

**NEXT Project EAC Log  
Sep-15**

Control Account	Resource (3)	Actuals	BCWP	BAC	P6 ETC	P6 EAC	Accrual Adj	Sept Labor	Adjusted ETC	Adjusted EAC	VAC	Cost Var	Remaining VAC	EAC NOTES
2.01.01 Project Management		3,248,447	3,413,646	4,657,379	1,181,740	4,430,188	0	-17,298	1,164,442	4,412,889	244,489	165,199	79,290	
	LABOR	2,608,404	2,160,979	2,929,724	938,879	3,547,283		-17,298	921,581	3,529,984	-600,261	-447,425	-152,836	project management effort known to be more than originally estimated, most of this is in the past. Future effort updates include added hours for deputy project manager.
	MATERIAL	640,044	1,252,667	1,727,655	242,861	882,905			242,861	882,905	844,750	612,624	232,126	project management material significantly overestimated; reductions in ETC include less-than-budgeted travel and consumables
2.01.02 Project Support		4,581,196	3,741,127	5,135,530	1,477,155	6,058,351	0	-20,708	1,456,446	6,037,643	-902,112	-840,070	-62,043	
	LABOR	3,019,236	2,656,113	3,718,710	1,123,278	4,142,513		-20,708	1,102,569	4,121,805	-403,095	-363,123	-39,972	project support effort known to be more than originally estimated, most of this is in the past; significant additional effort expected for metrology and procurement in FY16
	MATERIAL	1,561,961	1,085,014	1,416,821	353,877	1,915,838			353,877	1,915,838	-499,017	-476,947	-22,070	project support material costs are known to be more than originally estimated, most of this is in the past. Future materials cost increases include common vacuum equipment, forecast in business operation
2.02.02 Conceptual Design and Analysis of Photon Delivery Systems		849,881	849,881	849,881	0	849,881			0	849,881	0	0	0	Closed
	LABOR	805,279	805,279	805,279		805,279			0	805,279	0	0	0	
	MATERIAL	44,602	44,602	44,602		44,602			0	44,602	0	0	0	
2.02.04 ESM Advanced Conceptual Design		101,376	101,376	101,376	0	101,376			0	101,376	0	0	0	Closed
	LABOR	92,505	92,505	92,505		92,505			0	92,505	0	0	0	
	MATERIAL	8,871	8,871	8,871		8,871			0	8,871	0	0	0	
2.02.05 FXI Advanced Conceptual Design		120,634	120,634	120,634	0	120,634			0	120,634	0	0	0	Closed
	LABOR	107,145	107,145	107,145		107,145			0	107,145	0	0	0	
	MATERIAL	13,489	13,489	13,489		13,489			0	13,489	0	0	0	
2.02.06 ISR Advanced Conceptual Design		210,700	210,700	210,700	0	210,700			0	210,700	0	0	0	Closed
	LABOR	193,541	193,541	193,541		193,541			0	193,541	0	0	0	
	MATERIAL	17,159	17,159	17,159		17,159			0	17,159	0	0	0	
2.02.07 ISS Advanced Conceptual Design		163,508	163,508	163,508	0	163,508			0	163,508	0	0	0	Closed
	LABOR	130,348	130,348	130,348		130,348			0	130,348	0	0	0	
	MATERIAL	33,160	33,160	33,160		33,160			0	33,160	0	0	0	
2.02.08 SIX Advanced Conceptual Design		179,533	179,533	179,533	0	179,533			0	179,533	0	0	0	Closed
	LABOR	167,037	167,037	167,037		167,037			0	167,037	0	0	0	
	MATERIAL	12,496	12,496	12,496		12,496			0	12,496	0	0	0	
2.02.09 SMI Advanced Conceptual Design		181,684	181,684	181,684	0	181,684			0	181,684	0	0	0	Closed
	LABOR	154,536	154,536	154,536		154,536			0	154,536	0	0	0	
	MATERIAL	27,148	27,148	27,148		27,148			0	27,148	0	0	0	
2.03.01 Utilities		3,736,420	3,329,838	3,918,955	827,183	4,563,603	0	-24,776	802,407	4,538,827	-619,872	-406,582	-213,290	
	LABOR	1,944,054	1,793,784	2,262,106	626,398	2,570,452		-24,776	601,623	2,545,676	-283,571	-150,270	-133,301	labor additional costs anticipated include chilled water piping for gas handling equipment and SIX endstation electrical utilities
	MATERIAL	1,792,366	1,536,054	1,656,849	200,784	1,993,151			200,784	1,993,151	-336,301	-256,312	-79,989	material costs are underestimated, mostly in the past, additional overrun anticipated dominated by chilled water piping for ISR gas handling system
