994
1	01	03	05	03	06	Design EO Disgnostics	2-May-05	30-Sep-05	P		SL_CP	Hrs	747		67,955		67,955
1	01	03	05	03	06	Design EO Disgnostics	2-May-05	30-Sep-05	P		SL_CE	Hrs	413		46,467		46,467
1	01	03	05	03	06	Design EO Disgnostics	2-May-05	30-Sep-05	P		SL_CCA	Hrs	355		23,263		23,263
1	01	03	05	03	06	Design EO Diagnostics - CON	3-Oct-05	10-Feb-06	C		SL_CP	Hrs	468		43,767		43,767
1	01	03	05	03	06	Design EO Diagnostics - CON	3-Oct-05	10-Feb-06	C		SL_CE	Hrs	422		48,809		48,809
1	01	03	05	03	06	Design EO Diagnostics - CON	3-Oct-05	10-Feb-06	C		SL_CCA	Hrs	52		3,503		3,503
1	01	03	05	03	06	Write First Article for E/O Diagnostics	14-Feb-06	15-Sep-06	C		SL_CP	Hrs	520		48,630		48,630

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Run Time: 4/22/05 8:43am													Hours	\$	Labor	M&S	Total (No Conting)	
1	01	03	05	03	06	Procure 1 Set E/O Diagnostic Cntrls H/W & Cables	14-Feb-06	14-Mar-06	S	C	SL_MSEG	\$\$		5,000			5,600	5,600
1	01	03	05	03	07	Controls - BPM							3,247	30,000	308,358	33,314	341,672	
1	01	03	05	03	07	Design BPMs	1-Feb-05	31-Aug-05		P	SL_KE	Hrs	158		17,777		17,777	
1	01	03	05	03	07	Design BPMs	1-Feb-05	31-Aug-05		P	SL_CP	Hrs	249		22,652		22,652	
1	01	03	05	03	07	Design BPMs	1-Feb-05	31-Aug-05		P	SL_CE	Hrs	1,432		161,114		161,114	
1	01	03	05	03	07	Design BPMs	1-Feb-05	31-Aug-05		P	SL_CCA	Hrs	888		58,191		58,191	
1	01	03	05	03	07	Write First Article S/W for BPMs	30-Sep-05	17-Aug-06		L	SL_CP	Hrs	520		48,624		48,624	
1	01	03	05	03	07	Procure Prototype Board & Parts	2-Sep-05	2-Dec-05	S	L	SL_MSEG	\$\$		30,000		33,314	33,314	
1	01	03	05	03	08	Controls - Stoppers							369	-	34,548	-	34,548	
1	01	03	05	03	08	Design Linac Stoppers	4-Oct-05	6-Jan-06		P	SL_CP	Hrs	88		8,230		8,230	
1	01	03	05	03	08	Design Linac Stoppers	4-Oct-05	6-Jan-06		P	SL_CE	Hrs	153		17,696		17,696	
1	01	03	05	03	08	Design Linac Stoppers	4-Oct-05	6-Jan-06		P	SL_CCA	Hrs	128		8,622		8,622	
1	01	03	05	03	09	Controls - Bunch Length Monitors							497	-	46,518	-	46,518	
1	01	03	05	03	09	Design Bunch Length Monitors	3-Oct-05	12-Jan-06		P	SL_CP	Hrs	216		20,200		20,200	
1	01	03	05	03	09	Design Bunch Length Monitors	3-Oct-05	12-Jan-06		P	SL_CE	Hrs	153		17,696		17,696	
1	01	03	05	03	09	Design Bunch Length Monitors	3-Oct-05	12-Jan-06		P	SL_CCA	Hrs	128		8,622		8,622	
1	01	03	05	03	10	Controls - Beam Loss Monitors							237	-	22,967	-	22,967	
1	01	03	05	03	10	Design Beam Loss Monitors	4-Oct-05	15-Dec-05		P	SL_CP	Hrs	96		8,978		8,978	
1	01	03	05	03	10	Design Beam Loss Monitors	4-Oct-05	15-Dec-05		P	SL_CE	Hrs	93		10,756		10,756	
1	01	03	05	03	10	Design Beam Loss Monitors	4-Oct-05	15-Dec-05		P	SL_CCA	Hrs	48		3,233		3,233	
1	01	03	05	04	Laser Controls Design								1,281	-	136,478	-	136,478	
