

WBS	Name	Cost	M&S	Labor	M&S Cont.	Labor Cont	Level
1.2	<b>Calorimeter Upgrades</b>	\$962,708.00	\$852,728.00	\$109,356.00	0	0	0
	<u>Notes</u> WBS Definition- Summary task for the entire calorimeter project.						
1.2.1	<b>Central Preshower and Crack Detectors</b>	\$759,973.00	\$676,201.00	\$83,772.00	0	0	0
	<u>Notes</u> WBS Definition- Summary task for the central preshower/crack detector subproject.						
1.2.1.1	Start of Preshower/Crack Subproject	\$0.00	\$0.00	\$0.00	0	0	4
	<u>Notes</u> WBS Definition: Start of central preshower/crack detector subproject. (Milestone)						
1.2.1.2	<b>Research and Development(US)</b>	\$55,672.00	\$55,672.00	\$0.00	0	0	0
	<u>Notes</u> WBS Definition- Summary task for the U.S. R+D for the preshower/crack subproject.						
1.2.1.3	<b>Research and Development(Japan)</b>	\$28,940.00	\$28,940.00	\$0.00	0	0	0
	<u>Notes</u> WBS Definition- Summary task for the R+D in Japan for the preshower/crack subproject.						
1.2.1.4	<b>Research and Development(Italy)</b>	\$18,000.00	\$18,000.00	\$0.00	0	0	0
	<u>Notes</u> WBS Definition- Summary task for the R+D in Italy for the preshower/crack subproject.						
1.2.1.5	<b>Procure parts</b>	\$498,993.00	\$498,993.00	\$0.00	0	0	0
	<u>Notes</u> WBS Definition- Summary task for parts procurement common to both preshower and crack detectors.						

WBS	Name	Cost	M&S	Labor	M&S Cont.	Labor Cont	Level
1.2.1.6	<b>Preshower Detector Assembly</b>	\$111,646.00	\$36,108.00	\$75,538.00	0	0	0
	<u>Notes</u> WBS Definition- Summary task for preshower detector assembly.						
1.2.1.7	<b>Crack Detector Assembly</b>	\$17,622.00	\$9,388.00	\$8,234.00	0	0	0
	<u>Notes</u> WBS Definition- Summary task describing the assemble of the CDF Crack Detector.						
1.2.1.8	<b>Fiber Bundle Assembly</b>	\$29,100.00	\$29,100.00	\$0.00	0	0	0
	<u>Notes</u> WBS Definition- Summary task for fiber bundle assembly.						
1.2.1.9	<b>Physicist or Student Labor</b>	\$0.00	\$0.00	\$0.00	0	0	0
	<u>Notes</u> WBS Definition- Summary task for physicist and student labor testing detectors.						
1.2.1.10	<b>Level 2 Milestones</b>	\$0.00	\$0.00	\$0.00	0	0	0
	<u>Notes</u> WBS Definition- Summary task for Preshower/Crack Level 3 milestones.						
1.2.2	<b>Electromagnetic timing</b>	\$202,735.00	\$176,527.00	\$25,584.00	0	0	0
	<u>Notes</u> WBS Definition- Highest level summary for electromagnetic timing project						
1.2.2.1	<b>Research and Development</b>	\$12,936.00	\$12,000.00	\$312.00	0	0	0
	<u>Notes</u> WBS Definition- Summary of research and development for electromagnetic timing project						

WBS	Name	Cost	M&S	Labor	M&S Cont.	Labor Cont	Level
1.2.2.2	Purchase parts for components and Produce	\$189,799.00	\$164,527.00	\$25,272.00	0	0	0
	<u>Notes</u>						
	WBS Definition-						
	This is high level summary for purchasing parts for the components and doing production. We note that the components for this project are:						
	CEM Splitter harnesses, PEM cable harnesses, TB, ASD's, ASD->TDC cables and TDC's. We itemize each part here.						
	Parts = 227,128 Labor = 15,552 Parts & Labor = 242,680 Recycling = 83,840						
1.2.3	Calorimeter Milestones	\$0.00	\$0.00	\$0.00	0	0	0
	<u>Notes</u>						
	WBS Definition-						
	These are the EMTiming management milestones						
1.2.3.1	PAC Review	\$0.00	\$0.00	\$0.00	0	0	4
	<u>Notes</u>						
	WBS Definition-						
	This is the preliminary review approval process before Stage 1 approval and before critical decision 1.						
1.2.3.2	Approval to spend Construction funds	\$0.00	\$0.00	\$0.00	0	0	3
	<u>Notes</u>						
	WBS Definition-						
	This is the DOE critical decision. It is used, among other things, to finalize the final Italian funding.						
1.2.3.3	Italian R&D Funding Approval	\$0.00	\$0.00	\$0.00	0	0	4
	<u>Notes</u>						
	WBS Definition-						
	This is the preliminary approval needed for funding of the ASD prototypes to be built by the INFN groups						
1.2.3.4	Full Italian Government Approval	\$0.00	\$0.00	\$0.00	0	0	3
	<u>Notes</u>						
	WBS Definition-						
	Project has to be approved by Italian Government due the Italian government funds used on the project.						
1.2.3.5	End of Calorimetry Project: Level 2	\$0.00	\$0.00	\$0.00	0	0	2
	<u>Notes</u>						
	WBS Definition-						
	This is the end of the calorimetry project and is the Level 2 milestone. This milestone is coupled to the corresponding level 3 milestone with added schedule contingency.						

WBS	Name	Cost	M&S	Labor	M&S Cont.	Labor Cont.	Level
"End of Calorimetry Project: Level 2" continued							
	<u>Notes</u>						
1.2.3.6	End of Calorimetry Project: Level 1	\$0.00	\$0.00	\$0.00	0	0	1
	<u>Notes</u>						
	WBS Definition-						
	This is the end of the calorimetry project and is the Level 1 milestone. This milestone is coupled to the corresponding level 2 milestone with added schedule contingency.						