

From: Marcel Demarteau <demarteau@fnal.gov>

Subject: 21 tracking bullets from SLAC workshop

Date: March 9, 2009 11:04:32 AM PDT

To: "Graf, Norman" <ngraf@slac.stanford.edu>, "Bruce Schumm" <schumm@scipp.ucsc.edu>, "Richard Partridge" <partridge@hep.brown.edu>, "Dmitry Onoprienko" <onoprien@slac.stanford.edu>, "Andrei Nomerotski" <A.Nomerotski1@physics.ox.ac.uk>, "Su, Dong" <sudong@slac.stanford.edu>, lipton@fnal.gov, "Tim Nelson" <tknelson@slac.stanford.edu>, "Bill Cooper" <cooper@fnal.gov>, "Nikolai Sinev" <sinev@slac.stanford.edu>

Cc: "Marcel Demarteau" <demarteau@fnal.gov>

Dear all,

these are the 20 bullets I believe we agreed upon at the workshop last week. Please let me know of errors or omissions. Also note that the official deadline for the submission to the editors is March 13. The earlier you can send the material, the better. My apologies for getting this to you this late. Thanks,

-- Marcel

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- 1) #hits/cm2 as function of radius for background events (Norman)
 - 2) Check forward disk positions and consistency text and simulation (Marcel)
 - 3) Fix (=reduce size while retaining resolution) figure 2.1 (Marcel)
 - 4) Figure of overall vertex detector (fig.2.2):
Left side with support structures / right side only silicon
Locations and extend of forward disks should correspond to simulation. Figure has leads. (Bill)
 - 5) Text in main body on sensor technologies that is all inclusive (Sudong/Ron)
 - 6) Text on serial powering (Ron)
 - 7) Modify text to indicate that connections for vertex detectors is a conservative estimate (Marcel)
 - 8) Text on Lorentz forces for vertex/tracker detector (Bill)
 - 9) Address issue of Lorentz forces on sensors (Bill)
 - 10) Fig 2.10, material budget, broken down in silicon only and supports (Norman)
 - 11) # hits on infinite momentum tracks as function of angle vtx and tracker (Norman)
 - 12) Detail of barrel/disk support. Will lift from Bill's Boulder presentation (Marcel)
 - 13) In plot of momentum resolution, add curve for design resolution (Rich)
 - 14) Plot of DCA. Fix text to describe a figure in black and white (Rich)
 - 15) More text for the description of efficiency determination (Rich)
 - 16) Plot of efficiency versus cos(theta) for pt<500, pt>500 MeV (Rich)
 - 17) Include map of B-field. If possible, results on simulation with imperfect B-field, reconstruction with perfect B-field (Norman/Rich)
 - 18) Text for R&D section on different vertex detector technologies (Sudong/Ron)
 - 19) Tracking efficiency as function of angle from Thrust axis in Z-> qqbar events at 500GeV and 1 TeV (Rich/Bruce)
 - 20) Plot of b-tagging efficiency (Andrei)
 - 21) V-finder efficiency (Dima)