1	01	03	05	04	Design Gun Laser Controls	2-May-05	3-Aug-05		P	SL_CP	Hrs	355		32,294		32,294		
1	01	03	05	04	Design Gun Laser Controls	2-May-05	3-Aug-05		P	SL_CE	Hrs	926		104,184		104,184		
1	01	03	05	05	Laser Heater Controls Design								738	-	77,165	-	77,165	
1	01	03	05	05	Design Laser Heater Controls	12-Apr-06	29-Sep-06		C	SL_CP	Hrs	370		34,602		34,602		
1	01	03	05	05	Design Laser Heater Controls	12-Apr-06	29-Sep-06		C	SL_CE	Hrs	368		42,563		42,563		
1	01	03	05	06	Timing Controls								200	-	22,502	-	22,502	
1	01	03	05	06	Linac Timing Subsystem Design	1-Jun-05	10-Aug-05		P	SL_CE	Hrs	200		22,502		22,502		
1	01	03	05	07	Vacuum Controls Infrastructure								2,554	-	252,389	-	252,389	
1	01	03	05	07	Design Vacuum Controls	1-Feb-05	25-Aug-05		L	SL_CP	Hrs	728		66,226		66,226		
1	01	03	05	07	Design Vacuum Controls	1-Feb-05	25-Aug-05		L	SL_CE	Hrs	826		92,933		92,933		
1	01	03	05	07	First Article Vacuum Software	26-Aug-05	25-Jul-06	S	L	SL_CP	Hrs	1,000		93,230		93,230		
1	01	03	05	08	S/W & Controls Infrastructure								5,098	-	522,565	-	522,565	
1	01	03	05	09	Design Power Supply - NEW	1-Feb-05	7-Nov-05		L	SL_PCE	Hrs	2,940		332,008		332,008		
1	01	03	05	09	Design Power Supply - NEW	1-Feb-05	7-Nov-05		L	SL_PCCA	Hrs	650		42,752		42,752		
1	01	03	05	09	Design Power Supply - NEW	1-Feb-05	7-Nov-05		L	SL_CP	Hrs	355		32,414		32,414		
1	01	03	05	09	Design Power Supply - NEW	1-Feb-05	7-Nov-05		L	SL_CE	Hrs	399		45,058		45,058		
1	01	03	05	09	Write First Article S/W for Power Supplies	8-Nov-05	17-Apr-06		L	SL_CP	Hrs	540		50,501		50,501		
1	01	03	05	09	Write First Article S/W for Power Supplies	8-Nov-05	17-Apr-06		L	SL_CCA	Hrs	94		6,332		6,332		
1	01	03	05	09	Define Power Conv Spec Requirements	1-Feb-05	7-Feb-05		L	SL_PCE	Hrs	40		4,500		4,500		
1	01	03	05	09	Prep Bid Pak - Power Supplies - (Dipole Type)	8-Feb-05	14-Feb-05	S	L	SL_PCE	Hrs	40		4,500		4,500		
1	01	03	05	09	Prep Bid Pak - Power Supplies - (Trim Type)	8-Feb-05	14-Feb-05	S	L	SL_PCE	Hrs	40		4,500		4,500		
1	01	03	05	10	MPS/PPS/BCS Controls								4,867	-	411,724	-	411,724	
1	01	03	05	10	PPS/MPS Design New	2-May-05	11-Jan-06		L	SL_PCEF	Hrs	224		13,941		13,941		
1	01	03	05	10	PPS/MPS Design New	2-May-05	11-Jan-06		L	SL_MFAT	Hrs	157		12,983		12,983		
1	01	03	05	10	PPS/MPS Design New	2-May-05	11-Jan-06		L	SL_ME	Hrs	39		4,164		4,164		
1	01	03	05	10	PPS/MPS Design New	2-May-05	11-Jan-06		L	SL_MDD	Hrs	39		2,471		2,471		
1	01	03	05	10	PPS/MPS Design New	2-May-05	11-Jan-06		L	SL_CT	Hrs	899		55,952		55,952		
1	01	03	05	10	PPS/MPS Design New	2-May-05	11-Jan-06		L	SL_CP	Hrs	1,462		134,338		134,338		
1	01	03	05	10	PPS/MPS Design New	2-May-05	11-Jan-06		L	SL_CE	Hrs	1,104		125,460		125,460		
