

| 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 | \$4,378 | \$54,726 | \$59,105 | 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. | \$46,920 | \$70,000 | \$13,410 | \$15,640 | \$130,330 | \$145,970 | Minimal risk |
| 3 | Cerenkov | Construct two sapphire Cerenkov counters. Must be delivered for 2015 test run. | \$202,400 | \$4,000 | \$1,750 | \$5,621 | \$208,150 | \$213,771 | Minimal risk |
| 4 | Straw Chambers | Will build 4 straw tube chambers, with approximately 3000 straws and 10% spares. One chamber to be delivered by 2015 test run. | \$350,713 | \$201,000 | \$50,250 | \$72,236 | \$601,963 | \$674,199 | 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 | \$395,968 | \$348,383 | \$124,170 | \$912,351 | \$1,036,521 | 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. | \$416,697 | \$156,456 | \$81,357 | \$78,918 | \$654,510 | \$733,428 | 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 | \$53,579 | \$442,160 | \$495,739 | Minimal risk |
| 8 | GEM | Maintain current GEM detectors. Improve speed to specs. | \$28,434 | \$2,000 | \$1,680 | \$3,211 | \$32,114 | \$35,325 | Primary risk is in readout speed, which could lead to longer running times or poorer statistics than planned |
| 9 | Installation | Coordination of installation. | | | \$0 | | | | |
| | | | \$1,612,054 | \$943,309 | \$529,942 | \$357,752 | \$3,036,305 | \$3,394,057 | |