

Response to Referee Report Paper 47

This paper contains useful information and I recommend publishing it once the following comments are addressed:

1. Line 7: which model predicts that 27% of the b-pairs are produced in the LHCb acceptance? **This is the value measured by LHCb – added reference**
2. Line 8: One design feature of the detector is··· (vertexing is important, but other aspects of LHCb are important to the physics) **OK- reworded**
3. Line 27 co-ordinate-> coordinate **Done**
4. Line 82 I think that the reference is Fig. 1 **True – fixed**
5. Lines 97 and 101 reference is Fig. 2 **True – fixed**
6. Fig. 8: what is the meaning of MC10? Is it tuned to represent 2011 data? Does it have the same reconstruction? **MC10 is the label for the combination of simulation+digitization code where the detector response was tuned using the data collected in 2010. These events are then reconstructed using the same offline reconstruction code used for the data.**
7. It would have been nice to see all the tracking studies done on a consistent data set. Is the information on the stability of the VELO alignment available? **I agree that it would be nice to see results from a consistent data set. Unfortunately the results from 2011 and 2012 are not yet publicly available.**
8. Is Fig. 5 based on 2010 or 2011 data? **2010 – added to caption**