1	01	03	05	10	PPS/MPS Design New	2-May-05	11-Jan-06		L	SL_CCA	Hrs	943		62,415		62,415		
1	01	03	05	11	Global Controls Commissioning								26,074	763,675	2,375,070	864,461	3,239,531	
1	01	03	05	12	Global Controls NRE													
1	01	03	05	12	Global Controls Management - PED	1-Oct-04	29-Sep-05		P	SL_MSPS	\$\$		136,529		148,817		148,817	
1	01	03	05	12	Global Controls Management - PED	1-Oct-04	29-Sep-05		P	SL_CE	Hrs	1,701		191,380		191,380		
1	01	03	05	12	Global Controls Management - CONST	3-Oct-05	30-Mar-09	S	C	SL_MSPS	\$\$		284,764		329,875		329,875	
1	01	03	05	12	Global Controls Management - CONST	3-Oct-05	30-Mar-09	S	C	SL_CE	Hrs	5,915		707,236		707,236		
1	01	03	05	12	Global Controls System Administrator - PED	1-Feb-05	28-Oct-05	S	P	SL_CRA	Hrs	602		28,214		28,214		
1	01	03	05	12	Global Controls System Administrator - CONST	31-Oct-05	2-Dec-08	S	C	SL_CRA	Hrs	5,230		259,770		259,770		
1	01	03	05	12	Write low level application SW Rqmnts - PED	18-Oct-04	14-Oct-05	S	P	SL_CP	Hrs	1,330		121,130		121,130		
1	01	03	05	12	Write low level application SW Rqmnts - CONST	3-Jan-06	1-Dec-06		C	SL_CP	Hrs	1,624		152,608		152,608		
1	01	03	05	12	Write Low Level application SW Rqmnts - Const	17-Jan-07	26-Nov-07		C	SL_CP	Hrs	1,526		147,102		147,102		
1	01	03	05	12	High Level Application Programming - 1st Phase	3-Jan-05	30-Jun-05		P	SL_CP	Hrs	504		45,849		45,849		

LCLS TPC Detailed Cost Estimate (FY05FY09)

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WBS Level						LCLA DCE March-2005 Description	Early Start	Early Finish	OBS	Fund Type	Res Code	Units	Budgeted Quantity		Fully Burdened and Escalated Cost			
Run Time: 4/22/05 8:43am													Hours	\$	Labor	M&S	Total (No Conting)	
1	01	03	05	12		High Level Application Programming - PED	1-Aug-05	28-Oct-05	S	P	SL_CP	Hrs	720			66,072		66,072
1	01	03	05	12		High Level Application Programming - CONST	31-Oct-05	27-Oct-06	S	C	SL_CP	Hrs	3,388			317,526		317,526
1	01	03	05	12		High Level Application Programming - CONST	30-Oct-06	8-Nov-07		C	SL_CP	Hrs	3,514			338,183		338,183
1	01	03	05	12		LCLS Beam Instrumentatn Cntls & Test Equip FY05	1-Feb-05	28-Oct-05	S	P	SL_MSEG	\$\$		97,333			106,400	106,400
1	01	03	05	12		LCLS Beam Instrumentatn Cntls & Test Equip FY06	31-Oct-05	27-Oct-06	C		SL_MSEG	\$\$		97,333			109,246	109,246
1	01	03	05	12		LCLS Beam Instrumentatn Cntls & Test Equip FY07	30-Oct-06	26-Oct-07		C	SL_MSEG	\$\$		89,716			103,388	103,388
1	01	03	05	12		SLAC MCC Controls Upgrade	3-Oct-06	5-Oct-07	S	C	SL_MSEG	\$\$		58,000			66,735	66,735
1	01	03	05	13		SLC Aware IOC - PED							1,795	-		163,291	-	163,291
1	01	03	05	13		SLC Aware IOC - PED	28-Feb-05	22-Aug-05		P	SL_CP	Hrs	1,795			163,291		163,291
1	01	04				Education Support							-	32,659	-	-	41,284	41,284