2.03.02 Personnel Protection System (PPS)		1,124,644	569,857	1,323,218	912,810	2,037,454	0	-21,693	891,117	2,015,761	-692,542	-554,787	-137,755	
	LABOR	657,755	134,180	881,453	861,310	1,519,066		-21,693	839,617	1,497,372	-615,920	-523,575	-92,344	labor updated, based on recent ABBIX actuals. Increased mostly on installation of H/W in hutches (buttons, HMI) - installing door switches & programming HMIs
	MATERIAL	466,888	435,677	441,766	51,500	518,388			51,500	518,388	-76,623	-31,212	-45,411	material cost increases are driven by area radiation monitor:
2.03.03 Equipment Protection System (EPS)		520,037	308,751	594,451	393,169	913,206	0	-4,046	389,123	909,160	-314,709	-211,286	-103,423	
	LABOR	117,399	191,872	447,566	273,376	390,775		-4,046	269,330	386,729	60,837	74,472	-13,635	future labor costs are roughly on-budget
	MATERIAL	402,638	116,880	146,885	119,793	522,431			119,793	522,431	-375,545	-285,758	-89,787	materials costs underestimated, reflected by EAC activities for additional EPS equipment (requirements per beamline equipment details now finalized)
2.03.04 Control Station		68,265	83,136	306,744	226,002	294,267	0	-808	225,194	293,459	13,285	14,871	-1,586	
	LABOR	24,511	33,817	140,719	104,794	129,305		-808	103,987	128,497	12,222	9,307	2,915	future labor costs are roughly on-budget
	MATERIAL	43,754	49,318	166,025	121,208	164,962			121,208	164,962	1,063	5,564	-4,501	future material costs are largely on-budget.
2.03.05 Common Beamline Systems Management		479,981	395,910	476,689	82,578	562,558	0	-2,810	79,768	559,749	-83,060	-84,070	1,010	
	LABOR	454,611	383,954	462,225	80,071	534,682		-2,810	77,261	531,872	-69,647	-70,657	1,010	future labor costs are roughly on-budget
	MATERIAL	25,370	11,957	14,464	2,507	27,876			2,507	27,876	-13,413	-13,413	0	future material costs are largely on-budget.
2.04.01 Control System Management		171,161	223,185	294,427	71,242	242,403	0	-662	70,580	241,741	52,686	52,024	662	
	LABOR	109,060	120,602	160,510	39,908	148,968		-662	39,245	148,305	12,205	11,542	662	future labor costs are roughly on-budget
	MATERIAL	62,101	102,583	133,917	31,334	93,436			31,334	93,436	40,482	40,482	0	future material costs are largely on-budget.

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2.04.02 Control System Design & Implementation		1,973,109	1,974,166	2,913,586	909,382	2,882,491	0	-13,110	896,271	2,869,381	44,205	1,057	43,148	
	LABOR	1,794,728	1,972,986	2,912,406	909,382	2,704,110		-13,110	896,271	2,691,000	221,406	178,257	43,148	Future costs are anticipated to be under budget by ~\$40k (identification of incorrect resource for controls engineer)
	MATERIAL	178,381	1,180	1,180		178,381			0	178,381	-177,201	-177,201	0	future material costs are largely on-budget.
2.04.03 Control System Equipment		1,151,077	1,170,549	1,350,223	136,536	1,287,613	0	0	136,536	1,287,613	62,610	19,473	43,138	
	LABOR	783				783			0	783	-783	-783	0	future labor costs are roughly on-budget
	MATERIAL	1,150,294	1,170,549	1,350,223	136,536	1,286,830			136,536	1,286,830	63,393	20,255	43,138	materials costs are overestimated: motor and encoder cable costs anticipated to be under budget
2.05.01 ESM Management		417,807	433,949	692,100	184,319	602,126	0	-2,149	182,170	599,977	92,124	16,142	75,982	
	LABOR	343,740	291,559	505,842	140,450	484,191		-2,149	138,302	482,042	23,800	-52,181	75,982	Future costs are anticipated to be under budget due to efficient completion of IRR
	MATERIAL	74,067	142,390	186,258	43,868	117,935			43,868	117,935	68,323	68,323	0	future material costs are largely on-budget.
