

WBS Dictionary and Labor BOE as of 4/8/02
Level 2 Trigger
Run2b_Trigger_Schedule_4-7-02

ID	WBS	Name	M&S Cost	Labor Cost	Total Cost																																				
138	1.3	Run 2b Level 2 Trigger	\$473,800.00	\$160,128.45	\$633,928.45																																				
	<u>Notes</u> WBS Definition- The Level 2 trigger upgrade has been designed to maintain a peak output rate of 1 kHz in the higher luminosity environment of Run 2b. It consists of an upgrade to the Level 2 Beta processors and, in order to maintain adequate b-tagging efficiency, an upgrade to the silicon track trigger. This summary WBS element includes all the effort to design, build, test, install, and initially commission the Run 2b Level 2 trigger system.																																								
139	1.3.1	Level 2 Beta Processor	\$72,100.00	\$18,740.20	\$90,840.20																																				
	<u>Notes</u> WBS Definition- This summary element includes the procurement of additional single-board computers (Level 2 Beta processors), associated hardware, and firmware support.																																								
140	1.3.1.1	Develop Prototype	\$19,160.00	\$9,567.60	\$28,727.60																																				
	<u>Notes</u> WBS Definition-																																								
141	1.3.1.1.1	Survey processor market, chose candidate SBCs	\$0.00	\$0.00	\$0.00																																				
	<table border="1"> <thead> <tr> <th>ID</th> <th>Resource Name</th> <th>Units</th> <th>Cost</th> <th>Baseline Cost</th> <th>Act. Cost</th> <th>Rem. Cost</th> <th>Work</th> <th>Ovt. Work</th> <th>Baseline Work</th> <th>Act. Work</th> <th>Rem. Work</th> </tr> </thead> <tbody> <tr> <td>14</td> <td>PHYSU</td> <td>0.5</td> <td>\$0.00</td> <td>\$0.00</td> <td>\$0.00</td> <td>\$0.00</td> <td>80 h</td> <td>0 h</td> <td>0 h</td> <td>0 h</td> <td>80 h</td> </tr> </tbody> </table>					ID	Resource Name	Units	Cost	Baseline Cost	Act. Cost	Rem. Cost	Work	Ovt. Work	Baseline Work	Act. Work	Rem. Work	14	PHYSU	0.5	\$0.00	\$0.00	\$0.00	\$0.00	80 h	0 h	0 h	0 h	80 h												
ID	Resource Name	Units	Cost	Baseline Cost	Act. Cost	Rem. Cost	Work	Ovt. Work	Baseline Work	Act. Work	Rem. Work																														
14	PHYSU	0.5	\$0.00	\$0.00	\$0.00	\$0.00	80 h	0 h	0 h	0 h	80 h																														
	<u>Notes</u> WBS Definition- Compare compatible cPCI processors on market Labor BOE- Experience w/ original Beta processors																																								
142	1.3.1.1.2	Evaluate software impact of new SBCs	\$0.00	\$0.00	\$0.00																																				
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ID	Resource Name	Units	Cost	Baseline Cost	Act. Cost	Rem. Cost	Work	Ovt. Work	Baseline Work	Act. Work	Rem. Work																														
14	PHYSU	0.5	\$0.00	\$0.00	\$0.00	\$0.00	80 h	0 h	0 h	0 h	80 h																														
	<u>Notes</u> WBS Definition- Determine if newer boards require changes to existing code Labor BOE- Experience w/ original Beta processors																																								
143	1.3.1.1.3	Evaluate firmware impact of new SBCs	\$0.00	\$1,876.00	\$1,876.00																																				
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ID	Resource Name	Units	Cost	Baseline Cost	Act. Cost	Rem. Cost	Work	Ovt. Work	Baseline Work	Act. Work	Rem. Work																														
5	EEU	0.25	\$1,876.00	\$0.00	\$0.00	\$1,876.00	40 h	0 h	0 h	0 h	40 h																														
14	PHYSU	0.25	\$0.00	\$0.00	\$0.00	\$0.00	40 h	0 h	0 h	0 h	40 h																														
	<u>Notes</u> WBS Definition- Determine extent of any necessary firmware changes Labor BOE- Experience w/ original Beta processors																																								
144	1.3.1.1.4	Acquire 2 new processor SBCs for evaluation	\$8,160.00	\$0.00	\$8,160.00																																				
	<u>Notes</u> WBS Definition- cPCI boards for software/firmware tests. Vendor quotes (prices range 30% across manufacturers) Labor BOE- Experience w/ original Beta processors																																								

