

WBS	Name	Cost	U.S. R&D	M&S	M&S - Cont.	Labor	Labor - Cont.	G&A	G&A - Cont.	Japan	Italy	Feb '02
1.31	Start of Run 2b DAQ and Trigger Project	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3	Run 2b DAQ and Trigger Project	\$4,048,791.00	\$568,552.00	\$3,951,743.00	\$1,413,204.45	\$97,048.00	\$86,688.00	\$349,769.62	\$146,396.53	\$0.00	\$70,000.00	
1.3.1	Run 2b TDC Project	\$1,183,030.00	\$374,425.00	\$1,085,982.00	\$509,227.40	\$97,048.00	\$86,688.00	\$161,827.89	\$69,370.81	\$0.00	\$0.00	
1.3.1.1	Start Run 2b TDC Subproject	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.1.2	Specification & Development	\$50,840.00	\$45,800.00	\$44,240.00	\$39,200.00	\$6,600.00	\$6,600.00	\$1,966.00	\$2,260.00	\$0.00	\$0.00	
1.3.1.2.1	Formal Specification	\$1,120.00	\$0.00	\$1,120.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.1.2.1.1	Block Diagram	\$1,120.00	\$0.00	\$1,120.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.1.2.1.2	Physics Justification	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.1.2.2	Interface Specification	\$17,800.00	\$17,800.00	\$11,200.00	\$11,200.00	\$6,600.00	\$6,600.00	\$1,910.00	\$1,910.00	\$0.00	\$0.00	
1.3.1.2.2.1	Trigger	\$6,600.00	\$6,600.00	\$0.00	\$0.00	\$6,600.00	\$6,600.00	\$1,887.60	\$1,887.60	\$0.00	\$0.00	
1.3.1.2.2.2	ASDQ	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.1.2.2.3	Crate - Hardware	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.1.2.2.4	Data Transmission (FNAL)	\$11,200.00	\$11,200.00	\$11,200.00	\$11,200.00	\$0.00	\$0.00	\$22.40	\$22.40	\$0.00	\$0.00	
1.3.1.2.2.5	Data Transmission (Chicago)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.1.2.3	Front End Timing (FNAL)	\$17,920.00	\$17,920.00	\$17,920.00	\$17,920.00	\$0.00	\$0.00	\$35.84	\$35.84	\$0.00	\$0.00	
1.3.1.2.3.1	Simulation	\$6,720.00	\$6,720.00	\$6,720.00	\$6,720.00	\$0.00	\$0.00	\$13.44	\$13.44	\$0.00	\$0.00	
1.3.1.2.3.2	Test Board	\$11,200.00	\$11,200.00	\$11,200.00	\$11,200.00	\$0.00	\$0.00	\$22.40	\$22.40	\$0.00	\$0.00	
1.3.1.2.4	Front End Timing (Chicago)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.1.2.4.1	Simulation	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.1.2.4.2	Test Board	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.1.2.5	Buffer Management (FNAL)	\$4,200.00	\$4,200.00	\$4,200.00	\$4,200.00	\$0.00	\$0.00	\$8.40	\$8.40	\$0.00	\$0.00	
1.3.1.2.5.1	Simulation	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.1.2.5.2	Trial Implementation	\$4,200.00	\$4,200.00	\$4,200.00	\$4,200.00	\$0.00	\$0.00	\$8.40	\$8.40	\$0.00	\$0.00	
1.3.1.2.6	Buffer Management (Chicago)	\$2,240.00	\$0.00	\$2,240.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.1.2.6.1	Simulation	\$2,240.00	\$0.00	\$2,240.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.1.2.6.2	Trial Implementation	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.1.2.7	VME Interface (FNAL)	\$4,200.00	\$4,200.00	\$4,200.00	\$4,200.00	\$0.00	\$0.00	\$8.40	\$8.40	\$0.00	\$0.00	
1.3.1.2.7.1	Trial Implementation	\$4,200.00	\$4,200.00	\$4,200.00	\$4,200.00	\$0.00	\$0.00	\$8.40	\$8.40	\$0.00	\$0.00	
1.3.1.2.8	VME Interface (Chicago)	\$1,680.00	\$0.00	\$1,680.00	\$1,680.00	\$0.00	\$0.00	\$0.00	\$297.36	\$0.00	\$0.00	
1.3.1.2.8.1	Simulation	\$1,680.00	\$0.00	\$1,680.00	\$1,680.00	\$0.00	\$0.00	\$0.00	\$297.36	\$0.00	\$0.00	
1.3.1.2.8.2	Trial Implementation	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.1.2.9	Design Review	\$1,680.00	\$1,680.00	\$1,680.00	\$0.00	\$0.00	\$0.00	\$3.36	\$0.00	\$0.00	\$0.00	
1.3.1.3	Detailed Design (FNAL)	\$126,060.00	\$126,060.00	\$98,560.00	\$98,560.00	\$27,500.00	\$27,500.00	\$8,062.12	\$8,062.12	\$0.00	\$0.00	
1.3.1.3.1	Front End	\$11,200.00	\$11,200.00	\$11,200.00	\$11,200.00	\$0.00	\$0.00	\$22.40	\$22.40	\$0.00	\$0.00	
1.3.1.3.2	Trigger Interface	\$11,200.00	\$11,200.00	\$11,200.00	\$11,200.00	\$0.00	\$0.00	\$22.40	\$22.40	\$0.00	\$0.00	
1.3.1.3.3	Compression	\$8,400.00	\$8,400.00	\$8,400.00	\$8,400.00	\$0.00	\$0.00	\$16.80	\$16.80	\$0.00	\$0.00	
1.3.1.3.4	Buffers	\$8,400.00	\$8,400.00	\$8,400.00	\$8,400.00	\$0.00	\$0.00	\$16.80	\$16.80	\$0.00	\$0.00	
1.3.1.3.5	VME	\$5,600.00	\$5,600.00	\$5,600.00	\$5,600.00	\$0.00	\$0.00	\$11.20	\$11.20	\$0.00	\$0.00	
1.3.1.3.6	Test Paths	\$5,600.00	\$5,600.00	\$5,600.00	\$5,600.00	\$0.00	\$0.00	\$11.20	\$11.20	\$0.00	\$0.00	
1.3.1.3.7	Board Layout	\$16,800.00	\$16,800.00	\$16,800.00	\$16,800.00	\$0.00	\$0.00	\$33.60	\$33.60	\$0.00	\$0.00	
1.3.1.3.8	Board Simulation	\$16,800.00	\$16,800.00	\$16,800.00	\$16,800.00	\$0.00	\$0.00	\$33.60	\$33.60	\$0.00	\$0.00	
1.3.1.3.9	Documentation	\$14,000.00	\$14,000.00	\$14,000.00	\$14,000.00	\$0.00	\$0.00	\$28.00	\$28.00	\$0.00	\$0.00	
1.3.1.3.10	Firmware development	\$27,500.00	\$27,500.00	\$0.00	\$0.00	\$27,500.00	\$27,500.00	\$7,865.00	\$7,865.00	\$0.00	\$0.00	
1.3.1.3.11	Design Review	\$560.00	\$560.00	\$560.00	\$560.00	\$0.00	\$0.00	\$1.12	\$1.12	\$0.00	\$0.00	
1.3.1.4	Detailed Design (Chicago)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.1.4.1	Front End	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.1.4.2	Trigger Interface	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.1.4.3	Compression	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.1.4.4	Buffers	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.1.4.5	VME	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.1.4.6	Test Paths	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	

WBS	Name	Cost	U.S. R&D	M&S	M&S - Cont.	Labor	Labor - Cont.	G&A	G&A - Cont.	Japan	Italy	Feb '02
1.3.1.4.7	Board Layout	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.4.8	Board Simulation	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.4.9	Documentation	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.4.10	Design Review	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.4.11	TDC Prototype fabrication contingency task	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.5	TDC Design Review	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.6	Prototype - V1.0 (FNAL)	\$143,265.00	\$143,265.00	\$143,265.00	\$107,323.50	\$0.00	\$0.00	\$6,411.53	\$3,277.15	\$0.00	\$0.00	\$0.00
1.3.1.6.1	ASDQ test stand	\$35,000.00	\$35,000.00	\$35,000.00	\$17,500.00	\$0.00	\$0.00	\$6,195.00	\$3,097.50	\$0.00	\$0.00	\$0.00
1.3.1.6.2	Develop Test Protocols	\$33,600.00	\$33,600.00	\$33,600.00	\$33,600.00	\$0.00	\$0.00	\$67.20	\$67.20	\$0.00	\$0.00	\$0.00
1.3.1.6.3	Board Fabrication	\$5,055.00	\$5,055.00	\$5,055.00	\$1,516.50	\$0.00	\$0.00	\$10.11	\$3.03	\$0.00	\$0.00	\$0.00
1.3.1.6.4	Parts Procurement	\$19,540.00	\$19,540.00	\$19,540.00	\$5,862.00	\$0.00	\$0.00	\$39.08	\$11.72	\$0.00	\$0.00	\$0.00
1.3.1.6.5	First Board Assembly	\$350.00	\$350.00	\$350.00	\$105.00	\$0.00	\$0.00	\$0.70	\$0.21	\$0.00	\$0.00	\$0.00
1.3.1.6.7	First Prototype TDC available for testing	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.6.8	Bench Tests	\$23,648.00	\$23,648.00	\$23,648.00	\$23,648.00	\$0.00	\$0.00	\$47.30	\$47.30	\$0.00	\$0.00	\$0.00