1	01	04	01			Education/Outreach Travel							-	25,454	-	-	33,029	33,029
1	01	04	01			Education Support - PED	3-Jan-05	30-Sep-05	S	P	SL_MSTR	\$\$		4,650			5,720	5,720
1	01	04	01			Education Support - CONST	3-Oct-05	30-Mar-09	S	C	SL_MSTR	\$\$		20,804			27,309	27,309
1	01	04	02			Education/Outreach M&S							-	7,205	-	-	8,255	8,255
1	01	04	02			Education/Outreach M&S - PED	3-Jan-05	30-Sep-05	S	P	SL_MSCS	\$\$		1,350			1,472	1,472
1	01	04	02			Education/Outreach M&S - CONST	3-Oct-05	30-Mar-09	S	C	SL_MSCS	\$\$		5,855			6,783	6,783
2	01					LCLS PROJECT MGMT, PLANNING & ADMN (OPC)							96,607	21,100,034		9,200,771	21,462,030	30,662,801
2	01	01				Physics R&D Support							84,566	1,213,941		7,776,964	1,396,963	9,173,927
2	01	01	01			SAC-MAC Physics							7,245	-		628,465	-	628,465
2	01	01	01			Physics Group Leader (R&D)	3-Jan-05	30-Sep-05		R	SL_PHS	Hrs	1,330			109,749		109,749
2	01	01	01			Physics Group Leader (PreOps)	3-Oct-05	30-Mar-09		X	SL_PHS	Hrs	5,915			518,716		518,716
2	01	01	02			Injector Physics							15,232	-		1,318,160	-	1,318,160
2	01	01	02			Injector Physicists (R&D)	4-Oct-04	30-Sep-05		R	SL_PHS	Hrs	1,701			140,363		140,363
2	01	01	02			Injector Physicists (PreOps)	3-Oct-05	30-Mar-09		X	SL_PHS	Hrs	5,915			518,716		518,716
2	01	01	02			Laser & RF Gun Physics Development (R&D)	4-Oct-04	30-Sep-05		R	SL_PHS	Hrs	1,701			140,363		140,363
2	01	01	02			Laser & RF Gun Physics Development (PreOps)	3-Oct-05	30-Mar-09		X	SL_PHS	Hrs	5,915			518,716		518,716
2	01	01	03			Linac Physics							7,616	-		659,080	-	659,080
2	01	01	03			Linac Physicists (R&D)	4-Oct-04	30-Sep-05		R	SL_PHS	Hrs	1,701			140,363		140,363
2	01	01	03			Linac Physicists (PreOps)	3-Oct-05	30-Mar-09		X	SL_PHS	Hrs	5,915			518,716		518,716
2	01	01	04			Undulator Physics							7,616	-		659,080	-	659,080
2	01	01	04			Undulator Physicists (R&D)	4-Oct-04	30-Sep-05		R	SL_PHS	Hrs	1,701			140,363		140,363
2	01	01	04			Undulator Physicists (PreOps)	3-Oct-05	30-Mar-09		X	SL_PHS	Hrs	5,915			518,716		518,716
2	01	01	05			X-Ray Transport Physics							2,178	-		188,485	-	188,485
2	01	01	05			X-Ray Transport Physicists (R&D)	4-Oct-04	30-Sep-05		R	SL_PHS	Hrs	486			40,104		40,104
2	01	01	05			X-Ray Transport Physicists (PreOps)	3-Oct-05	30-Mar-09		X	SL_PHS	Hrs	1,692			148,381		148,381
2	01	01	06			X-Ray Endstation Physics							2,178	-		188,485	-	188,485
2	01	01	06			X-Ray Endstation Physicists (R&D)	4-Oct-04	30-Sep-05		R	SL_PHS	Hrs	486			40,104		40,104
2	01	01	06			X-Ray Endstation Physicists (PreOps)	3-Oct-05	30-Mar-09		X	SL_PHS	Hrs	1,692			148,381		148,381
2	01	01	07			Conventional Facilities Physics							7,616	-		659,080	-	659,080
2	01	01	07			Conventional Facility Physicists (R&D)	4-Oct-04	30-Sep-05		R	SL_PHS	Hrs	1,701			140,363		140,363