WBS Dictionary and Labor BOE as of 4/8/02
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ID	WBS	Name				M&S Cost	Labor Cost	Total Cost			
145	1.3.1.1.5	Design Disk adapter				\$1,500.00	\$2,814.00	\$4,314.00			
<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
5	EEU	0.5	\$2,814.00	\$0.00	\$0.00	\$2,814.00	60 h	0 h	0 h	0 h	60 h
<i>Notes</i>											
WBS Definition- Adapter necessary if new SBC requires adapter for HD											
Labor BOE- Experience w/ design of simple, passive PBCs											
146	1.3.1.1.6	Layout adapter, generate artwork, etc				\$8,000.00	\$3,752.00	\$11,752.00			
<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
5	EEU	1	\$3,752.00	\$0.00	\$0.00	\$3,752.00	80 h	0 h	0 h	0 h	80 h
<i>Notes</i>											
WBS Definition- Art work for disk adapter											
Labor BOE- Experience w/ design of simple, passive PBCs											
147	1.3.1.1.7	Find manufacturer for disk adapters				\$500.00	\$1,125.60	\$1,625.60			
<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
5	EEU	0.3	\$1,125.60	\$0.00	\$0.00	\$1,125.60	24 h	0 h	0 h	0 h	24 h
<i>Notes</i>											
WBS Definition- Survey local manufacturers											
Labor BOE- Survey of local group's experience											
148	1.3.1.1.8	Produce prototype adapters				\$1,000.00	\$0.00	\$1,000.00			
<i>Notes</i>											
WBS Definition- Prototyping adapters											
Labor BOE- Expect to manufacture prototypes in house											
149	1.3.1.2	Test Prototype				\$10,000.00	\$7,504.00	\$17,504.00			
<i>Notes</i>											
WBS Definition- Verify operation of cPCI boards with L2Beta 9U motherboards											
150	1.3.1.2.1	Test Disk adapters				\$0.00	\$0.00	\$0.00			
<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
14	PHYSU	1	\$0.00	\$0.00	\$0.00	\$0.00	40 h	0 h	0 h	0 h	40 h
<i>Notes</i>											
WBS Definition- Test Disk adapters											
Labor BOE- Experience w/ original Beta processors											

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ID	WBS	Name	M&S Cost		Labor Cost		Total Cost					
151	1.3.1.2.2	Verify software compatiibty / hardware interface patches	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00				
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	14	PHYSU	0.3	\$0.00	\$0.00	\$0.00	\$0.00	96 h	0 h	0 h	0 h	96 h
	<i>Notes</i>											
	WBS Definition- Verify software and mother card functions w/ new SBC											
	Labor BOE- Experience w/ original Beta processors											
152	1.3.1.2.3	Firmware support and tuning	\$10,000.00	\$7,504.00								
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	5	EEU	0.5	\$7,504.00	\$0.00	\$0.00	\$7,504.00	160 h	0 h	0 h	0 h	160 h
	<i>Notes</i>											
	WBS Definition- Develop any necessary (or desired) firmware enhancements											
	Labor BOE- Estimated for register additions/redefinitions/tests, no protocol changes											
153	1.3.1.2.4	Verify Processor operability in Beta motherboards	\$0.00	\$0.00								
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	14	PHYSU	0.25	\$0.00	\$0.00	\$0.00	\$0.00	80 h	0 h	0 h	0 h	80 h
	<i>Notes</i>											
	WBS Definition- Test an assembled card under typicaa running conditions											
	Labor BOE- Estimate from experience of working at D0 test stand											
154	1.3.1.3	Assemble Production Processors	\$42,940.00	\$1,668.60								\$44,608.60
	<i>Notes</i>											
	WBS Definition- Assemble Production Processors											
155	1.3.1.3.1	Finalize Run2b SBC order	\$39,840.00	\$0.00								\$39,840.00
	<i>Notes</i>											
	WBS Definition- cPCI boards for upgrade os system. Vendor quotes (prices range 30% across manufacturers)											
	Labor BOE- Experience w/ original Beta processors											
156	1.3.1.3.2	Acquire heat sink hardware	\$375.00	\$0.00								\$375.00
	<i>Notes</i>											
	WBS Definition- Find any new hardware needed for new processors											
	Labor BOE- Experience w/ original Beta processors											
157	1.3.1.3.3	Modify heatsinks	\$1,125.00	\$1,668.60								\$2,793.60
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	2	MEU	0.15	\$1,668.60	\$0.00	\$0.00	\$1,668.60	36 h	0 h	0 h	0 h	36 h

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ID	WBS	Name	M&S Cost	Labor Cost	Total Cost							
"Modify heatsinks" continued												
	<u>Notes</u> WBS Definition- Complete any necessary machining											
	Labor BOE- Experience w/ original Beta processors											
158	1.3.1.3.4	Acquire Run2b SBCs	\$0.00	\$0.00	\$0.00							
	<u>Notes</u> WBS Definition- Purchase full complement of SBC cards											
	Labor BOE- Experience w/ original Beta processors											
159	1.3.1.3.5	Produce adapters for Run2b SBCs	\$1,600.00	\$0.00	\$1,600.00							
	<u>Notes</u> WBS Definition- Disk drive adapters for new cPCI processors											
	Labor BOE- Survey of local group's experience											
160	1.3.1.4	Install and Operate	\$0.00	\$0.00	\$0.00							
	<u>Notes</u> WBS Definition- Complete installation											
	Labor BOE- Experience w/ L2 system											
161	1.3.1.4.1	Cut first code release for new hardware	\$0.00	\$0.00	\$0.00							
	<u>ID</u>	<u>Resource Name</u>	<u>Units</u>	<u>Cost</u>	<u>Baseline Cost</u>	<u>Act. Cost</u>	<u>Rem. Cost</u>	<u>Work</u>	<u>Ovt. Work</u>	<u>Baseline Work</u>	<u>Act. Work</u>	<u>Rem. Work</u>
	14	PHYSU	1	\$0.00	\$0.00	\$0.00	\$0.00	16 h	0 h	0 h	0 h	16 h
	<u>Notes</u> WBS Definition- Cut first code release for new hardware											
	Labor BOE- Experience w/ original Beta processors											
162	1.3.1.4.2	Online code support/development	\$0.00	\$0.00	\$0.00							
	<u>ID</u>	<u>Resource Name</u>	<u>Units</u>	<u>Cost</u>	<u>Baseline Cost</u>	<u>Act. Cost</u>	<u>Rem. Cost</u>	<u>Work</u>	<u>Ovt. Work</u>	<u>Baseline Work</u>	<u>Act. Work</u>	<u>Rem. Work</u>
	14	PHYSU	0.1	\$0.00	\$0.00	\$0.00	\$0.00	56 h	0 h	0 h	0 h	56 h
	<u>Notes</u> WBS Definition- Tune online code											
	Labor BOE- Experience w/ original Alpha and Beta processors											
163	1.3.1.4.3	Install and Commission in L2 Trigger	\$0.00	\$0.00	\$0.00							
	<u>ID</u>	<u>Resource Name</u>	<u>Units</u>	<u>Cost</u>	<u>Baseline Cost</u>	<u>Act. Cost</u>	<u>Rem. Cost</u>	<u>Work</u>	<u>Ovt. Work</u>	<u>Baseline Work</u>	<u>Act. Work</u>	<u>Rem. Work</u>
	14	PHYSU	3	\$0.00	\$0.00	\$0.00	\$0.00	480 h	0 h	0 h	0 h	480 h