1.3.1.6.9	Multiple Board Assy	\$1,400.00	\$1,400.00	\$1,400.00	\$420.00	\$0.00	\$0.00	\$2.80	\$0.84	\$0.00	\$0.00	\$0.00
1.3.1.6.10	Bench Tests	\$5,912.00	\$5,912.00	\$5,912.00	\$5,912.00	\$0.00	\$0.00	\$11.82	\$11.82	\$0.00	\$0.00	\$0.00
1.3.1.6.11	B0 Tests	\$8,400.00	\$8,400.00	\$8,400.00	\$8,400.00	\$0.00	\$0.00	\$16.80	\$16.80	\$0.00	\$0.00	\$0.00
1.3.1.6.12	Documentation	\$9,800.00	\$9,800.00	\$9,800.00	\$9,800.00	\$0.00	\$0.00	\$19.60	\$19.60	\$0.00	\$0.00	\$0.00
1.3.1.6.13	Design Review	\$560.00	\$560.00	\$560.00	\$560.00	\$0.00	\$0.00	\$1.12	\$1.12	\$0.00	\$0.00	\$0.00
1.3.1.7	Prototype - V1.0 (Chicago)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.7.1	Develop Test Protocols	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.7.2	Bench Tests	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.7.3	Bench Tests(multi boards)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.7.4	B0 Tests	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.7.5	Documentation	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.7.6	Design Review	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.8	Design Review Milestone	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.9	Preproduction (FNAL)	\$151,441.00	\$0.00	\$151,441.00	\$63,501.10	\$0.00	\$0.00	\$17,994.86	\$6,834.59	\$0.00	\$0.00	\$0.00
1.3.1.9.13	TDC Preproduction Contingency task	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.9.1	TDC crate power supplies	\$2,000.00	\$0.00	\$2,000.00	\$600.00	\$0.00	\$0.00	\$354.00	\$106.20	\$0.00	\$0.00	\$0.00
1.3.1.9.2	Production test equipment	\$40,000.00	\$0.00	\$40,000.00	\$20,000.00	\$0.00	\$0.00	\$7,080.00	\$3,540.00	\$0.00	\$0.00	\$0.00
1.3.1.9.3	Layout Modification	\$8,400.00	\$0.00	\$8,400.00	\$4,200.00	\$0.00	\$0.00	\$16.80	\$8.40	\$0.00	\$0.00	\$0.00
1.3.1.9.4	Board Fabrication	\$5,297.00	\$0.00	\$5,297.00	\$1,589.10	\$0.00	\$0.00	\$937.57	\$281.27	\$0.00	\$0.00	\$0.00
1.3.1.9.5	Parts Procurement	\$50,800.00	\$0.00	\$50,800.00	\$15,240.00	\$0.00	\$0.00	\$8,991.60	\$2,697.48	\$0.00	\$0.00	\$0.00
1.3.1.9.6	First Board Assembly	\$150.00	\$0.00	\$150.00	\$45.00	\$0.00	\$0.00	\$26.55	\$7.97	\$0.00	\$0.00	\$0.00
1.3.1.9.7	Bench Tests	\$23,648.00	\$0.00	\$23,648.00	\$11,824.00	\$0.00	\$0.00	\$47.30	\$23.65	\$0.00	\$0.00	\$0.00
1.3.1.9.8	Multiple Board Assy	\$2,850.00	\$0.00	\$2,850.00	\$855.00	\$0.00	\$0.00	\$504.45	\$151.33	\$0.00	\$0.00	\$0.00
1.3.1.9.9	Bench Tests	\$2,800.00	\$0.00	\$2,800.00	\$1,400.00	\$0.00	\$0.00	\$5.60	\$2.80	\$0.00	\$0.00	\$0.00
1.3.1.9.10	B0 Tests	\$5,136.00	\$0.00	\$5,136.00	\$2,568.00	\$0.00	\$0.00	\$10.27	\$5.14	\$0.00	\$0.00	\$0.00
1.3.1.9.11	Documentation	\$9,800.00	\$0.00	\$9,800.00	\$4,900.00	\$0.00	\$0.00	\$19.60	\$9.80	\$0.00	\$0.00	\$0.00
1.3.1.9.12	Design Review	\$560.00	\$0.00	\$560.00	\$280.00	\$0.00	\$0.00	\$1.12	\$0.56	\$0.00	\$0.00	\$0.00
1.3.1.10	Preproduction (U of Chicago)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.10.1	Layout Modification	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.10.2	Bench Tests (first board)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.10.3	Bench Tests(multiple boards)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.10.4	B0 Tests	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.10.5	Documentation	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.12	Beginning of TDC Production	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.13	Production	\$480,898.00	\$0.00	\$471,850.00	\$141,555.00	\$9,048.00	\$7,488.00	\$80,715.18	\$25,579.80	\$0.00	\$0.00	\$0.00
1.3.1.13.1	TDC crate power supplies	\$28,000.00	\$0.00	\$28,000.00	\$8,400.00	\$0.00	\$0.00	\$4,956.00	\$1,486.80	\$0.00	\$0.00	\$0.00
1.3.1.13.2	Bid Documentation (FNAL)	\$8,400.00	\$0.00	\$8,400.00	\$4,200.00	\$0.00	\$0.00	\$16.80	\$8.40	\$0.00	\$0.00	\$0.00

WBS	Name	Cost	U.S. R&D	M&S	M&S - Cont.	Labor	Labor - Cont.	G&A	G&A - Cont.	Japan	Italy	Feb '02
1.3.1.13.3	Bid Documentation (Chicago)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.13.4	Board Fabrication	\$50,400.00	\$0.00	\$50,400.00	\$15,120.00	\$0.00	\$0.00	\$8,920.80	\$2,676.24	\$0.00	\$0.00	\$0.00
1.3.1.13.5	Parts Procurement	\$295,150.00	\$0.00	\$295,150.00	\$88,545.00	\$0.00	\$0.00	\$52,241.55	\$15,672.47	\$0.00	\$0.00	\$0.00
1.3.1.13.6	Board Assembly	\$45,500.00	\$0.00	\$45,500.00	\$13,650.00	\$0.00	\$0.00	\$8,053.50	\$2,416.05	\$0.00	\$0.00	\$0.00
1.3.1.13.7	Board Test (FNAL)	\$53,448.00	\$0.00	\$44,400.00	\$11,640.00	\$9,048.00	\$7,488.00	\$6,526.53	\$3,319.85	\$0.00	\$0.00	\$0.00
1.3.1.13.7.1	Production Test Stands(hardware)	\$22,000.00	\$0.00	\$22,000.00	\$6,600.00	\$0.00	\$0.00	\$3,894.00	\$1,168.20	\$0.00	\$0.00	\$0.00
1.3.1.13.7.1	Production Test Stands	\$16,800.00	\$0.00	\$16,800.00	\$5,040.00	\$0.00	\$0.00	\$33.60	\$10.08	\$0.00	\$0.00	\$0.00
1.3.1.13.7.2	Test Software Revision	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.13.7.3	Test Data Base	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.13.7.4	First Pass Tests	\$5,920.00	\$0.00	\$2,800.00	\$0.00	\$3,120.00	\$3,120.00	\$897.92	\$892.32	\$0.00	\$0.00	\$0.00
1.3.1.13.7.5	Rework	\$5,920.00	\$0.00	\$2,800.00	\$0.00	\$3,120.00	\$1,560.00	\$897.92	\$446.16	\$0.00	\$0.00	\$0.00
1.3.1.13.7.6	Second Pass	\$2,808.00	\$0.00	\$0.00	\$0.00	\$2,808.00	\$2,808.00	\$803.09	\$803.09	\$0.00	\$0.00	\$0.00
1.3.1.13.8	Board Test (Chicago)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.13.8.1	Production Test Stands	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.13.8.2	First Pass Tests	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.13.8.3	Rework	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.13.10	Production Board testing complete	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.14	Data Concentrator	\$230,526.00	\$59,300.00	\$176,626.00	\$59,087.80	\$53,900.00	\$45,100.00	\$46,678.20	\$23,357.14	\$0.00	\$0.00	\$0.00
1.3.1.14.1	Data Concentrator (R&D)	\$49,400.00	\$49,400.00	\$23,000.00	\$13,000.00	\$26,400.00	\$26,400.00	\$11,621.40	\$9,851.40	\$0.00	\$0.00	\$0.00
1.3.1.14.1.1	Readout Evaluation System	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$0.00	\$0.00	\$531.00	\$531.00	\$0.00	\$0.00	\$0.00
1.3.1.14.1.2	Design	\$17,600.00	\$17,600.00	\$0.00	\$0.00	\$17,600.00	\$17,600.00	\$5,033.60	\$5,033.60	\$0.00	\$0.00	\$0.00
1.3.1.14.1.3	Layout	\$8,800.00	\$8,800.00	\$0.00	\$0.00	\$8,800.00	\$8,800.00	\$2,516.80	\$2,516.80	\$0.00	\$0.00	\$0.00
1.3.1.14.1.4	Prototype fabrication	\$20,000.00	\$20,000.00	\$20,000.00	\$10,000.00	\$0.00	\$0.00	\$3,540.00	\$1,770.00	\$0.00	\$0.00	\$0.00
1.3.1.14.5	Test	\$9,900.00	\$9,900.00	\$0.00	\$0.00	\$9,900.00	\$9,900.00	\$2,831.40	\$2,831.40	\$0.00	\$0.00	\$0.00
1.3.1.14.2	Data Concentrator (Production)	\$171,226.00	\$0.00	\$153,626.00	\$46,087.80	\$17,600.00	\$8,800.00	\$32,225.40	\$10,674.34	\$0.00	\$0.00	\$0.00
1.3.1.14.2.10	Data Concentrator schedule contingency task	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.14.2.1	Layout modification	\$8,800.00	\$0.00	\$0.00	\$0.00	\$8,800.00	\$4,400.00	\$2,516.80	\$1,258.40	\$0.00	\$0.00	\$0.00
