Summary of Basis of Estimates and Risk Assessment

WBS-1 Detector Frames and Support Table

The items in WBS 1 are straight-forward frames and holders. Designs are still in a preliminary stage. The estimates are based on past experience and discussions with machine shop. The total cost is a small, so even with a substantial uncertainty the cost-risk is small. The schedule and technical risks are minimal.

WBS-2 SciFi Detector

Scintillating fiber technology is well established. The primary costs are the fibers and phototubes. Costs are based on recent quotes. The labor estimate is based on past experience. There is low technical, cost, or schedule risk.

WBS-3 Beam Cerenkov Detectors

The major cost for the Cenenkov detector is for the phototubes. The PMT cost estimate is based on a recent quote. There is little schedule, technical, or cost risk.

WBS-4 Straw Tube Tracker

The straw tube chambers are based on standard technology, using the design and techniques developed for the PANDA detector. Cost estimates are primarily based on the PANDA experience, and recent quotes for the straws. There is relatively little cost or technical risk. Straw construction is labor intensive and there is some uncertainty on the time for construction. The primary risk is to the schedule.

WBS 5 – Cryo Target

The cryo-target is based on well established and tested technology. The costs for materials and labor are based on recent experience with similar targets. The technical, cost, and schedule risks are small.

WBS 6 – Electronics/DAQ/Analysis

The primary cost in this WBS is for electronics are off-the-shelf items. Recent quotes are available for most items. The other cost is for tuning the software to enable data acquisition at the highest rates desired. The cost and technical risks are small. There is moderate risk to the schedule based on the uncertainty achieving the highest rates.

WBS 7 – Scintillator

The scintillator detectors are based on proven technology. The primary cost is for materials and are all based on recent quotes. The cost, schedule and technical risks are small.

WBS-8 GEM

The GEM detectors already exist. The major issue is achieving the desired data acquisition rate.