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"Install and Commission in L2 Trigger" continued					
	<u>Notes</u> WBS Definition- Install and Commission in L2 Trigger				
	Labor BOE- Experience w/ original Alpha and Beta processors				
164	1.3.2	Silicon Track Trigger Upgrade	\$401,700.00	\$141,388.25	\$543,088.25
	<u>Notes</u> WBS Definition- This summary element includes upgrades to the Run 2a silicon track trigger to adapt it to the increased number of inputs from the Run 2b silicon detector. It consists of the procurement of additional electronics boards of the Run 2a type, together with the development and production of a new board type (the Link Echo Board). Also included are firmware changes, procurement of additional, slightly modified backplanes, and additional cabling and connector hardware.				
165	1.3.2.1	Place Parts Orders	\$0.00	\$0.00	\$0.00
	<u>Notes</u> WBS Definition- milestone				
166	1.3.2.2	Begin PCB Production	\$0.00	\$0.00	\$0.00
	<u>Notes</u> WBS Definition- milestone				
167	1.3.2.3	Start Run 2b-specific Projects	\$0.00	\$0.00	\$0.00
	<u>Notes</u> WBS Definition- milestone				
168	1.3.2.4	Run 2b Inputs Finalized	\$0.00	\$0.00	\$0.00
	<u>Notes</u> WBS Definition- milestone - Format of inputs from upgraded L1CTT and new SMT are fixed				
169	1.3.2.5	VME Motherboard	\$55,200.00	\$4,055.25	\$59,255.25
	<u>Notes</u> WBS Definition- Common 9Ux400 mm VME motherboard for all STT modules. Design is the same as for Run 2A.				
170	1.3.2.5.1	Order parts	\$20,976.00	\$0.00	\$20,976.00
	<u>Notes</u> WBS Definition- place order for parts				
171	1.3.2.5.2	Fabricate PCB	\$19,320.00	\$0.00	\$19,320.00
	<u>Notes</u> WBS Definition- fabrication of PC boards by outside vendor				
172	1.3.2.5.3	Assemble	\$12,696.00	\$0.00	\$12,696.00
	<u>Notes</u> WBS Definition- assembly of boards by outside vendor				

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ID	WBS	Name								M&S Cost	Labor Cost	Total Cost
173	1.3.2.5.4	Test								\$2,208.00	\$4,055.25	\$6,263.25
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	5	EEU	0.25	\$1,407.00	\$0.00	\$0.00	\$1,407.00	30 h	0 h	0 h	0 h	30 h
	11	ETU	0.75	\$2,648.25	\$0.00	\$0.00	\$2,648.25	90 h	0 h	0 h	0 h	90 h
	<i>Notes</i>											
	WBS Definition- test boards for acceptance											
	Labor BOE- 2.5 hours @ \$26/hour for technician											
174	1.3.2.6	STC Module								\$61,300.00	\$5,407.00	\$66,707.00
	<i>Notes</i>											
	WBS Definition- Daughter board that processes raw data from SMT. Design as the same as for Run 2A.											
175	1.3.2.6.1	Order parts								\$39,845.00	\$0.00	\$39,845.00
	<i>Notes</i>											
	WBS Definition- place order for parts											
176	1.3.2.6.2	Fabricate PCB								\$12,260.00	\$0.00	\$12,260.00
	<i>Notes</i>											
	WBS Definition- fabrication of PC boards by outside vendor											
177	1.3.2.6.3	Assemble								\$7,969.00	\$0.00	\$7,969.00
	<i>Notes</i>											
	WBS Definition- assembly of boards by outside vendor											
178	1.3.2.6.4	Test								\$1,226.00	\$5,407.00	\$6,633.00
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	5	EEU	0.25	\$1,876.00	\$0.00	\$0.00	\$1,876.00	40 h	0 h	0 h	0 h	40 h
	11	ETU	0.75	\$3,531.00	\$0.00	\$0.00	\$3,531.00	120 h	0 h	0 h	0 h	120 h
	<i>Notes</i>											
	WBS Definition- test boards for acceptance											
	Labor BOE- 2.5 hours @ \$26/hour for technician											
179	1.3.2.6.5	Install								\$0.00	\$0.00	\$0.00
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	14	PHYSU	1	\$0.00	\$0.00	\$0.00	\$0.00	40 h	0 h	0 h	0 h	40 h
	<i>Notes</i>											
	WBS Definition- install modules in the L2STT crates											
180	1.3.2.7	Link Transmitter Board								\$20,696.00	\$6,758.75	\$27,454.75
	<i>Notes</i>											
	WBS Definition- PC-MIP board with three serial link transmitters for intermodule data transfer. Design is the same as for Run 2A.											

