

Minutes of the executive session of the 4th meeting of the MB&UE working group, Febr 7-8 2011

0. Next meeting

Date fixed to Friday June 17, 9am-5pm.

1. Common plots:

o we'll seek final approval, from the Collaborations, of the layout and presentation of the plots shown at the meeting. In the meantime, this was achieved and the slides are now on the agenda web page. MLM will start preparing a small document, including the definition of the plots and the results, to be posted on the WG web page. This will grow as more common plots become available.

Added after the meeting: The plots were approved, and are now available from the WG web page, http://lpcc.web.cern.ch/LPCC/index.php?page=mb_ue_wg

o LHCb is invited to consider how to contribute to this effort. ATLAS and CMS have comparisons of eta distributions out to 2.4-2.5, and this could bridge out to the large etas accessible to LHCb. LHCb will look into this as soon as their first MB results will be made public.

2. Strange and identified particles:

We confirm interest in exploring the origin of the discrepancies between data and MC models, including observables from both MB and UE studies.

o MB: the suggestion emerged during the discussion at the mtg to use the sample samples adopted in the current common plots, namely events with on charged track within $abs(eta) < 0.8$ and $pt > 0.5$ or 1 GeV. Strange (S) or identified particle (IP) distributions will be plotted for events in this class. MLM will circulate a proposal within the already-existing S&IP subgroup.

o UE: a proposal is to measure the average K0S and Lambda fractions particularly in the "transverse" and "towards" regions (representing outside-jet and inside-jet respectively), as function of the leading track or jet pT (depending on the analysis). The definition of K0S and Lambda would be the same as used in the other identified-particle analyses of the given experiment. In particular, it should be comparable to the measurements performed in minimum-bias with identified particles, so that the two can be compared. This would start to probe the particle composition of the underlying event.

3. Large multiplicity events:

there is a clear need to better understand the nature and properties of events in the tail of the Ncharged distribution, where discrepancies with MC models are rather large. Rick prepared a proposal, which is being reviewed by Peter and MLM, for distributions that should be looked at. We suggest that the conveners advertise the proposal across the analyses groups, to identify volunteers to address these new analysis topics.

Note added by MLM: we could take this opportunity to produce a more comprehensive document listing interesting analyses topics in the field of MB&UE, to be used to stimulate contributions.

4. AOB:

- Jan-Fiete raised the question of whether an upper limit on the pt oh high-pt tracks is applied, when determining $\langle pt \rangle$ vs Nch. From the discussion it appeared that this is not done in a common way by all the experiments, but that this is estimated to be a negligible effect.

- EMily (?) suggested to try repeat CDF analysis cuts in the study of the pt dependence of the ratio $(\lambda + \text{antilambda})/2K_s$, where a large discrepancy is seen between CDF and ALICE (see L.Barnby's talk, slide 14). CDF does not correct for feed-down from Xi's, the question is whether this could be the origin of the difference.

- Emily raised the issue of how to best inform the fitting/tuning community of the availability of experimental corrected data on HEPDATA. MLM will explore this with the conveners and physics coordinators.

- Input is required by the experiments on which MC versions (tunes) to use for their comparisons on physics publications, and which ones to leave out, as obsolete/deprecated. Peter will try to organize this info for PYTHIA. MLM will try to collect this info from other codes. We could post the conclusions as a document for the WG web page