2	01	01	07			Conventional Facility Physicists (PreOps)	3-Oct-05	30-Mar-09		X	SL_PHS	Hrs	5,915			518,716		518,716
2	01	01	08			Consulting Physics (Collaboration)							-	941,667	-	-	1,080,692	1,080,692
2	01	01	08			Consulting Collaboration Physicists (R&D)	4-Oct-04	30-Sep-05		R	SL_MSPS	\$\$		266,667			292,861	292,861
2	01	01	08			Consulting Collaboration Physicists (PreOps)	3-Oct-05	30-Mar-09		X	SL_MSPS	\$\$		675,000			787,831	787,831
2	01	01	09			Consulting Physics (SLAC)							7,616	-		659,080	-	659,080
2	01	01	09			Consulting SLAC Physicists (R&D)	4-Oct-04	30-Sep-05		R	SL_PHS	Hrs	1,701			140,363		140,363
2	01	01	09			Consulting SLAC Physicists (PreOps)	3-Oct-05	30-Mar-09		X	SL_PHS	Hrs	5,915			518,716		518,716
2	01	01	10			Global Controls Physics Liaison							7,616	-		659,080	-	659,080
2	01	01	10			Global Controls Physicists Liaison (R&D)	4-Oct-04	30-Sep-05		R	SL_PHS	Hrs	1,701			140,363		140,363
2	01	01	10			Global Controls Physicists Liaison (PreOps)	3-Oct-05	30-Mar-09		X	SL_PHS	Hrs	5,915			518,716		518,716
2	01	01	11			Global Controls R&D							19,653	272,274		2,157,971	316,271	2,474,242
2	01	01	11	01		EPICS Control Modules							1,018	82,432		109,728	94,506	204,234
2	01	01	11	01		Define Injector Timing module Reqmts CP	1-Mar-05	13-May-05	S	R	SL_CP	Hrs	120			12,371		12,371
2	01	01	11	01		Define Injector Timing Module Reqmts CE	1-Oct-04	29-Nov-04		R	SL_CE	Hrs	120			15,301		15,301
2	01	01	11	01		Prep Bid Pak-Injector Timing modules	16-May-05	13-Jun-05	S	R	SL_CP	Hrs	40			4,124		4,124
2	01	01	11	01		Prep Bid Pak-Injector Timing modules	16-May-05	13-Jun-05	S	R	SL_CE	Hrs	40			5,100		5,100
2	01	01	11	01		Prep Bid Pak-Injector Timing modules	16-May-05	13-Jun-05	S	R	SL_ADMIN	Hrs	40			2,647		2,647
2	01	01	11	01		Evaluate Vendor Proposals	14-Jul-05	27-Jul-05	S	R	SL_CP	Hrs	8			825		825
2	01	01	11	01		Evaluate Vendor Proposals	14-Jul-05	27-Jul-05	S	R	SL_CE	Hrs	8			1,020		1,020
2	01	01	11	01		Manage/Work with Vendor	28-Jul-05	3-Nov-05	S	R	SL_CP	Hrs	40			4,164		4,164
2	01	01	11	01		Manage/Work with Vendor	28-Jul-05	3-Nov-05	S	R	SL_CE	Hrs	40			5,150		5,150
2	01	01	11	01		Procure SLCnet cable to MPG micro 360 Hz signal	15-Feb-07	1-Mar-07	S	X	SL_MSEG	\$\$		199			231	231
2	01	01	11	01		Procure VME crate (1) w/IOC(1), VxWorks license	4-Nov-05	20-Jan-06	S	R	SL_MSEG	\$\$		15,000			16,927	16,927
2	01	01	11	01		Procure cables	4-Nov-05	6-Dec-05	S	R	SL_MSEG	\$\$		133			150	150

LCLS TPC Detailed Cost Estimate (FY05FY09)

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WBS Level						LCLA DCE March-2005 Description	Early Start	Early Finish	OBS	Fund Type	Res Code	Units	Budgeted Quantity		Fully Burdened and Escalated Cost					
