Dear PC,

Thanks for preparing the material. It helps to illustrate how different effects may affect the measurement of bare nudyn. However, as pointed out before it would have been better to look at scaled nudyn because bare nudyn essentially shows the multiplicity dependence.

Our detailed comments to your studies can be found below. We took the liberty to follow an order consistent with the minutes (https://indico.cern.ch/event/853237/) of the last meeting.

PID performance

Slide 7. It would be useful to specify the corresponding centrality class used for this study, a centrality dependence is expected. We also expected a bigger contamination in data than in MC, this is what we normally see for spectra. However, your study shows the opposite. In addition, slide 7 assumes that the TOF shape is purely Gaussian, over many orders of magnitude, even though we see that it is not. We also know this from other TOF analysis. In summary, it seems that the background is larger than assumed. (Also one can increase the binning in the left plot so that the TOF response shape would be more visible)

Slide 8: It seems that the approximation is incorrect because f_i (used for single particle spectra) ≠ f_i (used in "simplified correction method"). In addition, it is strange that albeit we observe a contamination effect (slide 5), the PID and tagged efficiency are almost exactly the same.

MC non-closure

The study is presented in slide 5. The MC non-closure is illustrated in the ratio CaseIII/default. Given that CaseI and CaseII study the misidentification/contamination of K0s and charged kaons, respectively. Then, if misidentification would produce the MC non closure, we would expect CaseIII to be in between CaseII and CaseI, something similar to what we see for peripheral collisions (50-80% centrality). However, for central Pb-Pb collisions (0-50%), Cases II and I are always above unity, while CaseIII is below 1 (Why?). Therefore, we would conclude that albeit misidentification/contamination plays a role, it does not explain the MC-non closure for central Pb-Pb collisions. Unfortunately, no explanation about the behavior of nudyn for the different cases was provided.

Absorption correction

What about K- and absorption correction? Nothing is presented in the slides. How does the new comparison to published spectra look like?

pT ranges

According with slides 3 and 4, physics for 0.2<p<1 GeV/c and 1<p<2 GeV/c is the same. If the DCCs are the main motivation of the paper, how do we put this and the DCCs in the same picture? Does it mean that DCCs are pushed even to 2 GeV/c due to flow?

Centrality binning

We requested to use finer centrality bins but results are still shown using the old binning.

In summary, given that we do not find satisfactory conclusions from the slides, we express our disappointment about the progress in this analysis.

Best regards
The IRC