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ID	WBS	Name	M&S Cost	Labor Cost	Total Cost							
181	1.3.2.7.1	Order parts	\$5,174.00	\$0.00	\$5,174.00							
	<i>Notes</i> WBS Definition- place order for parts											
182	1.3.2.7.2	Fabricate PCB	\$10,761.92	\$0.00	\$10,761.92							
	<i>Notes</i> WBS Definition- fabrication of PC boards by outside vendor											
183	1.3.2.7.3	Assemble	\$1,448.72	\$0.00	\$1,448.72							
	<i>Notes</i> WBS Definition- assembly of boards by outside vendor											
184	1.3.2.7.4	Test	\$3,311.36	\$6,758.75	\$10,070.11							
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	5	EEU	0.25	\$2,345.00	\$0.00	\$0.00	\$2,345.00	50 h	0 h	0 h	0 h	50 h
	11	ETU	0.75	\$4,413.75	\$0.00	\$0.00	\$4,413.75	150 h	0 h	0 h	0 h	150 h
	<i>Notes</i> WBS Definition- test boards for acceptance Labor BOE- 2.5 hours @ \$26/hour for technician											
185	1.3.2.8	Link Receiver Board	\$34,140.00	\$4,055.25	\$38,195.25							
	<i>Notes</i> WBS Definition- PC-MIP board with three serial link receivers for intermodule data transfer. Design is the same as for Run 2A.											
186	1.3.2.8.1	Order parts	\$13,997.40	\$0.00	\$13,997.40							
	<i>Notes</i> WBS Definition- place order for parts											
187	1.3.2.8.2	Fabricate PCB	\$12,290.40	\$0.00	\$12,290.40							
	<i>Notes</i> WBS Definition- fabrication of PC boards by outside vendor											
188	1.3.2.8.3	Assemble	\$3,755.40	\$0.00	\$3,755.40							
	<i>Notes</i> WBS Definition- assembly of boards by outside vendor											
189	1.3.2.8.4	Test	\$4,096.80	\$4,055.25	\$8,152.05							
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	5	EEU	0.25	\$1,407.00	\$0.00	\$0.00	\$1,407.00	30 h	0 h	0 h	0 h	30 h
	11	ETU	0.75	\$2,648.25	\$0.00	\$0.00	\$2,648.25	90 h	0 h	0 h	0 h	90 h
	<i>Notes</i> WBS Definition- test boards for acceptance Labor BOE- 2.5 hours @ \$26/hour for technician											

WBS Dictionary and Labor BOE as of 4/8/02
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ID	WBS	Name	M&S Cost	Labor Cost	Total Cost																																				
190	1.3.2.9	BC Module	\$31,744.00	\$4,055.25	\$35,799.25																																				
	<u>Notes</u> WBS Definition- Daughter board that buffers data for readout to L3 when an L2 accept is issued. Design is the same as for Run 2A.																																								
191	1.3.2.9.1	Order parts	\$25,712.64	\$0.00	\$25,712.64																																				
	<u>Notes</u> WBS Definition- place order for parts																																								
192	1.3.2.9.2	Fabricate PCB	\$2,539.52	\$0.00	\$2,539.52																																				
	<u>Notes</u> WBS Definition- fabrication of PC boards by outside vendor																																								
193	1.3.2.9.3	Assemble	\$1,587.20	\$0.00	\$1,587.20																																				
	<u>Notes</u> WBS Definition- assembly of boards by outside vendor																																								
194	1.3.2.9.4	Test	\$1,904.64	\$4,055.25	\$5,959.89																																				
	<table border="1"> <thead> <tr> <th>ID</th> <th>Resource Name</th> <th>Units</th> <th>Cost</th> <th>Baseline Cost</th> <th>Act. Cost</th> <th>Rem. Cost</th> <th>Work</th> <th>Ovt. Work</th> <th>Baseline Work</th> <th>Act. Work</th> <th>Rem. Work</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>EEU</td> <td>0.25</td> <td>\$1,407.00</td> <td>\$0.00</td> <td>\$0.00</td> <td>\$1,407.00</td> <td>30 h</td> <td>0 h</td> <td>0 h</td> <td>0 h</td> <td>30 h</td> </tr> <tr> <td>11</td> <td>ETU</td> <td>0.75</td> <td>\$2,648.25</td> <td>\$0.00</td> <td>\$0.00</td> <td>\$2,648.25</td> <td>90 h</td> <td>0 h</td> <td>0 h</td> <td>0 h</td> <td>90 h</td> </tr> </tbody> </table>					ID	Resource Name	Units	Cost	Baseline Cost	Act. Cost	Rem. Cost	Work	Ovt. Work	Baseline Work	Act. Work	Rem. Work	5	EEU	0.25	\$1,407.00	\$0.00	\$0.00	\$1,407.00	30 h	0 h	0 h	0 h	30 h	11	ETU	0.75	\$2,648.25	\$0.00	\$0.00	\$2,648.25	90 h	0 h	0 h	0 h	90 h
ID	Resource Name	Units	Cost	Baseline Cost	Act. Cost	Rem. Cost	Work	Ovt. Work	Baseline Work	Act. Work	Rem. Work																														
5	EEU	0.25	\$1,407.00	\$0.00	\$0.00	\$1,407.00	30 h	0 h	0 h	0 h	30 h																														
11	ETU	0.75	\$2,648.25	\$0.00	\$0.00	\$2,648.25	90 h	0 h	0 h	0 h	90 h																														
	<u>Notes</u> WBS Definition- test boards for acceptance Labor BOE- 2.5 hours @ \$26/hour for technician																																								
195	1.3.2.10	VTM	\$43,542.00	\$4,708.00	\$48,250.00																																				
	<u>Notes</u> WBS Definition- 9U board with 4 optical receivers and g-link serial link receivers that receive the raw data sent by SMT. The design of these boards is complete. They are used in D0 and CDF as part of the SVX DAQ system.																																								
196	1.3.2.10.1	Go out for bids	\$0.00	\$0.00	\$0.00																																				
	<u>Notes</u> WBS Definition- get competitive bids for assembly of boards																																								
197	1.3.2.10.2	Fabricate	\$42,235.74	\$0.00	\$42,235.74																																				
	<u>Notes</u> WBS Definition- order parts, manufacture and assemble PC boards																																								
198	1.3.2.10.3	Test	\$1,306.26	\$4,708.00	\$6,014.26																																				
	<table border="1"> <thead> <tr> <th>ID</th> <th>Resource Name</th> <th>Units</th> <th>Cost</th> <th>Baseline Cost</th> <th>Act. Cost</th> <th>Rem. Cost</th> <th>Work</th> <th>Ovt. Work</th> <th>Baseline Work</th> <th>Act. Work</th> <th>Rem. Work</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>ETF</td> <td>1</td> <td>\$4,708.00</td> <td>\$0.00</td> <td>\$0.00</td> <td>\$4,708.00</td> <td>160 h</td> <td>0 h</td> <td>0 h</td> <td>0 h</td> <td>160 h</td> </tr> </tbody> </table>					ID	Resource Name	Units	Cost	Baseline Cost	Act. Cost	Rem. Cost	Work	Ovt. Work	Baseline Work	Act. Work	Rem. Work	10	ETF	1	\$4,708.00	\$0.00	\$0.00	\$4,708.00	160 h	0 h	0 h	0 h	160 h												
ID	Resource Name	Units	Cost	Baseline Cost	Act. Cost	Rem. Cost	Work	Ovt. Work	Baseline Work	Act. Work	Rem. Work																														
10	ETF	1	\$4,708.00	\$0.00	\$0.00	\$4,708.00	160 h	0 h	0 h	0 h	160 h																														
	<u>Notes</u> WBS Definition- test boards for acceptance Labor BOE- 2.5 hours @ \$26/hour for technician																																								

