Non-Photonic Electron and Hadron Azimuthal Correlations in 200 GeV p+p Collisions at STAR

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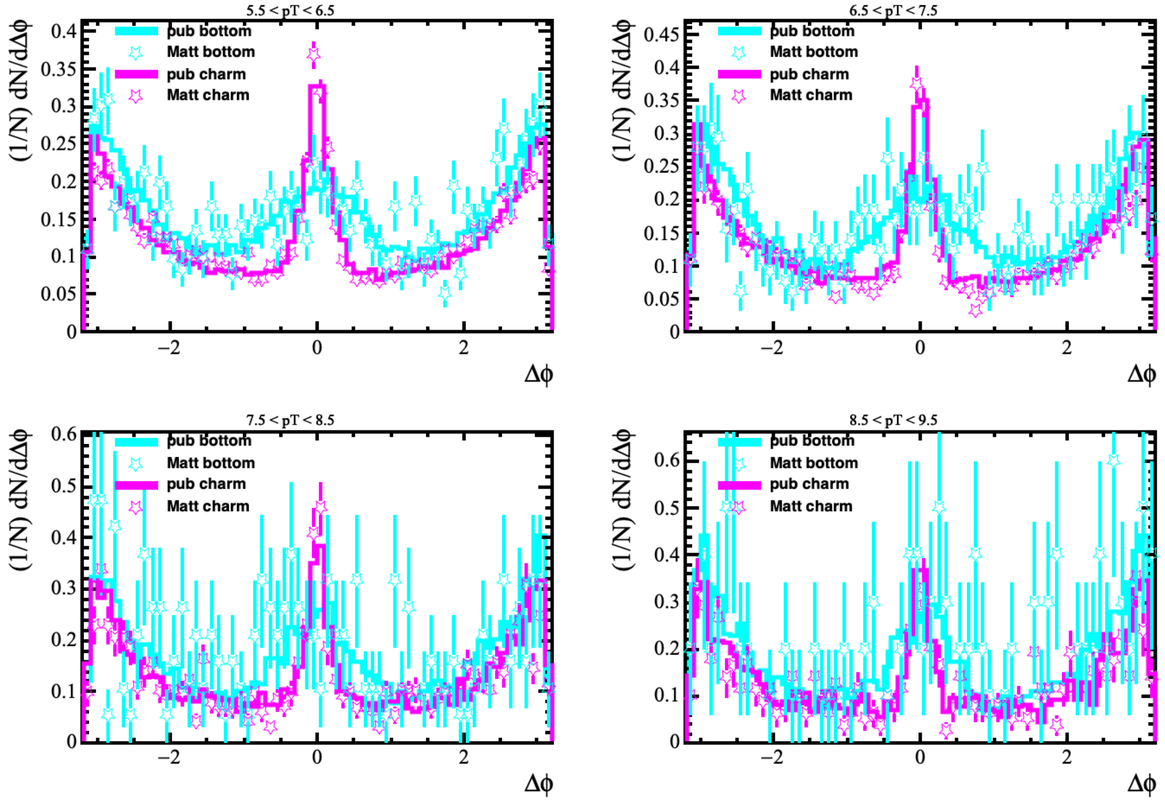
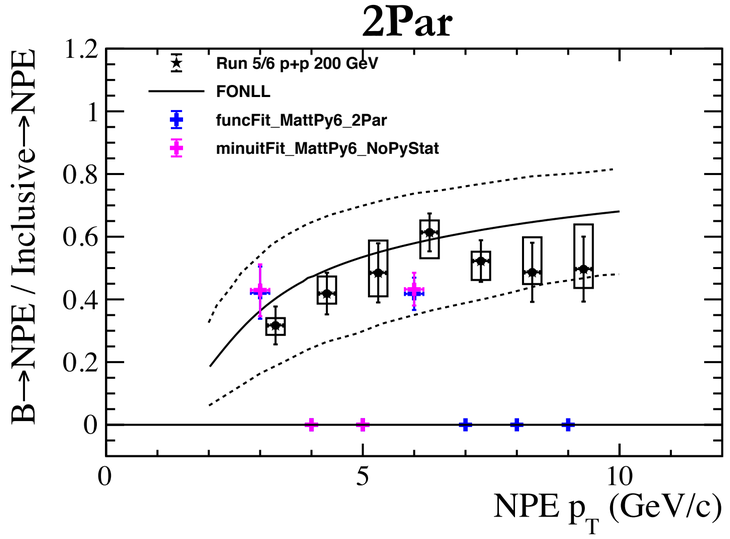
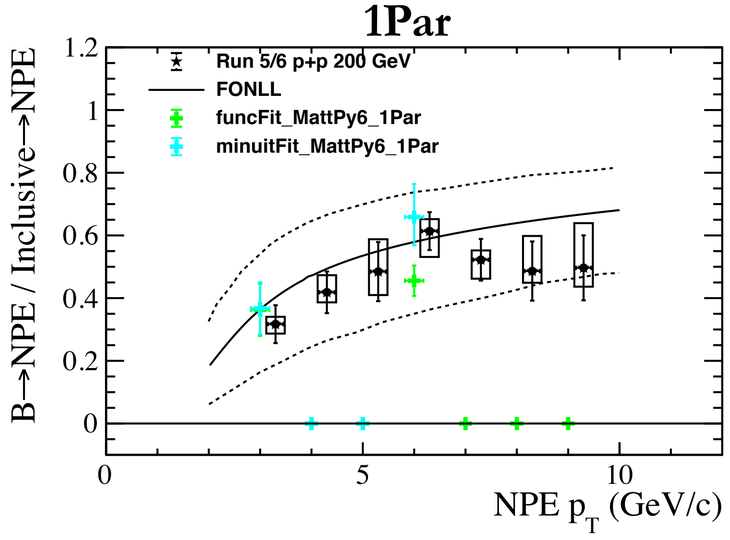
Weekly meeting

