Referee report Paper 46

This paper contains some interesting information about the CMS Si Tracker. I recommend publication after the few items below are addressed:

• A short description of the CMS silicon tracker would be useful to put the results in context.

A new section (right after the Introduction) has been added. The section describes the main features of the CMS Silicon tracker.

• In the descriptions of the track finding and track fitting there are strong similarities, an explanation on what is changed/refined in the fitting iteration would be useful.

The fitting stage is quite similar to the track finding stage. They both use the same Kalman filter algorithm (which can be used both to fit and to find tracks). The main difference is that in the fitting stage the hits to be attached to the trajectory have already been found in the previous stage. The fit is only done to refine the track parameters. I tried to stress this point in the Track Fitting section.

• Page 5 drop “promptly”

Done.

• For completeness a few words on the “deterministic annealing algorithm” are needed.

I put a short and hopefully understandable description in the overtaxing section.

• In Fig. 3, can the author comment on the eta dependence of the efficiency?

I added a small comment in the caption.

• Page 7, end of “tracks can also…” can we have more details on the track selection for HLT processing?

I added some examples at the end of the paragraph.

• The discussing on the track resolution that is put in the conclusions perhaps is best included in the track fitting section.