Run Time: 4/22/05 8:43am													Hours	\$\$	Labor	M&S	Total (No Conting)			
1	2	3	4	5	6															
2	01	01	11	01		Write Test Docs - Injector Timing modules	4-Nov-05	10-Nov-05	S	R	SL_CP	Hrs	10			1,060			1,060	
2	01	01	11	01		Install access to PEP-II timing signal, control	2-Mar-07	2-Mar-07	S	X	SL_PCEF	Hrs	24			1,768			1,768	
2	01	01	11	01		Install access to PEP-II timing signal, control	2-Mar-07	2-Mar-07	S	X	SL_CT	Hrs	8			589			589	
2	01	01	11	01		Install access to PEP-II timing signal, control	2-Mar-07	2-Mar-07	S	X	SL_CCA	Hrs	8			627			627	
2	01	01	11	01		Assemble procured parts	23-Jan-06	15-Feb-06	S	X	SL_PCEF	Hrs	72			5,168			5,168	
2	01	01	11	01		Procure Master & Distributed Timing Hardware	3-Oct-06	17-Jan-07	S	S	SL_MSEG	\$\$		30,000			34,760		34,760	
2	01	01	11	01		Procure Splitter to Main Drive Line (MDL) 476 MH	3-Oct-06	17-Jan-07	S	S	SL_MSEG	\$\$		9,900			11,471		11,471	
2	01	01	11	01		Procure Fiducial Output Module	3-Oct-06	17-Jan-07	S	S	SL_MSEG	\$\$		2,000			2,317		2,317	
2	01	01	11	01		Procure Fiducial RF Amplifier	3-Oct-06	17-Jan-07	S	S	SL_MSEG	\$\$		2,000			2,317		2,317	
2	01	01	11	01		Procure SLCnet cable to MPG micro 360 Hz signal	3-Oct-06	17-Jan-07	S	S	SL_MSEG	\$\$		200			232		232	
2	01	01	11	01		Procure Timing System Heliax Cableplant	3-Oct-06	17-Jan-07	S	S	SL_MSEG	\$\$		15,000			17,380		17,380	
2	01	01	11	01		Implement Fast-feedback in the IOC	13-Jul-06	17-Jan-07	S	X	SL_CP	Hrs	-			-			-	
2	01	01	11	01		Port Fast-feedback software from Kissnet to Ether	18-Jan-07	14-Feb-07	S	X	SL_CP	Hrs	160			17,399			17,399	
2	01	01	11	01		Fabricate 1st Articles	3-Jan-05	31-Mar-05	S	R	SA_MSSC	\$\$		8,000			8,720		8,720	
2	01	01	11	01		Write Test SW - Injector Timing modules	2-Oct-06	13-Oct-06	S	R	SL_CP	Hrs	40			4,350			4,350	
2	01	01	11	01		Integrate software & hardware	16-Oct-06	27-Oct-06	S	X	SL_CP	Hrs	20			2,175			2,175	
2	01	01	11	01		Integrate software & hardware	16-Oct-06	27-Oct-06	S	X	SL_CCA	Hrs	20			1,566			1,566	
2	01	01	11	01		Integrate with SLC Timing Sys	5-Mar-07	30-Mar-07	S	X	SL_CP	Hrs	60			6,525			6,525	
2	01	01	11	01		Integrate with SLC Timing Sys	5-Mar-07	30-Mar-07	S	X	SL_CE	Hrs	60			8,069			8,069	
2	01	01	11	01		Perform lab tests on Injector Timing modules	5-Mar-07	30-Mar-07	S	X	SL_CP	Hrs	40			4,350			4,350	
2	01	01	11	01		Perform lab tests on Injector Timing modules	5-Mar-07	30-Mar-07	S	X	SL_CE	Hrs	40			5,380			5,380	
2	01	01	11	02		LLRF Controls														
2	01	01	11	03		E-beam Diagnostics and Controls														
2	01	01	11	04		Laser Controls Design														
2	01	01	11	05		Laser Heater Controls Design														
2	01	01	11	06		Timing Controls														
2	01	01	11	07		Vacuum Controls														