WBS Dictionary and Labor BOE as of 4/8/02
Level 2 Trigger
Run2b_Trigger_Schedule_4-7-02

ID	WBS	Name				M&S Cost	Labor Cost			Total Cost		
199	1.3.2.10.4	Install				\$0.00	\$0.00			\$0.00		
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	14	PHYSU	1	\$0.00	\$0.00	\$0.00	\$0.00	40 h	0 h	0 h	0 h	40 h
	<i>Notes</i>											
	WBS Definition- install modules in the L2STT crates											
200	1.3.2.11	TFC Module				\$40,520.00	\$1,351.75			\$41,871.75		
	<i>Notes</i>											
	WBS Definition- Daughter board that fits a trajectory to hits in SMT and CFT. Design is the same as for Run 2A.											
201	1.3.2.11.1	Order parts				\$32,010.80	\$0.00			\$32,010.80		
	<i>Notes</i>											
	WBS Definition- place order for parts											
202	1.3.2.11.2	Fabricate PCB				\$4,052.00	\$0.00			\$4,052.00		
	<i>Notes</i>											
	WBS Definition- fabrication of PC boards by outside vendor											
203	1.3.2.11.3	Assemble				\$4,052.00	\$0.00			\$4,052.00		
	<i>Notes</i>											
	WBS Definition- assembly of boards by outside vendor											
204	1.3.2.11.4	Test				\$405.20	\$1,351.75			\$1,756.95		
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	5	EEU	0.25	\$469.00	\$0.00	\$0.00	\$469.00	10 h	0 h	0 h	0 h	10 h
	11	ETU	0.75	\$882.75	\$0.00	\$0.00	\$882.75	30 h	0 h	0 h	0 h	30 h
	<i>Notes</i>											
	WBS Definition- test boards for acceptance											
	Labor BOE- 2.5 hours @ \$26/hour for technician											
205	1.3.2.11.5	Install				\$0.00	\$0.00			\$0.00		
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	14	PHYSU	1	\$0.00	\$0.00	\$0.00	\$0.00	40 h	0 h	0 h	0 h	40 h
	<i>Notes</i>											
	WBS Definition- install modules in the L2STT crates											
206	1.3.2.12	Hotlink Transmitter				\$9,310.00	\$1,351.75			\$10,661.75		
	<i>Notes</i>											
	WBS Definition- PC-MIP board with hotlink serial link transmitter for data transfer to L2CTT. Design is the same as for Run 2A.											
207	1.3.2.12.1	Order parts				\$4,934.30	\$0.00			\$4,934.30		
	<i>Notes</i>											
	WBS Definition- place order for parts											