1.3.1.14.2.2	Data Concentrator Preproduction Review	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.14.2.3	Preproduction fabrication	\$20,000.00	\$0.00	\$20,000.00	\$6,000.00	\$0.00	\$0.00	\$3,540.00	\$1,062.00	\$0.00	\$0.00	\$0.00
1.3.1.14.2.4	Preproduction checkout	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.14.2.5	Layout modification	\$8,800.00	\$0.00	\$0.00	\$0.00	\$8,800.00	\$4,400.00	\$2,516.80	\$1,258.40	\$0.00	\$0.00	\$0.00
1.3.1.14.2.6	Data Concentrator Production Review	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.14.2.7	Production fabrication	\$125,000.00	\$0.00	\$125,000.00	\$37,500.00	\$0.00	\$0.00	\$22,125.00	\$6,637.50	\$0.00	\$0.00	\$0.00
1.3.1.14.2.8	Production checkout	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.14.2.9	Purchase optical fibers	\$8,626.00	\$0.00	\$8,626.00	\$2,587.80	\$0.00	\$0.00	\$1,526.80	\$458.04	\$0.00	\$0.00	\$0.00
1.3.1.14.16	Data Concentrator Production Completed	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.1.16	Run 2b TDC Ready for Installation	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.2	Run 2b Level 2 Project	\$307,819.00	\$0.00	\$307,819.00	\$50,792.85	\$0.00	\$0.00	\$38,313.96	\$5,756.33	\$0.00	\$0.00	\$0.00
1.3.2.1	Start of Run 2b Level 2 Project	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.2.2	Testing and Software work existing L2 Pulsar test stand	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.2.3	Commission L2 Pulsar for each data path - proof of principle tests	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.2.4	Preproduction run of Pulsar L2 system	\$145,515.00	\$0.00	\$145,515.00	\$26,447.25	\$0.00	\$0.00	\$9,586.16	\$1,447.16	\$0.00	\$0.00	\$0.00
1.3.2.4.13	Preproduction Pulsar L2 system schedule contingency task	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.2.4.1	Preproduction Readiness Review Pulsar L2 system	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.2.4.2	Engineering on preproduction L2 system (FNAL)	\$22,400.00	\$0.00	\$22,400.00	\$4,480.00	\$0.00	\$0.00	\$44.80	\$8.96	\$0.00	\$0.00	\$0.00
1.3.2.4.3	Engineering on preproduction L2 system (Chicago)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.2.4.4	Motherboards Fabrication	\$18,600.00	\$0.00	\$18,600.00	\$2,790.00	\$0.00	\$0.00	\$3,292.20	\$493.83	\$0.00	\$0.00	\$0.00
1.3.2.4.5	Mezzanine boards Fabrication	\$13,000.00	\$0.00	\$13,000.00	\$1,950.00	\$0.00	\$0.00	\$2,301.00	\$345.15	\$0.00	\$0.00	\$0.00
1.3.2.4.6	S-link Auxiliary boards	\$900.00	\$0.00	\$900.00	\$135.00	\$0.00	\$0.00	\$159.30	\$23.89	\$0.00	\$0.00	\$0.00
1.3.2.4.7	LSC/DL + fiber boards	\$6,828.00	\$0.00	\$6,828.00	\$1,024.20	\$0.00	\$0.00	\$1,208.56	\$181.28	\$0.00	\$0.00	\$0.00
1.3.2.4.8	PCI-> S-link boards	\$2,574.00	\$0.00	\$2,574.00	\$386.10	\$0.00	\$0.00	\$455.60	\$68.34	\$0.00	\$0.00	\$0.00

WBS	Name	Cost	U.S. R&D	M&S	M&S - Cont.	Labor	Labor - Cont.	G&A	G&A - Cont.	Japan	Italy	Feb '02
1.3.2.4.9	S-link -> PCI boards	\$3,213.00	\$0.00	\$3,213.00	\$481.95	\$0.00	\$0.00	\$568.70	\$85.31	\$0.00	\$0.00	
1.3.2.4.10	L2 decision processor	\$8,000.00	\$0.00	\$8,000.00	\$1,200.00	\$0.00	\$0.00	\$1,416.00	\$212.40	\$0.00	\$0.00	
1.3.2.4.11	software development/memory management (FNAL)	\$70,000.00	\$0.00	\$70,000.00	\$14,000.00	\$0.00	\$0.00	\$140.00	\$28.00	\$0.00	\$0.00	
1.3.2.4.12	software development/memory management (Chicago)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.2.5	Vertical Slice Test	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.2.6	Production run of Pulsar L2 system	\$162,304.00	\$0.00	\$162,304.00	\$24,345.60	\$0.00	\$0.00	\$28,727.81	\$4,309.17	\$0.00	\$0.00	
1.3.2.6.1	Production Readiness Review for Level 2 Pulsar system	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.2.6.3	Begin production of Level2 Pulsar system	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.2.6.11	L2 Pulsar system - schedule contingency task	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.2.6.4	Motherboards Fabrication	\$80,600.00	\$0.00	\$80,600.00	\$12,090.00	\$0.00	\$0.00	\$14,266.20	\$2,139.93	\$0.00	\$0.00	
1.3.2.6.5	Mezzanine boards Fabrication	\$32,500.00	\$0.00	\$32,500.00	\$4,875.00	\$0.00	\$0.00	\$5,752.50	\$862.88	\$0.00	\$0.00	
1.3.2.6.6	S-link Auxiliary boards	\$3,900.00	\$0.00	\$3,900.00	\$585.00	\$0.00	\$0.00	\$690.30	\$103.54	\$0.00	\$0.00	
1.3.2.6.7	LSC/LDL + fiber boards	\$29,588.00	\$0.00	\$29,588.00	\$4,438.20	\$0.00	\$0.00	\$5,237.08	\$785.56	\$0.00	\$0.00	
1.3.2.6.8	PCI-> S-link boards	\$3,432.00	\$0.00	\$3,432.00	\$514.80	\$0.00	\$0.00	\$607.46	\$91.12	\$0.00	\$0.00	
1.3.2.6.9	S-link -> PCI boards	\$4,284.00	\$0.00	\$4,284.00	\$642.60	\$0.00	\$0.00	\$758.27	\$113.74	\$0.00	\$0.00	
1.3.2.6.10	L2 decision processor	\$8,000.00	\$0.00	\$8,000.00	\$1,200.00	\$0.00	\$0.00	\$1,416.00	\$212.40	\$0.00	\$0.00	
1.3.2.7	System Integration standalone w/ test stand	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.2.9	Pulsar Level 2 subproject ready for installation	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3	Run 2b XFRTL Project	\$1,529,842.00	\$194,127.00	\$1,529,842.00	\$544,754.20	\$0.00	\$0.00	\$8,324.07	\$25,161.28	\$0.00	\$0.00	
1.3.3.1	Start of XFRTL Project	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.2	Finder Boards	\$638,480.00	\$106,410.00	\$638,480.00	\$211,452.00	\$0.00	\$0.00	\$1,210.30	\$3,339.28	\$0.00	\$0.00	
1.3.3.2.8	Prototype Finder boards schedule contingency task	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.2.1	Finder Board FPGA chip Firmware development	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.2.2	Prototype Finder boards (OSU)	\$26,730.00	\$0.00	\$26,730.00	\$13,365.00	\$0.00	\$0.00	\$0.00	\$2,365.61	\$0.00	\$0.00	
1.3.3.2.2.1	Study existing boards	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.2.2.2	Prototype Finder 1/3 Board Schematic Design	\$2,640.00	\$0.00	\$2,640.00	\$1,320.00	\$0.00	\$0.00	\$0.00	\$233.64	\$0.00	\$0.00	
1.3.3.2.2.3	Prototype Finder 1/3 board layout	\$11,550.00	\$0.00	\$11,550.00	\$5,775.00	\$0.00	\$0.00	\$0.00	\$1,022.18	\$0.00	\$0.00	
1.3.3.2.2.4	Test Stand Setup	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.2.2.5	Finder 1/3 board Prototype Testing	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.2.2.6	Prototype Finder 2/4 Board Schematic Design	\$1,320.00	\$0.00	\$1,320.00	\$660.00	\$0.00	\$0.00	\$0.00	\$116.82	\$0.00	\$0.00	
1.3.3.2.2.7	Prototype Finder SL7 Board Schematic Design	\$1,320.00	\$0.00	\$1,320.00	\$660.00	\$0.00	\$0.00	\$0.00	\$116.82	\$0.00	\$0.00	
1.3.3.2.2.8	Prototype Finder 2/4 board layout	\$4,950.00	\$0.00	\$4,950.00	\$2,475.00	\$0.00	\$0.00	\$0.00	\$438.08	\$0.00	\$0.00	
1.3.3.2.2.9	Prototype Finder SL7 board layout	\$4,950.00	\$0.00	\$4,950.00	\$2,475.00	\$0.00	\$0.00	\$0.00	\$438.08	\$0.00	\$0.00	
1.3.3.2.2.10	Finder 2/4 board Prototype Testing	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.2.2.11	Finder SL 7 board Prototype Testing	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.2.3	Prototype Finder boards (FNAL)	\$106,410.00	\$106,410.00	\$106,410.00	\$45,705.00	\$0.00	\$0.00	\$212.82	\$91.41	\$0.00	\$0.00	