2	01	01	11	08		S/W & Controls Infrastructure														
2	01	01	11	09		Power Supply Control														
2	01	01	11	10		MPS/PPS/BCS Controls														
2	01	01	11	11		Global Controls Commissioning							16,045	-		1,781,216	-		1,781,216	
2	01	01	11	11		RF Conditioning Controls Commissioning	2-Oct-06	5-Dec-06	S	X	SL_CP	Hrs	315			34,254			34,254	
2	01	01	11	11		RF Gun Ops with Beam-Controls Commissioning-A	9-Jul-07	8-Oct-07	S	X	SL_CP	Hrs	455			49,597			49,597	
2	01	01	11	11		RF Gun Ops with Beam-Controls Commissioning-B	9-Jul-07	26-Jul-07	S	X	SL_CP	Hrs	98			10,657			10,657	
2	01	01	11	11		L0-1&L0-2 Controls Commissioning	29-Oct-07	15-Feb-08	S	X	SL_CP	Hrs	455			50,768			50,768	
2	01	01	11	11		L0&SAB Controls Commissioning	26-Nov-07	14-Jan-08	S	X	SL_CP	Hrs	520			58,020			58,020	
2	01	01	11	11		DL1 Controls Commissioning	9-Nov-07	7-Jan-08	S	X	SL_CP	Hrs	520			58,020			58,020	
2	01	01	11	11		Injector Controls Optimization Commissioning	15-Dec-06	7-Jan-08	S	X	SL_CP	Hrs	4,220			461,657			461,657	
2	01	01	11	11		L1-BC1 Controls Commissioning	9-Nov-06	4-Jan-07	S	X	SL_CP	Hrs	320			34,798			34,798	
2	01	01	11	11		L1-BC1 Controls Commissioning	9-Nov-06	4-Jan-07	S	X	SL_CE	Hrs	120			16,139			16,139	
2	01	01	11	11		L2-BC2-L3 Controls Commissioning	11-Dec-07	14-Feb-08	S	X	SL_CP	Hrs	480			53,557			53,557	
2	01	01	11	11		L2-BC2-L3 Controls Commissioning	11-Dec-07	14-Feb-08	S	X	SL_CE	Hrs	200			27,597			27,597	
2	01	01	11	11		LTU + Dump Controls Commissioning	15-Feb-08	9-Apr-08	S	X	SL_CP	Hrs	320			35,705			35,705	
2	01	01	11	11		LTU + Dump Controls Commissioning	15-Feb-08	9-Apr-08	S	X	SL_CE	Hrs	160			22,077			22,077	
2	01	01	11	11		Linac Controls Optimization Commissioning	3-Oct-06	8-Oct-07	S	X	SL_CP	Hrs	6,926			753,633			753,633	
2	01	01	11	11		Controls Commissioning	6-Dec-06	17-Oct-07	S	X	SL_CP	Hrs	440			47,924			47,924	
2	01	01	11	11		Controls Commissioning	6-Dec-06	17-Oct-07	S	X	SL_CE	Hrs	496			66,816			66,816	
2	01	01	11	12		Global Controls Management								189,842			221,765		221,765	
2	01	01	11	12		Global Controls Management - OPC FY05	1-Oct-04	29-Sep-05		R	SL_MSPS	\$\$				-			-	
2	01	01	11	12		Global Controls Management - OPC FY06 forward	31-Oct-05	31-Mar-09		X	SL_MSPS	\$\$		189,842			221,765			221,765
2	01	01	11	13		SLC Aware IOC R&D							2,590			267,027			267,027	
2	01	01	11	13		SLC Aware IOC	1-Oct-04	25-Feb-05		R	SL_CP	Hrs	2,590			267,027			267,027	
2	01	02				R&D Studies & Prototyping							3,721	6,667		498,150	7,322		505,472	
2	01	02	01			R&D Studies & Prototyping							3,721	6,667		498,150	7,322		505,472	
2	01	02	01			R&D Studies & Prototyping	4-Oct-04	30-Sep-05		R	SL_MSEG	\$\$		6,667			7,322			7,322
2	01	02	01			Low Level Applications R&D	3-Jan-05	30-Sep-05		R	SL_CE	Hrs	760			96,909			96,909	