WBS Dictionary and Labor BOE as of 4/8/02
 Level 2 Trigger
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ID	WBS	Name			M&S Cost	Labor Cost	Total Cost					
208	1.3.2.12.2	Fabricate PCB			\$2,793.00	\$0.00	\$2,793.00					
	<u>Notes</u> WBS Definition- fabrication of PC boards by outside vendor											
209	1.3.2.12.3	Assemble			\$651.70	\$0.00	\$651.70					
	<u>Notes</u> WBS Definition- assembly of boards by outside vendor											
210	1.3.2.12.4	Test			\$931.00	\$1,351.75	\$2,282.75					
	<u>ID</u>	<u>Resource Name</u>	<u>Units</u>	<u>Cost</u>	<u>Baseline Cost</u>	<u>Act. Cost</u>	<u>Rem. Cost</u>	<u>Work</u>	<u>Ovt. Work</u>	<u>Baseline Work</u>	<u>Act. Work</u>	<u>Rem. Work</u>
	5	EEU	0.25	\$469.00	\$0.00	\$0.00	\$469.00	10 h	0 h	0 h	0 h	10 h
	11	ETU	0.75	\$882.75	\$0.00	\$0.00	\$882.75	30 h	0 h	0 h	0 h	30 h
	<u>Notes</u> WBS Definition- test boards for acceptance Labor BOE- 2.5 hours @ \$26/hour for technician											
211	1.3.2.13	LVDS Fanout Board			\$40,120.00	\$49,079.25	\$89,199.25					
	<u>Notes</u> WBS Definition-											
212	1.3.2.13.1	Design			\$33,600.00	\$40,521.60	\$74,121.60					
	<u>ID</u>	<u>Resource Name</u>	<u>Units</u>	<u>Cost</u>	<u>Baseline Cost</u>	<u>Act. Cost</u>	<u>Rem. Cost</u>	<u>Work</u>	<u>Ovt. Work</u>	<u>Baseline Work</u>	<u>Act. Work</u>	<u>Rem. Work</u>
	5	EEU	0.9	\$40,521.60	\$0.00	\$0.00	\$40,521.60	864 h	0 h	0 h	0 h	864 h
	14	PHYSU	0.1	\$0.00	\$0.00	\$0.00	\$0.00	96 h	0 h	0 h	0 h	96 h
	<u>Notes</u> WBS Definition-											
213	1.3.2.13.2	Prototype			\$2,000.00	\$4,502.40	\$6,502.40					
	<u>ID</u>	<u>Resource Name</u>	<u>Units</u>	<u>Cost</u>	<u>Baseline Cost</u>	<u>Act. Cost</u>	<u>Rem. Cost</u>	<u>Work</u>	<u>Ovt. Work</u>	<u>Baseline Work</u>	<u>Act. Work</u>	<u>Rem. Work</u>
	5	EEU	0.1	\$4,502.40	\$0.00	\$0.00	\$4,502.40	96 h	0 h	0 h	0 h	96 h
	14	PHYSU	0.9	\$0.00	\$0.00	\$0.00	\$0.00	864 h	0 h	0 h	0 h	864 h
	<u>Notes</u> WBS Definition-											
214	1.3.2.13.3	Order parts			\$4,000.00	\$0.00	\$4,000.00					
	<u>Notes</u> WBS Definition-											
215	1.3.2.13.4	Fabricate PCB			\$0.00	\$0.00	\$0.00					
	<u>Notes</u> WBS Definition-											
216	1.3.2.13.5	Assemble			\$0.00	\$0.00	\$0.00					
	<u>Notes</u> WBS Definition-											

WBS Dictionary and Labor BOE as of 4/8/02
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ID	WBS	Name			M&S Cost	Labor Cost	Total Cost					
217	1.3.2.13.6	Test			\$520.00	\$4,055.25	\$4,575.25					
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	5	EEU	0.25	\$1,407.00	\$0.00	\$0.00	\$1,407.00	30 h	0 h	0 h	0 h	30 h
	11	ETU	0.75	\$2,648.25	\$0.00	\$0.00	\$2,648.25	90 h	0 h	0 h	0 h	90 h
	<i>Notes</i>											
	WBS Definition-											
218	1.3.2.13.7	Install			\$0.00	\$0.00	\$0.00					
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	14	PHYSU	1	\$0.00	\$0.00	\$0.00	\$0.00	40 h	0 h	0 h	0 h	40 h
	<i>Notes</i>											
	WBS Definition-											
219	1.3.2.14	J3 Backplane			\$12,428.00	\$10,834.00	\$23,262.00					
	<i>Notes</i>											
	WBS Definition-											
	Modify the custom J3 backplane design to accommodate two additional slots for STC/TFC modules											
220	1.3.2.14.1	Design			\$5,000.00	\$7,504.00	\$12,504.00					
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	5	EEU	1	\$7,504.00	\$0.00	\$0.00	\$7,504.00	160 h	0 h	0 h	0 h	160 h
	<i>Notes</i>											
	WBS Definition-											
	layout of backplane											
	Labor BOE-											
	cost estimate based on Run 2A design											
221	1.3.2.14.2	Order parts			\$4,916.00	\$0.00	\$4,916.00					
	<i>Notes</i>											
	WBS Definition-											
	place order for parts											
222	1.3.2.14.3	Fabricate PCB			\$2,512.00	\$0.00	\$2,512.00					
	<i>Notes</i>											
	WBS Definition-											
	fabrication of PC boards by outside vendor											
223	1.3.2.14.4	Assemble			\$0.00	\$0.00	\$0.00					
	<i>Notes</i>											
	WBS Definition-											
	assembly of boards by outside vendor											
224	1.3.2.14.5	Test			\$0.00	\$0.00	\$0.00					
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	14	PHYSU	1	\$0.00	\$0.00	\$0.00	\$0.00	160 h	0 h	0 h	0 h	160 h
	<i>Notes</i>											
	WBS Definition-											
	test boards for acceptance											

