

WBS	Title	Scope	M&S	Labor	F&A	Contingency	Total w/o Contingency	Total with Contingency	Risk evaluation
1	Frames	Will build support table and support frames for detectors. The support table will hold the detectors. Support frames will be constructed for the scintillators, veto detector, and beam monitor. Must be delivered in time for 2015 test run.	\$18,205	\$24,550	\$11,971	\$12,587	\$54,726	\$67,313	This WBS has minimal risk from cost, schedule, or technical objectives.
2	Scintillating Fiber	Construct scintillating fiber detector. Must be delivered for 2015 test run.	\$69,442	\$70,000	\$17,505	\$29,115	\$156,947	\$186,062	Minimal risk
3	Cerenkov	Construct two sapphire Cerenkov counters. Must be delivered for 2015 test run.	\$205,494	\$4,000	\$3,094	\$27,115	\$212,588	\$239,703	Minimal risk
4	Straw Chambers	Will build 4 straw tube chambers, with approximately 3000 straws and 15% spares. One chamber to be delivered by 2015 test run.	\$426,875	\$161,436	\$40,282	\$160,105	\$628,593	\$788,698	Schedule risk due to uncertain construction time
5	Cryo-target	Build 4 cm long liquid hydrogen target. Must be delivered for full run in 2016	\$217,000	\$386,428	\$271,633	\$208,193	\$875,061	\$1,083,254	Minimal risk
6	Electronics &DAQ	Will order and test electronics and DAQ system. Half must delivered for 2015 test run. Write analysis software adequate for initial checking of system in first year, adequate for full run in second year.	\$413,519	\$165,996	\$86,317	\$86,564	\$665,832	\$752,396	Primary risk is in DAQ speed, which could lead to longer running times or poorer statistics than planned
7	Scintillator	Construct two time of flight plastic scintillator walls plus veto detector. Half of TOF, plus beam be delivered for 2015 test run	\$331,685	\$89,335	\$21,140	\$87,687	\$442,160	\$529,847	Minimal risk
8	GEM	Maintain current GEM detectors. Improve speed to specs.	\$28,434	\$2,000	\$1,680	\$5,174	\$32,114	\$37,288	Primary risk is in readout speed, which could lead to longer running times or poorer statistics than planned
9	Installation	Coordination of installation.		\$414,000	\$107,640	\$129,838	\$521,640	\$552,938	Minimal risk
			\$1,710,654	\$1,317,745	\$561,262	\$647,838	\$3,589,661	\$4,237,500	