2.05.02 ESM Beamline Systems		6,671,731	6,377,639	8,505,536	2,093,990	8,765,721	284,136	-33,385	2,344,742	9,016,473	-510,937	-294,092	-216,844	
	LABOR	1,997,214	1,521,967	2,500,079	741,293	2,738,507		-33,385	707,908	2,705,122	-205,044	-475,247	270,203	Future labor costs anticipated to be under budget, due to realization of savings on endstation assembly and test effort
	MATERIAL	4,674,517	4,855,671	6,005,458	1,352,698	6,027,214	284,136		1,636,834	6,311,350	-305,893	181,155	-487,048	material costs are underestimated, for future activities including endstation chamber vacuum equipment. Accrual offset included
2.06.01 FXI Beamline Systems		470,270	409,359	409,359	0	470,270			0	470,270	-60,911	-60,911	0	Closed
	LABOR	430,741	299,023	299,023		430,741			0	430,741	-131,718	-131,718	0	
	MATERIAL	39,529	110,336	110,336		39,529			0	39,529	70,807	70,807	0	
2.06.02 FXI Beamline Systems		1,042,554	1,246,422	1,408,965	154,873	1,197,427	76,037	0	230,910	1,273,464	135,501	203,869	-68,367	
	LABOR	502,598	583,064	606,805	34,105	536,703			34,105	536,703	70,101	80,466	-10,365	future labor costs are roughly on-budget
	MATERIAL	539,956	663,358	802,160	120,768	660,724	76,037		196,805	736,760	65,400	123,402	-58,003	future material costs are largely on-budget. Accrual offset included.
2.07.01 ISR Management		756,531	762,850	1,076,573	270,268	1,026,798	0	-7,927	262,340	1,018,871	57,703	6,319	51,384	
	LABOR	729,433	637,418	907,274	226,400	955,833		-7,927	218,472	947,906	-40,632	-92,015	51,384	Future costs are anticipated to be under budget due to efficient completion of IRR
	MATERIAL	27,097	125,432	169,300	43,868	70,965			43,868	70,965	98,334	98,334	0	future material costs are largely on-budget.
2.07.02 ISR Beamline Systems		3,392,780	3,182,118	9,251,036	6,058,563	9,451,343	3,185	-19,170	6,042,578	9,435,358	-184,321	-210,661	26,340	
	LABOR	1,443,569	1,218,497	2,036,971	763,384	2,206,953		-19,170	744,214	2,187,783	-150,811	-225,072	74,260	Future labor costs anticipated to be under budget, due to realization of savings on endstation assembly and test effort (e.g. KB mirror, DAQ)
	MATERIAL	1,949,211	1,963,621	7,214,065	5,295,179	7,244,390	3,185		5,298,364	7,247,575	-33,510	14,410	-47,920	future material costs are largely on-budget, with small increases expected (e.g. windows and support)
2.08.01 ISS Management		526,157	543,584	838,199	229,164	755,321	0	0	229,164	755,321	82,878	17,427	65,450	
	LABOR	356,659	366,958	617,705	185,296	541,956			185,296	541,956	75,749	10,298	65,450	Future costs are anticipated to be under budget due to efficient completion of IRR
	MATERIAL	169,497	176,626	220,494	43,868	213,366			43,868	213,366	7,129	7,129	0	future material costs are largely on-budget.
2.08.02 ISS Beamline Systems		6,633,671	5,872,355	9,502,301	3,540,280	10,173,951	-135,033	-8,557	3,396,690	10,030,361	-528,059	-761,315	233,256	
	LABOR	1,583,122	1,148,508	2,037,830	686,533	2,269,654		-8,557	677,976	2,261,097	-223,267	-434,614	211,346	Future labor costs anticipated to be under budget, due to realization of savings on endstation assembly and test effort (e.g. filterbox, DAQ), provided by suppliers
	MATERIAL	5,050,549	4,723,847	7,464,471	2,853,747	7,904,296	-135,033		2,718,714	7,769,263	-304,792	-326,702	21,910	material costs are underestimated, for future activities including "pizza boxes". Accrual offset included.
2.09.01 SIX Management		537,888	485,876	845,551	296,175	834,063	0	-2,993	293,182	831,070	14,481	-52,012	66,493	
	LABOR	278,940	335,333	651,141	252,307	531,247		-2,993	249,314	528,254	122,886	56,393	66,493	Future costs are anticipated to be under budget due to efficient completion of IRR
	MATERIAL	258,948	150,543	194,411	43,868	302,816			43,868	302,816	-108,405	-108,405	0	future material costs are largely on-budget.
2.09.02 SIX Beamline Systems		6,285,274	5,641,440	11,134,552	5,162,871	11,448,146	-42,830	-33,472	5,086,569	11,371,844	-237,292	-643,834	406,542	
	LABOR	2,528,617	2,033,012	3,199,525	786,838	3,315,455		-33,472	753,365	3,281,983	-82,458	-495,605	413,148	Future labor costs anticipated to be under budget, due to realization of savings on endstation assembly and test effort (e.g. mirror chamber, sample chamber), provided by suppliers
	MATERIAL	3,756,657	3,608,428	7,935,027	4,376,034	8,132,691	-42,830		4,333,204	8,089,861	-154,834	-148,229	-6,605	material costs are largely on-budget. Accrual offset included
2.10.01 SMI Management		482,892	591,731	918,583	203,652	686,544	0	-2,634	201,018	683,910	234,673	108,839	125,834	
	LABOR	396,394	456,491	739,476	176,078	572,473		-2,634	173,444	569,838	169,638	60,097	109,541	Future costs are anticipated to be under budget due to efficient completion of IRR and other work as seen in past months
	MATERIAL	86,498	135,239	179,108	27,574	114,072			27,574	114,072	65,036	48,742	16,294	future material costs are largely on-budget.