WBS Dictionary and Labor BOE as of 4/8/02
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ID	WBS	Name	M&S Cost			Labor Cost			Total Cost			
225	1.3.2.14.6	Install				\$0.00		\$3,330.00			\$3,330.00	
	<u>ID</u>	<u>Resource Name</u>	<u>Units</u>	<u>Cost</u>	<u>Baseline Cost</u>	<u>Act. Cost</u>	<u>Rem. Cost</u>	<u>Work</u>	<u>Ovt. Work</u>	<u>Baseline Work</u>	<u>Act. Work</u>	<u>Rem. Work</u>
	7	MTF	1	\$3,330.00	\$0.00	\$0.00	\$3,330.00	120 h	0 h	0 h	0 h	120 h
	<u>Notes</u>											
	WBS Definition- install backplanes in the L2STT crates											
226	1.3.2.15	Cables				\$19,100.00		\$4,708.00			\$23,808.00	
	<u>Notes</u>											
	WBS Definition-											
227	1.3.2.15.1	LVDS Cables				\$5,100.00		\$0.00			\$5,100.00	
	<u>Notes</u>											
	WBS Definition- cables for LVDS serial links.											
228	1.3.2.15.1.1	Go out for bids				\$0.00		\$0.00			\$0.00	
	<u>Notes</u>											
	WBS Definition- get quotes for cable assembly											
229	1.3.2.15.1.2	Fabricate				\$5,100.00		\$0.00			\$5,100.00	
	<u>Notes</u>											
	WBS Definition- fabrication of cables by outside vendor											
230	1.3.2.15.1.3	Test				\$0.00		\$0.00			\$0.00	
	<u>ID</u>	<u>Resource Name</u>	<u>Units</u>	<u>Cost</u>	<u>Baseline Cost</u>	<u>Act. Cost</u>	<u>Rem. Cost</u>	<u>Work</u>	<u>Ovt. Work</u>	<u>Baseline Work</u>	<u>Act. Work</u>	<u>Rem. Work</u>
	14	PHYSU	1	\$0.00	\$0.00	\$0.00	\$0.00	40 h	0 h	0 h	0 h	40 h
	<u>Notes</u>											
	WBS Definition- test cables											
231	1.3.2.15.2	Splitters				\$10,000.00		\$4,708.00			\$14,708.00	
	<u>Notes</u>											
	WBS Definition- passive optical splitters to create data path into STT											
232	1.3.2.15.2.1	Go out for bids				\$0.00		\$0.00			\$0.00	
	<u>Notes</u>											
	WBS Definition- get quotes for splitters											
233	1.3.2.15.2.2	Procure				\$10,000.00		\$0.00			\$10,000.00	
	<u>Notes</u>											
	WBS Definition- place order for splitters											
234	1.3.2.15.2.3	Test				\$0.00		\$0.00			\$0.00	
	<u>ID</u>	<u>Resource Name</u>	<u>Units</u>	<u>Cost</u>	<u>Baseline Cost</u>	<u>Act. Cost</u>	<u>Rem. Cost</u>	<u>Work</u>	<u>Ovt. Work</u>	<u>Baseline Work</u>	<u>Act. Work</u>	<u>Rem. Work</u>
	14	PHYSU	1	\$0.00	\$0.00	\$0.00	\$0.00	160 h	0 h	0 h	0 h	160 h
	<u>Notes</u>											
	WBS Definition-											

WBS Dictionary and Labor BOE as of 4/8/02
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ID	WBS	Name				M&S Cost	Labor Cost	Total Cost			
"Test" continued											
<u>Notes</u> test splitters											
235	1.3.2.15.2.4	Install				\$0.00	\$4,708.00	\$4,708.00			
<u>ID</u>	<u>Resource Name</u>	<u>Units</u>	<u>Cost</u>	<u>Baseline Cost</u>	<u>Act. Cost</u>	<u>Rem. Cost</u>	<u>Work</u>	<u>Ovt. Work</u>	<u>Baseline Work</u>	<u>Act. Work</u>	<u>Rem. Work</u>
10	ETF	1	\$4,708.00	\$0.00	\$0.00	\$4,708.00	160 h	0 h	0 h	0 h	160 h
<u>Notes</u> WBS Definition- install splitters in MCH											
236	1.3.2.15.3	Fibers				\$4,000.00	\$0.00	\$4,000.00			
<u>Notes</u> WBS Definition- optical fibers from splitters to VRBs and to STT											
237	1.3.2.15.3.1	Go out for bids				\$0.00	\$0.00	\$0.00			
<u>Notes</u> WBS Definition- get quotes for fibers											
238	1.3.2.15.3.2	Procure				\$4,000.00	\$0.00	\$4,000.00			
<u>Notes</u> WBS Definition- place orders for fibers											
239	1.3.2.15.3.3	Test				\$0.00	\$0.00	\$0.00			
<u>ID</u>	<u>Resource Name</u>	<u>Units</u>	<u>Cost</u>	<u>Baseline Cost</u>	<u>Act. Cost</u>	<u>Rem. Cost</u>	<u>Work</u>	<u>Ovt. Work</u>	<u>Baseline Work</u>	<u>Act. Work</u>	<u>Rem. Work</u>
14	PHYSU	1	\$0.00	\$0.00	\$0.00	\$0.00	160 h	0 h	0 h	0 h	160 h
<u>Notes</u> WBS Definition- test fibers											
240	1.3.2.15.3.4	Install				\$0.00	\$0.00	\$0.00			
<u>ID</u>	<u>Resource Name</u>	<u>Units</u>	<u>Cost</u>	<u>Baseline Cost</u>	<u>Act. Cost</u>	<u>Rem. Cost</u>	<u>Work</u>	<u>Ovt. Work</u>	<u>Baseline Work</u>	<u>Act. Work</u>	<u>Rem. Work</u>
14	PHYSU	1	\$0.00	\$0.00	\$0.00	\$0.00	80 h	0 h	0 h	0 h	80 h
<u>Notes</u> WBS Definition- install fibers in MCH											
241	1.3.2.16	Software				\$33,600.00	\$45,024.00	\$78,624.00			
<u>Notes</u> WBS Definition-											
242	1.3.2.16.1	Update STC firmware				\$33,600.00	\$45,024.00	\$78,624.00			
<u>ID</u>	<u>Resource Name</u>	<u>Units</u>	<u>Cost</u>	<u>Baseline Cost</u>	<u>Act. Cost</u>	<u>Rem. Cost</u>	<u>Work</u>	<u>Ovt. Work</u>	<u>Baseline Work</u>	<u>Act. Work</u>	<u>Rem. Work</u>
5	EEU	1	\$45,024.00	\$0.00	\$0.00	\$45,024.00	960 h	0 h	0 h	0 h	960 h
<u>Notes</u> WBS Definition- rewrite firmware for STC FPGA to accomodate changes in input data											
Labor BOE- based on engineering effort to design STC firmware for Run 2A (960 hours @ \$35/hour)											