1.3.3.2.3.1	Prototype Finder 1/3 Board Schematic Design	\$8,880.00	\$8,880.00	\$8,880.00	\$4,440.00	\$0.00	\$0.00	\$17.76	\$8.88	\$0.00	\$0.00	
1.3.3.2.3.2	Prototype Finder 1/3 board layout	\$10,850.00	\$10,850.00	\$10,850.00	\$5,425.00	\$0.00	\$0.00	\$21.70	\$10.85	\$0.00	\$0.00	
1.3.3.2.3.4	Fabrication of Prototype Finder 1/3 board	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.2.3.5	Fabricate Prototype Finder 1/3 board	\$12,500.00	\$12,500.00	\$12,500.00	\$3,750.00	\$0.00	\$0.00	\$25.00	\$7.50	\$0.00	\$0.00	
1.3.3.2.3.6	Test Stand Setup	\$25,400.00	\$25,400.00	\$25,400.00	\$12,700.00	\$0.00	\$0.00	\$50.80	\$25.40	\$0.00	\$0.00	
1.3.3.2.3.7	Finder 1/3 board Prototype Testing	\$2,400.00	\$2,400.00	\$2,400.00	\$1,200.00	\$0.00	\$0.00	\$4.80	\$2.40	\$0.00	\$0.00	
1.3.3.2.3.8	Prototype Finder 2/4 Board Schematic Design	\$4,440.00	\$4,440.00	\$4,440.00	\$2,220.00	\$0.00	\$0.00	\$8.88	\$4.44	\$0.00	\$0.00	
1.3.3.2.3.9	Prototype Finder SL7 Board Schematic Design	\$4,440.00	\$4,440.00	\$4,440.00	\$2,220.00	\$0.00	\$0.00	\$8.88	\$4.44	\$0.00	\$0.00	
1.3.3.2.3.10	Prototype Finder 2/4 board layout	\$4,650.00	\$4,650.00	\$4,650.00	\$2,325.00	\$0.00	\$0.00	\$9.30	\$4.65	\$0.00	\$0.00	
1.3.3.2.3.11	Prototype Finder SL7 board layout	\$4,650.00	\$4,650.00	\$4,650.00	\$2,325.00	\$0.00	\$0.00	\$9.30	\$4.65	\$0.00	\$0.00	
1.3.3.2.3.12	Fabrication of Prototype Finder 2/4 board	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.2.3.13	Fabricate Prototype Finder 2/4 board	\$12,500.00	\$12,500.00	\$12,500.00	\$3,750.00	\$0.00	\$0.00	\$25.00	\$7.50	\$0.00	\$0.00	
1.3.3.2.3.14	Fabrication of Prototype Finder SL7 board	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.2.3.15	Fabricate Prototype Finder SL7 board	\$12,500.00	\$12,500.00	\$12,500.00	\$3,750.00	\$0.00	\$0.00	\$25.00	\$7.50	\$0.00	\$0.00	
1.3.3.2.3.16	Finder 2/4 board Prototype Testing	\$1,600.00	\$1,600.00	\$1,600.00	\$800.00	\$0.00	\$0.00	\$3.20	\$1.60	\$0.00	\$0.00	

WBS	Name	Cost	U.S. R&D	M&S	M&S - Cont.	Labor	Labor - Cont.	G&A	G&A - Cont.	Japan	Italy	Feb '02
1.3.3.2.3.17	Finder SL 7 board Prototype Testing	\$1,600.00	\$1,600.00	\$1,600.00	\$800.00	\$0.00	\$0.00	\$3.20	\$1.60	\$0.00	\$0.00	
1.3.3.2.4	Preproduction Finder Boards (OSU)	\$6,600.00	\$0.00	\$6,600.00	\$3,300.00	\$0.00	\$0.00	\$0.00	\$584.10	\$0.00	\$0.00	
1.3.3.2.4.1	Finder Board FPGA chp Firmware refinement	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.2.4.8	Preproduction Finder 1/3 Board schedule contingency task	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.2.4.2	Modification of Finder 1/3 board Schematic and Layout	\$4,950.00	\$0.00	\$4,950.00	\$2,475.00	\$0.00	\$0.00	\$0.00	\$438.08	\$0.00	\$0.00	
1.3.3.2.4.3	Testing Finder 1/3 preproduction boards	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.2.4.8	Preproduction Finder 2/4 Board schedule contingency task	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.2.4.4	Modification of Finder 2/4 Board Schematic and Layout	\$1,650.00	\$0.00	\$1,650.00	\$825.00	\$0.00	\$0.00	\$0.00	\$146.03	\$0.00	\$0.00	
1.3.3.2.4.5	Testing Finder 2/4 preproduction boards	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.2.4.8	Preproduction Finder SL7 Board schedule contingency task	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.2.4.6	Modification of Finder SL7 board Schematic and Layout	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.2.4.7	Testing Finder SL7 preproduction boards	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.2.5	Preproduction Finder Boards(FNAL)	\$47,100.00	\$0.00	\$47,100.00	\$16,050.00	\$0.00	\$0.00	\$94.20	\$32.10	\$0.00	\$0.00	
1.3.3.2.5.1	Modification of Finder 1/3 board Schematic and Layout	\$4,650.00	\$0.00	\$4,650.00	\$2,325.00	\$0.00	\$0.00	\$9.30	\$4.65	\$0.00	\$0.00	
1.3.3.2.5.2	Preproduction Finder1/3 board Fabrication	\$12,500.00	\$0.00	\$12,500.00	\$3,750.00	\$0.00	\$0.00	\$25.00	\$7.50	\$0.00	\$0.00	
1.3.3.2.5.3	Testing Finder 1/3 preproduction boards	\$800.00	\$0.00	\$800.00	\$400.00	\$0.00	\$0.00	\$1.60	\$0.80	\$0.00	\$0.00	
1.3.3.2.5.4	Modification of Finder 2/4 Board Schematic and Layout	\$1,550.00	\$0.00	\$1,550.00	\$775.00	\$0.00	\$0.00	\$3.10	\$1.55	\$0.00	\$0.00	
1.3.3.2.5.5	Preproduction Finder 2/4 board Fabrication	\$12,500.00	\$0.00	\$12,500.00	\$3,750.00	\$0.00	\$0.00	\$25.00	\$7.50	\$0.00	\$0.00	
1.3.3.2.5.6	Testing Finder 2/4 preproduction boards	\$800.00	\$0.00	\$800.00	\$400.00	\$0.00	\$0.00	\$1.60	\$0.80	\$0.00	\$0.00	
1.3.3.2.5.7	Modification of Finder SL7 board Schematic and Layout	\$1,000.00	\$0.00	\$1,000.00	\$500.00	\$0.00	\$0.00	\$2.00	\$1.00	\$0.00	\$0.00	
1.3.3.2.5.8	Preproduction Finder SL7 board Fabrication	\$12,500.00	\$0.00	\$12,500.00	\$3,750.00	\$0.00	\$0.00	\$25.00	\$7.50	\$0.00	\$0.00	
1.3.3.2.5.9	Testing Finder SL7 preproduction boards	\$800.00	\$0.00	\$800.00	\$400.00	\$0.00	\$0.00	\$1.60	\$0.80	\$0.00	\$0.00	
1.3.3.2.6	Production Finder boards	\$446,640.00	\$0.00	\$446,640.00	\$131,832.00	\$0.00	\$0.00	\$893.28	\$263.66	\$0.00	\$0.00	
1.3.3.2.6.1	Production Readiness Review - Finder 1/3 boards	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.2.6.2	Production of Finder 1/3 boards	\$156,000.00	\$0.00	\$156,000.00	\$46,800.00	\$0.00	\$0.00	\$312.00	\$93.60	\$0.00	\$0.00	
1.3.3.2.6.3	Test Production Finder 1/3 boards	\$2,400.00	\$0.00	\$2,400.00	\$0.00	\$0.00	\$0.00	\$4.80	\$0.00	\$0.00	\$0.00	
1.3.3.2.6.4	Production Readiness Review - Finder 2/4 boards	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.2.6.5	Production of Finder 2/4 boards	\$174,240.00	\$0.00	\$174,240.00	\$52,272.00	\$0.00	\$0.00	\$348.48	\$104.54	\$0.00	\$0.00	
1.3.3.2.6.6	Test Production Finder 2/4 boards	\$2,400.00	\$0.00	\$2,400.00	\$0.00	\$0.00	\$0.00	\$4.80	\$0.00	\$0.00	\$0.00	
1.3.3.2.6.7	Production Readiness Review - Finder SL 7 boards	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.2.6.9	Begin Production Finder SL7 boards	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.2.6.10	Production of Finder SL7 boards	\$109,200.00	\$0.00	\$109,200.00	\$32,760.00	\$0.00	\$0.00	\$218.40	\$65.52	\$0.00	\$0.00	
1.3.3.2.6.11	Test Production Finder SL7 boards	\$2,400.00	\$0.00	\$2,400.00	\$0.00	\$0.00	\$0.00	\$4.80	\$0.00	\$0.00	\$0.00	
1.3.3.2.7	Finder3D backplane	\$5,000.00	\$0.00	\$5,000.00	\$1,200.00	\$0.00	\$0.00	\$10.00	\$2.40	\$0.00	\$0.00	
1.3.3.2.7.1	Finder3d backplane Layout	\$1,000.00	\$0.00	\$1,000.00	\$0.00	\$0.00	\$0.00	\$2.00	\$0.00	\$0.00	\$0.00	
1.3.3.2.7.2	Finder3d Backplane Production Readiness Review	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.2.7.3	Finder3d backplane Fabrication and Stuffing	\$4,000.00	\$0.00	\$4,000.00	\$1,200.00	\$0.00	\$0.00	\$8.00	\$2.40	\$0.00	\$0.00	
1.3.3.3	Test equipment	\$25,000.00	\$0.00	\$25,000.00	\$7,500.00	\$0.00	\$0.00	\$4,425.00	\$1,327.50	\$0.00	\$0.00	
1.3.3.4	TDC Transition Module	\$31,400.00	\$0.00	\$31,400.00	\$8,700.00	\$0.00	\$0.00	\$62.80	\$17.40	\$0.00	\$0.00	