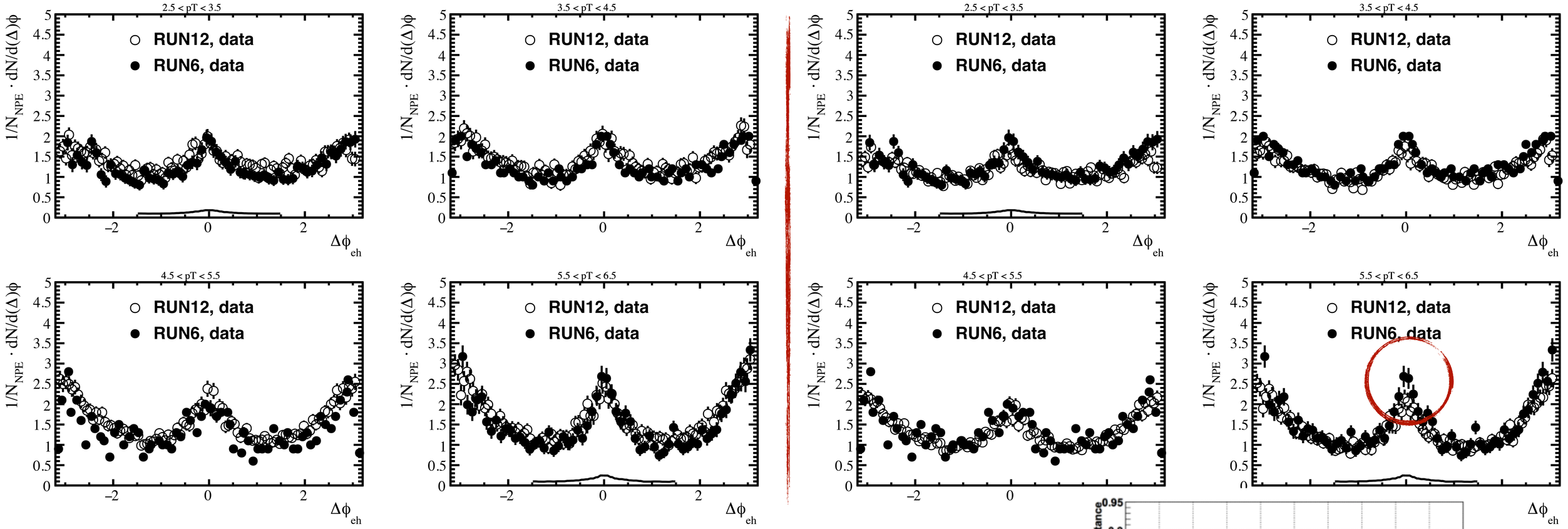
- hf py6 compare with Matt's py6,
- Matt's py6 is consistent with pub, but the higher pt bin stat. is not enough
  - function fit only considered stat. uncertainty from data, not template stat.



