

## PWG HF minutes, June 24, 2021

### NPE-h Correlation Update -- Yingjie Zhou

[https://drupal.star.bnl.gov/STAR/system/files/20210624\\_pp\\_NPEMeeting\\_v2\\_0.pdf](https://drupal.star.bnl.gov/STAR/system/files/20210624_pp_NPEMeeting_v2_0.pdf)

- slide 7: Have you tried to add a CS template ? A: It has a very small influence on the final result.
- Slide 8: do you subtract J/psi before the fitting ? A: yes
- Slide 8: how do you take this normalization for J/psi contribution ? A: The prompt J/psi / NPE fraction from the previous slide is used.
- slide 9: which efficiency do you mean, hadron ? A: Yes.
- slide 9: is this constant always positive or negative ? A: it's positive
- The constant method is sys. lower than the normalization method. A: We think that the constant method is more reliable, it was verified with a closure test while the normalization method had issues.
- Slide 10: what about hadron efficiency sys. unc. ? A: It's not included.
  - You should include tracking efficiency, e.g. vary by 5%.
- Slide 13: improvement in stat. unc. is not so significant, in many bins run6 has smaller stat. uncertainties. Is that expected from the luminosity ? A: Luminosity should be checked. But it also depends on the fitting, there are efficiency corrections which can increase the unc. as well.
- Slide 14: Pythia template uncertainties are the same for both results, do you separate them out ? A: It was not done like this, we will do it.
- Do run6 and run12 use the same templates ? A: no, but we use a template from run6 as the sys. unc., in run6 Pythia6 was used with no sys.
- When you combine the last two data points, do you consider correlated and uncorrelated uncertainties separately ? A: Sys. unc are treated correlated, but needs to be cross-checked in the code.
- When you compare run6 and 12 there's a drop at pT ~7 GeV/c for both, do you know the possible reason. A: It's just a coincidence.