

10.01.2012 Weekly

Discussions of HPS Prime (HPS') options took place. Takashi presented acceptance plots with the HPS configuration for the photon run and for various options of HPS'. Matt showed plots of the mass resolutions for different options.

Conclusions presented by Takashi at Tuesday's meeting: Target and ECAL will stay at $z=0$ and $z=137.4\text{cm}$. There are improvements to mass resolution with a stretched HPS with six planes. Doubling the coverage of Station 5 will result in a good match to the ECAL acceptance so that all tracks that reach ECAL will have a hit in Station 5. Adding a new Station 6 is being evaluated and would probably require triple silicon detectors above and below.

Takashi asked for new quadrupoles to achieve a spot size of 20 microns in the vertical and 10 microns in the horizontal. This will not happen. Stepan reported that new quadrupoles will not be needed. The beam size should be less than 100 microns in the horizontal and <25 microns in the vertical. However, with the new startup of beams work may be required to reach 25 microns.

Stepan reported that the Frascati magnets can run at higher current to reach 0.75 tesla meters required to scale everything for a 6.6 GeV run. Extra cooling may be required.