2	01	02	01			Low Level Applications Commissioning	3-Oct-05	30-Mar-09		X	SL_CE	Hrs	2,961			401,241			401,241	
2	01	03				Physics Commissioning Support							8,320	19,879,426		925,657	20,057,745		20,983,402	
2	01	03	01			SAC-MAC Physics							1,215			120,922			120,922	
2	01	03	01			Project Director - R&D	4-Oct-04	30-Sep-05		R	SL_PM	Hrs	243			30,006			30,006	
2	01	03	01			Chief Engineer - R&D	4-Oct-04	30-Sep-05		R	SL_PM	Hrs	243			30,006			30,006	
2	01	03	01			E-Beam Systems Oversight Manager - R&D	1-Mar-05	30-Sep-05		R	SL_TSM	Hrs	243			25,688			25,688	
2	01	03	01			Budget/Finance Officer - R&D	4-Oct-04	30-Sep-05		R	SL_FA	Hrs	243			19,139			19,139	
2	01	03	01			Administrative Support - SLAC 1 - R&D	4-Oct-04	30-Sep-05		R	SL_ADMN	Hrs	243			16,083			16,083	

LCLS TPC Detailed Cost Estimate (FY05FY09)

5/5/2005

WBS Level						LCLA DCE March-2005 Description	Early Start	Early Finish	OBS	Fund Type	Res Code	Units	Budgeted Quantity		Fully Burdened and Escalated Cost			
Run Time: 4/22/05 8:43am													Hours	\$	Labor	M&S	Total (No Conting)	
1	2	3	4	5	6													
2	01	03	02			Injector Physics												
2	01	03	03			Linac Physics							7,105	19,879,426	804,735	20,057,745	20,862,480	
2	01	03	03			Physics Programmatic Travel (PreOps)	3-Oct-05	30-Mar-09		X	SL_MSTR	\$\$		253,125			376,577	376,577
2	01	03	03			SAC/FAC Travel (PreOps)	3-Oct-05	30-Mar-09		X	SL_MSTR	\$\$		112,500			167,367	167,367
2	01	03	03			Pre-ops Electrical Power Usage (1.5k hrs) - 2007	3-Oct-06	28-Sep-07		X	SL_POWB	\$\$		1,488,764			1,488,764	1,488,764
2	01	03	03			Pre-ops Electrical Power Usage (3.0k hrs) - 2008	2-Oct-07	30-Sep-08		X	SL_POWB	\$\$		3,440,000			3,440,000	3,440,000
2	01	03	03			Additional Startup Costs-FY08	2-Oct-07	30-Sep-08		X	SL_STUP	\$\$		2,210,000			2,210,000	2,210,000
2	01	03	03			Pre-ops Electrical Power Usage (3.0k hrs) - 2009	1-Oct-08	30-Mar-09		X	SL_POWB	\$\$		3,560,000			3,560,000	3,560,000
2	01	03	03			Additional Startup Costs-FY09	2-Oct-08	31-Mar-09		X	SL_STUP	\$\$		7,440,000			7,440,000	7,440,000
2	01	03	03			SLAC Linac Legacy Upgrades	2-Oct-06	28-Sep-07		X	SL_UPGR	\$\$		1,375,037			1,375,037	1,375,037
2	01	03	03			Control Room Support	2-Jun-08	30-Mar-09		X	SL_CP	Hrs	7,105		804,735			804,735
2	01	03	04			Undulator Physics												
2	01	03	05			X-Ray Transport Physics												
2	01	03	06			X-Ray Endstation Physics												
2	01	03	07			Conventional Facilities Physics												
2	01	03	08			Consulting Physics (Collaboration)												
2	01	03	09			Consulting Physics (SLAC)												
2	01	03	10			Global Controls Physics Liaison												
2	01	03	11			Physics Commissioning Support - General												