1.3.3.4.4	TDC Transition Module schedule contingency task	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.4.1	TDC Transition Module Production Readiness Review	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.4.2	TDC Transition Module board Fabrication	\$29,000.00	\$0.00	\$29,000.00	\$8,700.00	\$0.00	\$0.00	\$58.00	\$17.40	\$0.00	\$0.00	
1.3.3.4.3	TDC Transition Module board production checkout	\$2,400.00	\$0.00	\$2,400.00	\$0.00	\$0.00	\$0.00	\$4.80	\$0.00	\$0.00	\$0.00	
1.3.3.5	Finder Transition Module	\$21,600.00	\$0.00	\$21,600.00	\$6,000.00	\$0.00	\$0.00	\$43.20	\$12.00	\$0.00	\$0.00	
1.3.3.5.4	Finder Transition Module schedule contingency task	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.5.1	Production Readiness Review - Finder Transition board	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.5.2	Finder Transition board Fabrication	\$20,000.00	\$0.00	\$20,000.00	\$6,000.00	\$0.00	\$0.00	\$40.00	\$12.00	\$0.00	\$0.00	
1.3.3.5.3	Production Finder Transition Module checkout	\$1,600.00	\$0.00	\$1,600.00	\$0.00	\$0.00	\$0.00	\$3.20	\$0.00	\$0.00	\$0.00	
1.3.3.6	Finder3D Tester Board	\$13,600.00	\$0.00	\$13,600.00	\$6,000.00	\$0.00	\$0.00	\$17.30	\$445.13	\$0.00	\$0.00	
1.3.3.6.4	Finder3D tester board schedule contingency task	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.6.1	Finder3D Tester Board schematic design and layout (OSU)	\$4,950.00	\$0.00	\$4,950.00	\$2,475.00	\$0.00	\$0.00	\$0.00	\$438.08	\$0.00	\$0.00	

WBS	Name	Cost	U.S. R&D	M&S	M&S - Cont.	Labor	Labor - Cont.	G&A	G&A - Cont.	Japan	Italy	Feb '02
1.3.3.6.2	Finder3D Tester Board schematic design and layout (FNAL)	\$4,650.00	\$0.00	\$4,650.00	\$2,325.00	\$0.00	\$0.00	\$9.30	\$4.65	\$0.00	\$0.00	
1.3.3.6.3	Finder3D Tester board fabrication	\$4,000.00	\$0.00	\$4,000.00	\$1,200.00	\$0.00	\$0.00	\$8.00	\$2.40	\$0.00	\$0.00	
1.3.3.7	Cables	\$8,000.00	\$0.00	\$8,000.00	\$2,400.00	\$0.00	\$0.00	\$1,416.00	\$424.80	\$0.00	\$0.00	
1.3.3.7.4	Cables schedule contingency task	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.7.1	Finder3D to Stereo Association Module cables fab	\$4,000.00	\$0.00	\$4,000.00	\$1,200.00	\$0.00	\$0.00	\$708.00	\$212.40	\$0.00	\$0.00	
1.3.3.7.2	Linker Output Module-II to Stereo Assoc. Module cable Fab.	\$4,000.00	\$0.00	\$4,000.00	\$1,200.00	\$0.00	\$0.00	\$708.00	\$212.40	\$0.00	\$0.00	
1.3.3.8	Linker Modules	\$259,544.00	\$43,887.00	\$259,544.00	\$85,143.20	\$0.00	\$0.00	\$472.89	\$2,191.54	\$0.00	\$0.00	
1.3.3.8.1	Prototype Linker Modules	\$62,037.00	\$43,887.00	\$62,037.00	\$24,931.10	\$0.00	\$0.00	\$87.77	\$1,637.99	\$0.00	\$0.00	
1.3.3.8.1.11	Prototype Linker Modules schedule contingency task	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.8.1.1	Prototype Linker Module Schematic Design (FNAL)	\$6,200.00	\$6,200.00	\$6,200.00	\$3,100.00	\$0.00	\$0.00	\$12.40	\$6.20	\$0.00	\$0.00	
1.3.3.8.1.2	Prototype Linker Module Schematic Design (OSU)	\$6,600.00	\$0.00	\$6,600.00	\$3,300.00	\$0.00	\$0.00	\$0.00	\$584.10	\$0.00	\$0.00	
1.3.3.8.1.3	Prototype Linker Module pc board layout (FNAL)	\$10,850.00	\$10,850.00	\$10,850.00	\$5,425.00	\$0.00	\$0.00	\$21.70	\$10.85	\$0.00	\$0.00	
1.3.3.8.1.4	Prototype Linker Module pc board layout (OSU)	\$11,550.00	\$0.00	\$11,550.00	\$5,775.00	\$0.00	\$0.00	\$0.00	\$1,022.18	\$0.00	\$0.00	
1.3.3.8.1.5	FPGA Firmware Development	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.8.1.6	Prototype Linker Module pc board fabrication	\$14,037.00	\$14,037.00	\$14,037.00	\$4,211.10	\$0.00	\$0.00	\$28.07	\$8.42	\$0.00	\$0.00	
1.3.3.8.1.7	Linker Module Test Stand Setup	\$10,400.00	\$10,400.00	\$10,400.00	\$3,120.00	\$0.00	\$0.00	\$20.80	\$6.24	\$0.00	\$0.00	
1.3.3.8.1.9	Prototype Linker Module available for testing	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.8.1.10	Prototype Linker Module testing	\$2,400.00	\$2,400.00	\$2,400.00	\$0.00	\$0.00	\$0.00	\$4.80	\$0.00	\$0.00	\$0.00	
1.3.3.8.2	Preproduction Linker Modules	\$24,437.00	\$0.00	\$24,437.00	\$9,011.10	\$0.00	\$0.00	\$38.97	\$451.15	\$0.00	\$0.00	
1.3.3.8.2.6	Preproduction Linker Modules schedule contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.8.2.1	Modification of Schematic Design and Layout (FNAL)	\$4,650.00	\$0.00	\$4,650.00	\$2,325.00	\$0.00	\$0.00	\$9.30	\$4.65	\$0.00	\$0.00	
1.3.3.8.2.2	Modification of Schematic Design and Layout (OSU)	\$4,950.00	\$0.00	\$4,950.00	\$2,475.00	\$0.00	\$0.00	\$0.00	\$438.08	\$0.00	\$0.00	
1.3.3.8.2.3	Preproduction Linker Module pc board fabrication	\$14,037.00	\$0.00	\$14,037.00	\$4,211.10	\$0.00	\$0.00	\$28.07	\$8.42	\$0.00	\$0.00	
1.3.3.8.2.4	FPGA Firmware Refinement	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.8.2.5	Preproduction Linker Module pc board testing	\$800.00	\$0.00	\$800.00	\$0.00	\$0.00	\$0.00	\$1.60	\$0.00	\$0.00	\$0.00	
1.3.3.8.3	Production Linker Modules	\$173,070.00	\$0.00	\$173,070.00	\$51,201.00	\$0.00	\$0.00	\$346.14	\$102.40	\$0.00	\$0.00	
1.3.3.8.3.1	Production Readiness Review Linker Modules	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.8.3.3	Begin Production Linker Modules	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.8.3.4	Production Linker Module pc board fabrication	\$170,670.00	\$0.00	\$170,670.00	\$51,201.00	\$0.00	\$0.00	\$341.34	\$102.40	\$0.00	\$0.00	
1.3.3.8.3.5	Production Linker Module pc board testing	\$2,400.00	\$0.00	\$2,400.00	\$0.00	\$0.00	\$0.00	\$4.80	\$0.00	\$0.00	\$0.00	
1.3.3.9	Linker Output Module II	\$36,800.00	\$0.00	\$36,800.00	\$12,600.00	\$0.00	\$0.00	\$63.70	\$458.33	\$0.00	\$0.00	
1.3.3.9.8	Linker Output Module II schedule contingency task	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.9.1	Linker Output Module Schematic Design and Layout (FNAL)	\$4,650.00	\$0.00	\$4,650.00	\$2,325.00	\$0.00	\$0.00	\$9.30	\$4.65	\$0.00	\$0.00	
1.3.3.9.2	Linker Output Module Schematic Design and Layout (OSU)	\$4,950.00	\$0.00	\$4,950.00	\$2,475.00	\$0.00	\$0.00	\$0.00	\$438.08	\$0.00	\$0.00	
1.3.3.9.3	Linker Output Module Preproduction PC board Fabrication	\$2,000.00	\$0.00	\$2,000.00	\$600.00	\$0.00	\$0.00	\$4.00	\$1.20	\$0.00	\$0.00	
1.3.3.9.4	PreProduction Link Output Module Preproduction board checko	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.9.5	Production Readiness Review Linker Output Module	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.9.6	Linker Output Module board Fabrication	\$24,000.00	\$0.00	\$24,000.00	\$7,200.00	\$0.00	\$0.00	\$48.00	\$14.40	\$0.00	\$0.00	
1.3.3.9.7	Production Link Output Module board checkout	\$1,200.00	\$0.00	\$1,200.00	\$0.00	\$0.00	\$0.00	\$2.40	\$0.00	\$0.00	\$0.00	
1.3.3.10	Stereo Association Modules	\$296,326.00	\$33,870.00	\$296,326.00	\$121,413.00	\$0.00	\$0.00	\$392.89	\$8,982.50	\$0.00	\$0.00	
1.3.3.10.1	Prototype Stereo Association Module (FNAL)	\$33,870.00	\$33,870.00	\$33,870.00	\$14,935.00	\$0.00	\$0.00	\$67.74	\$29.87	\$0.00	\$0.00	
1.3.3.10.1.1	Prototype Stereo Association Module Schematic Design	\$6,510.00	\$6,510.00	\$6,510.00	\$3,255.00	\$0.00	\$0.00	\$13.02	\$6.51	\$0.00	\$0.00	