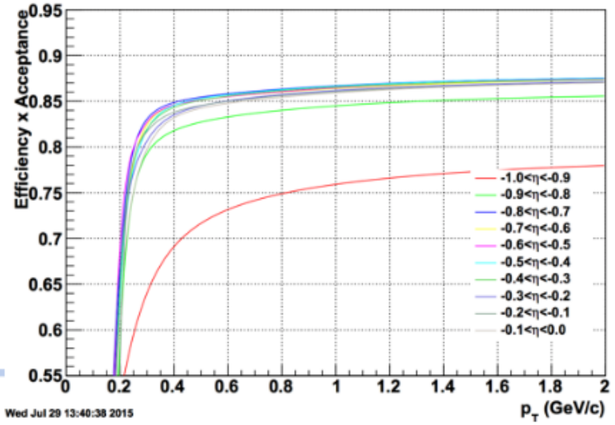




run12 * 0.85



If we scale run12 by 0.85(take the number randomly), it will be more consistent with run6 data



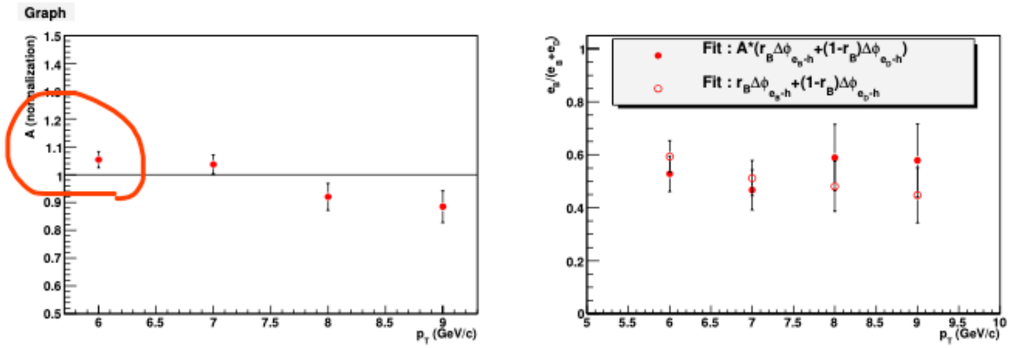
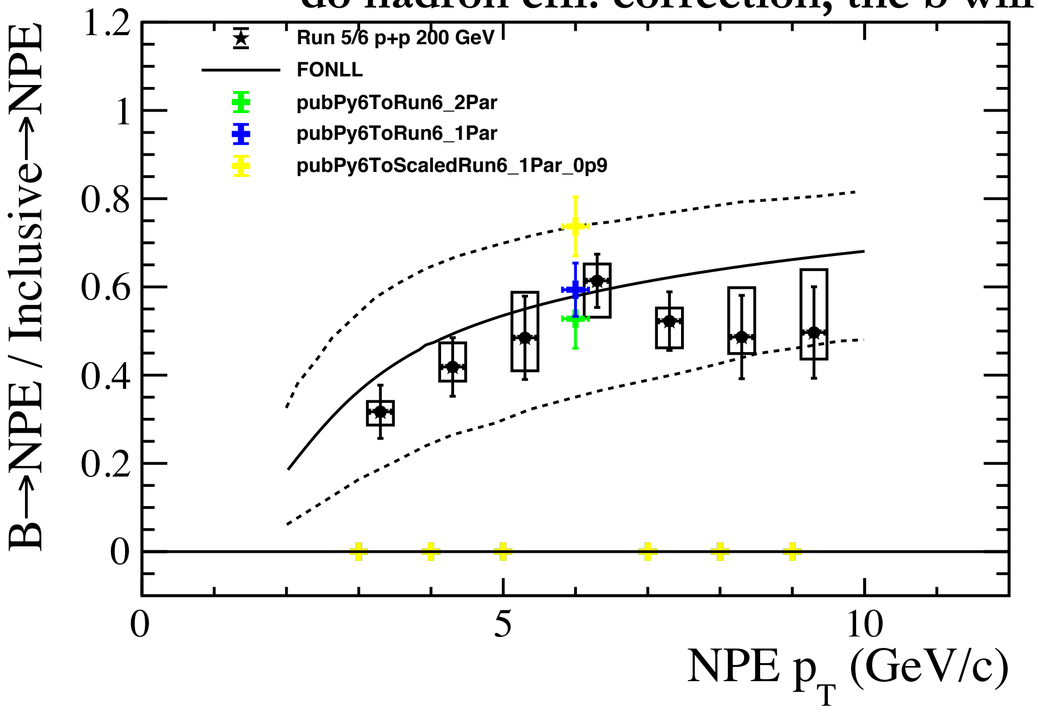