WBS Dictionary and Labor BOE as of 4/8/02
 Level 2 Trigger
 Run2b_Trigger_Schedule_4-7-02

ID	WBS	Name	M&S Cost			Labor Cost			Total Cost		
243	1.3.2.16.2	Change TFC code	\$0.00			\$0.00			\$0.00		
<u>ID</u>	<u>Resource Name</u>	<u>Units</u>	<u>Cost</u>	<u>Baseline Cost</u>	<u>Act. Cost</u>	<u>Rem. Cost</u>	<u>Work</u>	<u>Ovt. Work</u>	<u>Baseline Work</u>	<u>Act. Work</u>	<u>Rem. Work</u>
14	PHYSU	1	\$0.00	\$0.00	\$0.00	\$0.00	960 h	0 h	0 h	0 h	960 h
<u>Notes</u>											
WBS Definition- rewrite software that runs in DSPs to do fits to increased number of silicon layers											
Labor BOE- done by physicists											
244	1.3.2.16.3	Update downloading & monitoring software	\$0.00			\$0.00			\$0.00		
<u>ID</u>	<u>Resource Name</u>	<u>Units</u>	<u>Cost</u>	<u>Baseline Cost</u>	<u>Act. Cost</u>	<u>Rem. Cost</u>	<u>Work</u>	<u>Ovt. Work</u>	<u>Baseline Work</u>	<u>Act. Work</u>	<u>Rem. Work</u>
14	PHYSU	1	\$0.00	\$0.00	\$0.00	\$0.00	640 h	0 h	0 h	0 h	640 h
<u>Notes</u>											
WBS Definition- update downloading and monitoring software											
Labor BOE- done by physicists											
245	1.3.2.16.4	Update simulator	\$0.00			\$0.00			\$0.00		
<u>ID</u>	<u>Resource Name</u>	<u>Units</u>	<u>Cost</u>	<u>Baseline Cost</u>	<u>Act. Cost</u>	<u>Rem. Cost</u>	<u>Work</u>	<u>Ovt. Work</u>	<u>Baseline Work</u>	<u>Act. Work</u>	<u>Rem. Work</u>
14	PHYSU	1	\$0.00	\$0.00	\$0.00	\$0.00	640 h	0 h	0 h	0 h	640 h
<u>Notes</u>											
WBS Definition- update simulator to reflect changes in hardware											
Labor BOE- done by physicists											
246	1.3.2.17	Test system	\$0.00			\$0.00			\$0.00		
<u>ID</u>	<u>Resource Name</u>	<u>Units</u>	<u>Cost</u>	<u>Baseline Cost</u>	<u>Act. Cost</u>	<u>Rem. Cost</u>	<u>Work</u>	<u>Ovt. Work</u>	<u>Baseline Work</u>	<u>Act. Work</u>	<u>Rem. Work</u>
14	PHYSU	1	\$0.00	\$0.00	\$0.00	\$0.00	240 h	0 h	0 h	0 h	240 h
<u>Notes</u>											
WBS Definition- system test. send test data through all modules, verify output, interface with other systems, test downloading and monitoring											
Labor BOE- done by physicists											
247	1.3.2.18	Commissioning	\$0.00			\$0.00			\$0.00		
<u>ID</u>	<u>Resource Name</u>	<u>Units</u>	<u>Cost</u>	<u>Baseline Cost</u>	<u>Act. Cost</u>	<u>Rem. Cost</u>	<u>Work</u>	<u>Ovt. Work</u>	<u>Baseline Work</u>	<u>Act. Work</u>	<u>Rem. Work</u>
14	PHYSU	1	\$0.00	\$0.00	\$0.00	\$0.00	240 h	0 h	0 h	0 h	240 h
<u>Notes</u>											
WBS Definition- verify operation of STT with collider data											
Labor BOE- done by physicists											
248	1.3.2.19	STT Operational	\$0.00			\$0.00			\$0.00		
<u>Notes</u>											
WBS Definition- milestone											