1.3.3.10.1.2	Prototype Stereo Association Module pc board layout	\$7,440.00	\$7,440.00	\$7,440.00	\$3,720.00	\$0.00	\$0.00	\$14.88	\$7.44	\$0.00	\$0.00	
1.3.3.10.1.3	Prototype Stereo Association Module Component procurem	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.10.1.4	Prototype Stereo Association Module pc board fabrication	\$10,000.00	\$10,000.00	\$10,000.00	\$3,000.00	\$0.00	\$0.00	\$20.00	\$6.00	\$0.00	\$0.00	
1.3.3.10.1.5	Prototype Stereo Association Module testing	\$9,920.00	\$9,920.00	\$9,920.00	\$4,960.00	\$0.00	\$0.00	\$19.84	\$9.92	\$0.00	\$0.00	
1.3.3.10.2	Prototype Stereo Association Module (ILL)	\$71,610.00	\$0.00	\$71,610.00	\$35,805.00	\$0.00	\$0.00	\$0.00	\$6,337.49	\$0.00	\$0.00	
1.3.3.10.2.1	Prototype Stereo Association Module Schematic Design	\$19,530.00	\$0.00	\$19,530.00	\$9,765.00	\$0.00	\$0.00	\$0.00	\$1,728.41	\$0.00	\$0.00	
1.3.3.10.2.2	Prototype Stereo Association Module pc board layout	\$22,320.00	\$0.00	\$22,320.00	\$11,160.00	\$0.00	\$0.00	\$0.00	\$1,975.32	\$0.00	\$0.00	
1.3.3.10.2.3	Prototype Stereo Association Module testing	\$29,760.00	\$0.00	\$29,760.00	\$14,880.00	\$0.00	\$0.00	\$0.00	\$2,633.76	\$0.00	\$0.00	
1.3.3.10.3	Preproduction Stereo Association Module	\$16,726.00	\$0.00	\$16,726.00	\$5,613.00	\$0.00	\$0.00	\$28.99	\$206.53	\$0.00	\$0.00	

WBS	Name	Cost	U.S. R&D	M&S	M&S - Cont.	Labor	Labor - Cont.	G&A	G&A - Cont.	Japan	Italy	Feb '02
1.3.3.10.3.9	Preproduction Stereo Association Module schedule cor	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.3.10.3.1	Preproduction Readiness Review Stereo Association Modul	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.3.10.3.3	Begin Preproduction Stereo Association Modules	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.3.10.3.4	Modification of Schematic Design and Layout (FNAL)	\$744.00	\$0.00	\$744.00	\$372.00	\$0.00	\$0.00	\$1.49	\$0.74	\$0.00	\$0.00	\$0.00
1.3.3.10.3.5	Modification of Schematic Design and Layout (ILL)	\$2,232.00	\$0.00	\$2,232.00	\$1,116.00	\$0.00	\$0.00	\$0.00	\$197.53	\$0.00	\$0.00	\$0.00
1.3.3.10.3.6	Preproduction Stereo Association Module component procu	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.3.10.3.7	Preproduction Stereo Association Module pc board fabricati	\$13,750.00	\$0.00	\$13,750.00	\$4,125.00	\$0.00	\$0.00	\$27.50	\$8.25	\$0.00	\$0.00	\$0.00
1.3.3.10.3.8	Preproduction Stereo Association Module pc board testing	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.3.10.4	Production Stereo Association Module (FNAL)	\$133,080.00	\$0.00	\$133,080.00	\$44,540.00	\$0.00	\$0.00	\$266.16	\$89.08	\$0.00	\$0.00	\$0.00
1.3.3.10.4.1	Modification of Schematic Design and Layout	\$1,240.00	\$0.00	\$1,240.00	\$620.00	\$0.00	\$0.00	\$2.48	\$1.24	\$0.00	\$0.00	\$0.00
1.3.3.10.4.2	Production Readiness Review Stereo Association Module	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.3.10.4.3	Production Stereo Association Module pc board fabrication	\$110,000.00	\$0.00	\$110,000.00	\$33,000.00	\$0.00	\$0.00	\$220.00	\$66.00	\$0.00	\$0.00	\$0.00
1.3.3.10.4.4	Production Stereo Association Module pc board testing	\$21,840.00	\$0.00	\$21,840.00	\$10,920.00	\$0.00	\$0.00	\$43.68	\$21.84	\$0.00	\$0.00	\$0.00
1.3.3.10.4.6	Production Stereo Association Modules complete	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.3.10.5	Production Stereo Association Module (ILL)	\$26,040.00	\$0.00	\$26,040.00	\$13,020.00	\$0.00	\$0.00	\$0.00	\$2,304.54	\$0.00	\$0.00	\$0.00
1.3.3.10.5.1	Modification of Schematic Design and Layout	\$3,720.00	\$0.00	\$3,720.00	\$1,860.00	\$0.00	\$0.00	\$0.00	\$329.22	\$0.00	\$0.00	\$0.00
1.3.3.10.5.2	Production Stereo Association Module pc board testing	\$22,320.00	\$0.00	\$22,320.00	\$11,160.00	\$0.00	\$0.00	\$0.00	\$1,975.32	\$0.00	\$0.00	\$0.00
1.3.3.10.6	Purchase VME crate	\$15,000.00	\$0.00	\$15,000.00	\$7,500.00	\$0.00	\$0.00	\$30.00	\$15.00	\$0.00	\$0.00	\$0.00
1.3.3.11	Stereo Association Module Custom Backplane (FNAL)	\$11,540.00	\$0.00	\$11,540.00	\$3,770.00	\$0.00	\$0.00	\$23.08	\$7.54	\$0.00	\$0.00	\$0.00
1.3.3.11.6	Stereo Assoc. Module Custom Backplane schedule conting	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.3.11.1	Stereo Assoc. Module Custom Backplane Schematic design	\$744.00	\$0.00	\$744.00	\$372.00	\$0.00	\$0.00	\$1.49	\$0.74	\$0.00	\$0.00	\$0.00
1.3.3.11.2	Stereo Association Module Backplane layout	\$372.00	\$0.00	\$372.00	\$186.00	\$0.00	\$0.00	\$0.74	\$0.37	\$0.00	\$0.00	\$0.00
1.3.3.11.3	Stereo Association Module Backplane fabrication	\$10,000.00	\$0.00	\$10,000.00	\$3,000.00	\$0.00	\$0.00	\$20.00	\$6.00	\$0.00	\$0.00	\$0.00
1.3.3.11.4	Stereo Association Module Backplane assembly	\$300.00	\$0.00	\$300.00	\$150.00	\$0.00	\$0.00	\$0.60	\$0.30	\$0.00	\$0.00	\$0.00
1.3.3.11.5	Stereo Association Module Backplane testing	\$124.00	\$0.00	\$124.00	\$62.00	\$0.00	\$0.00	\$0.25	\$0.12	\$0.00	\$0.00	\$0.00
1.3.3.12	Stereo Association Module Custom Backplane (ILL)	\$3,720.00	\$0.00	\$3,720.00	\$1,860.00	\$0.00	\$0.00	\$0.00	\$329.22	\$0.00	\$0.00	\$0.00
1.3.3.12.1	Stereo Assoc. Module Custom Backplane Schematic design	\$2,232.00	\$0.00	\$2,232.00	\$1,116.00	\$0.00	\$0.00	\$0.00	\$197.53	\$0.00	\$0.00	\$0.00
1.3.3.12.2	Stereo Association Module Backplane layout	\$1,116.00	\$0.00	\$1,116.00	\$558.00	\$0.00	\$0.00	\$0.00	\$98.77	\$0.00	\$0.00	\$0.00
1.3.3.12.3	Stereo Association Module Backplane testing	\$372.00	\$0.00	\$372.00	\$186.00	\$0.00	\$0.00	\$0.00	\$32.92	\$0.00	\$0.00	\$0.00
1.3.3.13	Stereo Association Module Tester Board (FNAL)	\$28,888.00	\$0.00	\$28,888.00	\$11,444.00	\$0.00	\$0.00	\$57.78	\$22.89	\$0.00	\$0.00	\$0.00
1.3.3.13.1	Stereo Association Module Tester Board schematic design	\$2,976.00	\$0.00	\$2,976.00	\$1,488.00	\$0.00	\$0.00	\$5.95	\$2.98	\$0.00	\$0.00	\$0.00
1.3.3.13.2	Stereo Association Module Tester Board layout	\$3,472.00	\$0.00	\$3,472.00	\$1,736.00	\$0.00	\$0.00	\$6.94	\$3.47	\$0.00	\$0.00	\$0.00
1.3.3.13.3	Stereo Association Module Tester Board Fabrication	\$15,000.00	\$0.00	\$15,000.00	\$4,500.00	\$0.00	\$0.00	\$30.00	\$9.00	\$0.00	\$0.00	\$0.00
1.3.3.13.4	Stereo Association Module TestStand Setup and software	\$1,240.00	\$0.00	\$1,240.00	\$620.00	\$0.00	\$0.00	\$2.48	\$1.24	\$0.00	\$0.00	\$0.00
1.3.3.13.5	Stereo Association Module Tester Board testing	\$6,200.00	\$0.00	\$6,200.00	\$3,100.00	\$0.00	\$0.00	\$12.40	\$6.20	\$0.00	\$0.00	\$0.00
1.3.3.14	Stereo Association Module Tester Board (ILL)	\$41,664.00	\$0.00	\$41,664.00	\$20,832.00	\$0.00	\$0.00	\$0.00	\$3,687.26	\$0.00	\$0.00	\$0.00
1.3.3.14.1	Stereo Association Module Tester Board schematic design	\$8,928.00	\$0.00	\$8,928.00	\$4,464.00	\$0.00	\$0.00	\$0.00	\$790.13	\$0.00	\$0.00	\$0.00
1.3.3.14.2	Stereo Association Module Tester Board layout	\$10,416.00	\$0.00	\$10,416.00	\$5,208.00	\$0.00	\$0.00	\$0.00	\$921.82	\$0.00	\$0.00	\$0.00
1.3.3.14.3	Stereo Association Module TestStand Setup and software	\$3,720.00	\$0.00	\$3,720.00	\$1,860.00	\$0.00	\$0.00	\$0.00	\$329.22	\$0.00	\$0.00	\$0.00