2.10.02 SMI Beamline Systems		4,834,348	4,636,601	8,325,960	3,674,607	8,508,955	6,375	-26,049	3,654,933	8,489,281	-163,321	-197,747	34,426	
	LABOR	1,471,904	1,268,046	2,116,620	832,743	2,304,647		-26,049	806,694	2,278,598	-161,979	-203,858	41,879	Future labor costs anticipated to be under budget, due to realization of some savings on endstation assembly and test effort

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2.11.01 ESM EPU Insertion Device	MATERIAL	3,362,444	3,368,555	6,209,340	2,841,864	6,204,308	6,375		2,848,239	6,210,683	-1,342	6,111	-7,453	future material costs are largely on-budget overall.
		1,920,590	1,966,771	4,562,016	2,609,897	4,530,487	-82,705	-15,335	2,511,857	4,432,447	129,569	46,180	83,389	
	LABOR	330,024	453,538	1,007,658	525,418	855,442		-15,335	510,083	840,107	167,550	123,514	44,036	Future labor costs anticipated to be under budget, due to realization of savings on test effort for current strip power supplies
	MATERIAL	1,590,566	1,513,233	3,554,359	2,084,479	3,675,045	-82,705		2,001,774	3,592,340	-37,981	-77,334	39,353	material costs are underestimated, for future activities including contract monitoring (\$30k). Accrual offset included.
2.11.02 SIX EPU Insertion Devices		70,375	117,137	117,137	0	70,375			0	70,375	46,762	46,762	0	Closed
	LABOR	69,206	107,974	107,974		69,206			0	69,206	38,767	38,767	0	
	MATERIAL	1,168	9,163	9,163		1,168			0	1,168	7,995	7,995	0	
2.11.03 Insertion Devices Management		38,194	60,413	100,460	40,047	78,241	0	-504	39,543	77,737	22,723	22,219	504	
	LABOR	34,455	60,413	100,460	40,047	74,501		-504	39,543	73,997	26,463	25,959	504	future labor costs are roughly on-budget
	MATERIAL	3,740				3,740			0	3,740	-3,740	-3,740	0	future material costs are largely on-budget.
2.12.01 ID & FE Installation & Testing Management		17,295	20,895	52,716	31,821	49,116	0	-1,329	30,493	47,787	4,929	3,600	1,329	
	LABOR	17,295	20,895	52,716	31,821	49,116		-1,329	30,493	47,787	4,929	3,600	1,329	labor costs are on-budget
2.12.02 ID Installation & Testing		550,336	284,439	1,240,295	959,556	1,509,892	0	-35,395	924,161	1,474,497	-234,202	-265,897	31,695	
	LABOR	512,051	263,333	1,187,901	757,293	1,269,344		-35,395	721,898	1,233,949	-46,048	-248,718	202,670	Future labor costs anticipated to be under budget; updated (reduced) estimates for ESM EPU57 magnetic measurement and long EPU installation effort indicated
	MATERIAL	38,285	21,106	52,394	202,264	240,548			202,264	240,548	-188,154	-17,179	-170,975	future material costs are underestimated by ~\$130k, for misc. cables, hardware & vacuum components
2.12.03 FE Installation & Testing		760,018	551,155	808,136	440,947	1,200,965	0	-50,119	390,828	1,150,846	-342,709	-208,863	-133,846	
	LABOR	622,143	393,723	586,965	369,449	991,592		-50,119	319,330	941,473	-354,508	-228,420	-126,088	future labor costs updated, based on recent actuals. Increased mostly on cable pulling / terminating & final bake / survey / test
	MATERIAL	137,875	157,432	221,171	71,498	209,373			71,498	209,373	11,798	19,557	-7,759	future material costs are largely on-budget.
<b>Grand Total</b>		<b>54,270,363</b>	<b>50,202,215</b>	<b>82,567,996</b>	<b>32,168,828</b>	<b>86,439,190</b>	<b>109,166</b>	<b>-344,930</b>	<b>31,933,063</b>	<b>86,203,426</b>	<b>-3,635,430</b>	<b>-4,068,147</b>	<b>432,717</b>	
<b>Labor</b>		26,029,038	22,558,430	34,827,771	11,506,852	37,535,890		-344,930	11,161,922	37,190,959	-2,363,189	-3,470,608	1,107,419	
<b>Material</b>		28,241,325	27,643,786	47,740,225	20,661,976	48,903,301	109,166		20,771,141	49,012,466	-1,272,241	-597,539	-674,702	