1.3.3.14.4	Stereo Association Module Tester Board testing	\$18,600.00	\$0.00	\$18,600.00	\$9,300.00	\$0.00	\$0.00	\$0.00	\$1,646.10	\$0.00	\$0.00	\$0.00
1.3.3.15	Stereo Association Module Transition Module (FNAL)	\$16,054.00	\$0.00	\$16,054.00	\$5,027.00	\$0.00	\$0.00	\$32.11	\$10.05	\$0.00	\$0.00	\$0.00
1.3.3.15.5	Stereo Assoc. Module Transition Module schedule continge	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.3.15.1	Stereo Association Module Transition Module Schematic design	\$744.00	\$0.00	\$744.00	\$372.00	\$0.00	\$0.00	\$1.49	\$0.74	\$0.00	\$0.00	\$0.00
1.3.3.15.2	Stereo Association Module Transition Module layout	\$310.00	\$0.00	\$310.00	\$155.00	\$0.00	\$0.00	\$0.62	\$0.31	\$0.00	\$0.00	\$0.00
1.3.3.15.3	Stereo Association Module Transition Module fabrication	\$15,000.00	\$0.00	\$15,000.00	\$4,500.00	\$0.00	\$0.00	\$30.00	\$9.00	\$0.00	\$0.00	\$0.00
1.3.3.15.4	Stereo Association Module Transition Module testing	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.3.16	Stereo Association Module Transition Module (ILL)	\$3,162.00	\$0.00	\$3,162.00	\$1,581.00	\$0.00	\$0.00	\$0.00	\$279.84	\$0.00	\$0.00	\$0.00
1.3.3.16.1	Stereo Association Module Transition Module Schematic design	\$2,232.00	\$0.00	\$2,232.00	\$1,116.00	\$0.00	\$0.00	\$0.00	\$197.53	\$0.00	\$0.00	\$0.00
1.3.3.16.2	Stereo Association Module Transition Module layout	\$930.00	\$0.00	\$930.00	\$465.00	\$0.00	\$0.00	\$0.00	\$82.31	\$0.00	\$0.00	\$0.00
1.3.3.17	Stereo Association Module Clock and Control Board (FNAL)	\$13,348.00	\$0.00	\$13,348.00	\$4,674.00	\$0.00	\$0.00	\$26.70	\$9.35	\$0.00	\$0.00	\$0.00
1.3.3.17.5	Stereo Assoc. Module Clock and Control board schedule co	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

WBS	Name	Cost	U.S. R&D	M&S	M&S - Cont.	Labor	Labor - Cont.	G&A	G&A - Cont.	Japan	Italy	Feb '02
1.3.3.17.1	Stereo Association Module Clock and Control Board Schematic	\$1,488.00	\$0.00	\$1,488.00	\$744.00	\$0.00	\$0.00	\$2.98	\$1.49	\$0.00	\$0.00	
1.3.3.17.2	Stereo Association Module Clock and Control Board Layout	\$1,860.00	\$0.00	\$1,860.00	\$930.00	\$0.00	\$0.00	\$3.72	\$1.86	\$0.00	\$0.00	
1.3.3.17.3	Stereo Association Module Clock and Control Board Fabrication	\$10,000.00	\$0.00	\$10,000.00	\$3,000.00	\$0.00	\$0.00	\$20.00	\$6.00	\$0.00	\$0.00	
1.3.3.17.4	Stereo Association Module Clock and Control Board testing	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.18	Stereo Association Module Clock and Control Board (ILL)	\$10,044.00	\$0.00	\$10,044.00	\$5,022.00	\$0.00	\$0.00	\$0.00	\$888.89	\$0.00	\$0.00	
1.3.3.18.1	Stereo Association Module Clock and Control Board Schematic	\$4,464.00	\$0.00	\$4,464.00	\$2,232.00	\$0.00	\$0.00	\$0.00	\$395.06	\$0.00	\$0.00	
1.3.3.18.2	Stereo Association Module Clock and Control Board Layout	\$5,580.00	\$0.00	\$5,580.00	\$2,790.00	\$0.00	\$0.00	\$0.00	\$493.83	\$0.00	\$0.00	
1.3.3.19	SAM Clock and Control Transition Module (FNAL)	\$13,348.00	\$0.00	\$13,348.00	\$4,674.00	\$0.00	\$0.00	\$26.70	\$9.35	\$0.00	\$0.00	
1.3.3.19.5	SAM Clock and Control Transition Module schedule contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.19.1	SAM Clock and Control TM Schematic Design	\$1,488.00	\$0.00	\$1,488.00	\$744.00	\$0.00	\$0.00	\$2.98	\$1.49	\$0.00	\$0.00	
1.3.3.19.2	SAM Clock and Control TM Layout	\$1,860.00	\$0.00	\$1,860.00	\$930.00	\$0.00	\$0.00	\$3.72	\$1.86	\$0.00	\$0.00	
1.3.3.19.3	SAM Clock and Control TM Fabrication	\$10,000.00	\$0.00	\$10,000.00	\$3,000.00	\$0.00	\$0.00	\$20.00	\$6.00	\$0.00	\$0.00	
1.3.3.19.4	SAM Clock and Control TM testing	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.20	SAM Clock and Control Transition Module (ILL)	\$10,044.00	\$0.00	\$10,044.00	\$5,022.00	\$0.00	\$0.00	\$0.00	\$888.89	\$0.00	\$0.00	
1.3.3.20.1	SAM Clock and Control TM Schematic Design	\$4,464.00	\$0.00	\$4,464.00	\$2,232.00	\$0.00	\$0.00	\$0.00	\$395.06	\$0.00	\$0.00	
1.3.3.20.2	SAM Clock and Control TM Layout	\$5,580.00	\$0.00	\$5,580.00	\$2,790.00	\$0.00	\$0.00	\$0.00	\$493.83	\$0.00	\$0.00	
1.3.3.21	Level 2 Interface Board	\$47,280.00	\$9,960.00	\$47,280.00	\$19,640.00	\$0.00	\$0.00	\$53.64	\$1,829.53	\$0.00	\$0.00	
1.3.3.21.1	Level 2 Interface Board Schematic and PCB Layout (ILL)	\$14,880.00	\$0.00	\$14,880.00	\$7,440.00	\$0.00	\$0.00	\$0.00	\$1,316.88	\$0.00	\$0.00	
1.3.3.21.2	Level 2 Interface Board Schematic and PCB Layout (FNAL)	\$4,960.00	\$4,960.00	\$4,960.00	\$2,480.00	\$0.00	\$0.00	\$9.92	\$4.96	\$0.00	\$0.00	
1.3.3.21.3	Prototype Level 2 Interface Board fabrication and testing	\$5,000.00	\$5,000.00	\$5,000.00	\$1,500.00	\$0.00	\$0.00	\$10.00	\$3.00	\$0.00	\$0.00	
1.3.3.21.4	Modification Level 2 Interface Board Schematic and PCB Layout	\$5,580.00	\$0.00	\$5,580.00	\$2,790.00	\$0.00	\$0.00	\$0.00	\$493.83	\$0.00	\$0.00	
1.3.3.21.5	Modification Level 2 Interface Board Schematic and PCB Layout	\$1,860.00	\$0.00	\$1,860.00	\$930.00	\$0.00	\$0.00	\$3.72	\$1.86	\$0.00	\$0.00	
1.3.3.21.6	Production Level 2 Interface Board Fabrication and assembly	\$15,000.00	\$0.00	\$15,000.00	\$4,500.00	\$0.00	\$0.00	\$30.00	\$9.00	\$0.00	\$0.00	
1.3.3.21.7	Level 2 Interface Board checkout	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.3.23	XFT Ready for Installation at CDF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.4	Event-Builder Upgrade	\$414,000.00	\$0.00	\$414,000.00	\$124,200.00	\$0.00	\$0.00	\$73,278.00	\$21,983.40	\$0.00	\$0.00	
1.3.4.1	Start Event-Builder Upgrade	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.4.2	technology evaluation	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.4.3	upgrade software	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.4.3.1	decide on the OS versions	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.4.3.2	test available drivers for compatibility with hardware	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.4.3.3	adjust drivers for special needs	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.4.3.4	adjust remaining software	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.4.3.5	MS: establish general functionality of software	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.4.4	construct prototype	\$103,500.00	\$0.00	\$103,500.00	\$31,050.00	\$0.00	\$0.00	\$18,319.50	\$5,495.85	\$0.00	\$0.00	
1.3.4.4.1	purchase prototype system (1/4)	\$103,500.00	\$0.00	\$103,500.00	\$31,050.00	\$0.00	\$0.00	\$18,319.50	\$5,495.85	\$0.00	\$0.00	
1.3.4.4.1.1	submit PO and implementation plan	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.4.4.1.5	EVB Construct prototype schedule contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.4.4.1.2	purchase formalities	\$103,500.00	\$0.00	\$103,500.00	\$31,050.00	\$0.00	\$0.00	\$18,319.50	\$5,495.85	\$0.00	\$0.00	
1.3.4.4.1.4	arrival of the hardware	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.4.4.2	install test stand	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.4.4.3	evaluate test stand	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.4.4.4	MS: establish functionality of hardware	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.4.5	construct full size system	\$310,500.00	\$0.00	\$310,500.00	\$93,150.00	\$0.00	\$0.00	\$54,958.50	\$16,487.55	\$0.00	\$0.00	
1.3.4.5.8	EVB construct full size system schedule contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.4.5.1	Production Readiness Review - Event Builder	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.4.5.3	Production Readiness Review - Event Builder	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.4.5.4	purchase remaining hardware	\$310,500.00	\$0.00	\$310,500.00	\$93,150.00	\$0.00	\$0.00	\$54,958.50	\$16,487.55	\$0.00	\$0.00	
1.3.4.5.4.1	submit PO and implementation plan	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.4.5.4.2	purchase formalities	\$310,500.00	\$0.00	\$310,500.00	\$93,150.00	\$0.00	\$0.00	\$54,958.50	\$16,487.55	\$0.00	\$0.00	
1.3.4.5.4.4	arrival of the hardware	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	

WBS	Name	Cost	U.S. R&D	M&S	M&S - Cont.	Labor	Labor - Cont.	G&A	G&A - Cont.	Japan	Italy	Feb '02
1.3.4.5.5	assemble new hardware in B0 third floor	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.4.5.6	evaluate the new hardware and software	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.4.5.7	MS: establish functionality of hardware	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.4.6	commissioning of hardware and software	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.4.8	Finish Event-Builder Upgrade	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5	Computer for Level3 PC Farm / DAQ	\$382,500.00	\$0.00	\$382,500.00	\$114,750.00	\$0.00	\$0.00	\$67,702.50	\$20,310.75	\$0.00	\$0.00	\$0.00
1.3.5.1	Start Computers for Level3 PC Farm/DAQ	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.2	replace 10 DAQ PCs (2003)	\$15,000.00	\$0.00	\$15,000.00	\$4,500.00	\$0.00	\$0.00	\$2,655.00	\$796.50	\$0.00	\$0.00	\$0.00
1.3.5.2.1	submit PO and implementation plan	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.2.8	Replace 10 DAQ PCs schedule contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.2.2	purchase formalities	\$15,000.00	\$0.00	\$15,000.00	\$4,500.00	\$0.00	\$0.00	\$2,655.00	\$796.50	\$0.00	\$0.00	\$0.00
1.3.5.2.3	install and test one prototype machine	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.2.5	arrival of 0/10 PCs from the vendor	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.2.6	burn in phase	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.2.7	installation into the DAQ system	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.3	replace 15 DAQ PCs (2004)	\$22,500.00	\$0.00	\$22,500.00	\$6,750.00	\$0.00	\$0.00	\$3,982.50	\$1,194.75	\$0.00	\$0.00	\$0.00
1.3.5.3.1	submit PO and implementation plan	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.3.8	Replace 15 DAQ PCs schedule contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.3.2	purchase formalities	\$22,500.00	\$0.00	\$22,500.00	\$6,750.00	\$0.00	\$0.00	\$3,982.50	\$1,194.75	\$0.00	\$0.00	\$0.00
1.3.5.3.3	install and test one prototype machine	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.3.4	arrival of 15 DAQ PCs from the vendor	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.3.5	burn in phase	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.3.6	installation into the DAQ system	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.4	replace 20 DAQ PCs (2005)	\$30,000.00	\$0.00	\$30,000.00	\$9,000.00	\$0.00	\$0.00	\$5,310.00	\$1,593.00	\$0.00	\$0.00	\$0.00
1.3.5.4.1	submit PO and implementation plan	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.4.8	Replace 20 DAQ PCs schedule contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.4.2	purchase formalities	\$30,000.00	\$0.00	\$30,000.00	\$9,000.00	\$0.00	\$0.00	\$5,310.00	\$1,593.00	\$0.00	\$0.00	\$0.00
1.3.5.4.3	install and test one prototype machine	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.4.4	arrival of 20 DAQ PCs from the vendor	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.4.5	burn in phase	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.4.6	installation into the DAQ system	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.5	replace 70 Level 3 PCs (2004)	\$105,000.00	\$0.00	\$105,000.00	\$31,500.00	\$0.00	\$0.00	\$18,585.00	\$5,575.50	\$0.00	\$0.00	\$0.00
1.3.5.5.1	submit PO and implementation plan	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.5.2	purchase formalities	\$105,000.00	\$0.00	\$105,000.00	\$31,500.00	\$0.00	\$0.00	\$18,585.00	\$5,575.50	\$0.00	\$0.00	\$0.00
1.3.5.5.3	install and test one prototype machine	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.5.5	arrival of 70 Level3 and 15 DAQ PCs from the vendor	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.5.6	burn in phase	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.5.7	installation into the DAQ system	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.6	replace 140 Level 3 PCs (2005)	\$210,000.00	\$0.00	\$210,000.00	\$63,000.00	\$0.00	\$0.00	\$37,170.00	\$11,151.00	\$0.00	\$0.00	\$0.00
1.3.5.6.1	submit PO and implementation plan	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.6.2	purchase formalities	\$210,000.00	\$0.00	\$210,000.00	\$63,000.00	\$0.00	\$0.00	\$37,170.00	\$11,151.00	\$0.00	\$0.00	\$0.00
1.3.5.6.3	install and test one prototype machine	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.6.5	arrival of 140/20 PCs from the vendor	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.6.6	burn in phase	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.6.7	installation into the DAQ system	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.5.8	Finish Purchase of Computers for Level3/DAQ system	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.6	SVT upgrade	\$231,600.00	\$0.00	\$231,600.00	\$69,480.00	\$0.00	\$0.00	\$323.20	\$96.96	\$0.00	\$70,000.00	\$0.00
1.3.6.1	Start of SVT upgrade	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.6.2	trackfitter boards	\$161,600.00	\$0.00	\$161,600.00	\$48,480.00	\$0.00	\$0.00	\$323.20	\$96.96	\$0.00	\$0.00	\$0.00
1.3.6.2.3	SVT Trackfitter boards schedule contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.3.6.2.1	Upgrade SVT trackfitters (FNAL)	\$161,600.00	\$0.00	\$161,600.00	\$48,480.00	\$0.00	\$0.00	\$323.20	\$96.96	\$0.00	\$0.00	\$0.00

WBS	Name	Cost	U.S. R&D	M&S	M&S - Cont.	Labor	Labor - Cont.	G&A	G&A - Cont.	Japan	Italy	Feb '02
1.3.6.2.2	Upgrade SVT trackfitters (Chicago)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.6.3	Merger boards	\$70,000.00	\$0.00	\$70,000.00	\$21,000.00	\$0.00	\$0.00	\$0.00	\$3,717.00	\$0.00	\$70,000.00	
1.3.6.3.1	Upgrade SVT merger boards	\$70,000.00	\$0.00	\$70,000.00	\$21,000.00	\$0.00	\$0.00	\$0.00	\$3,717.00	\$0.00	\$70,000.00	
1.3.6.5	SVT ready for installation	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.8	Finish Run 2b Trigger DAQ project	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1.3.9	Data Acquisition and Trigger Upgrades Ready for Installation	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	