Figure 23: Uncertainty from normalization (Run6 HT2)

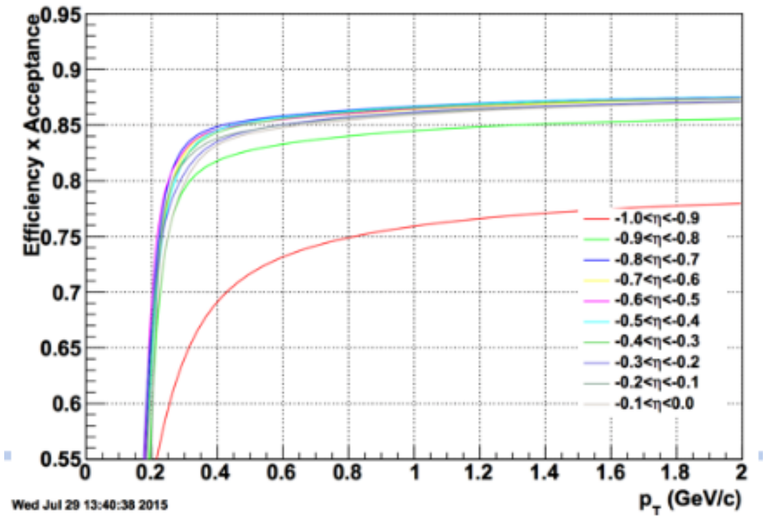
do hadron effi. correction, the b will increase

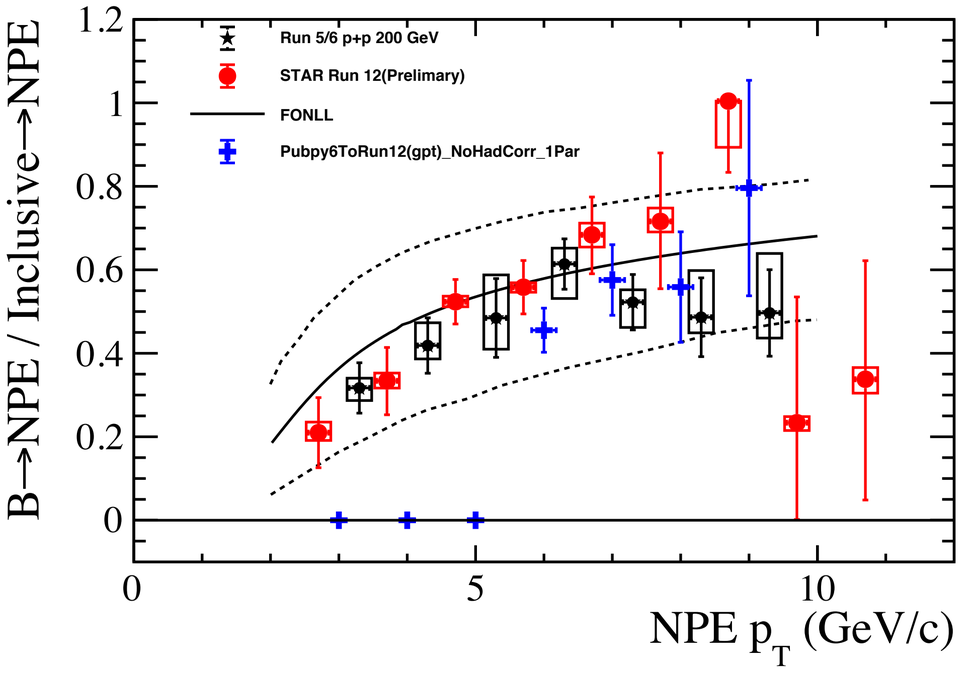


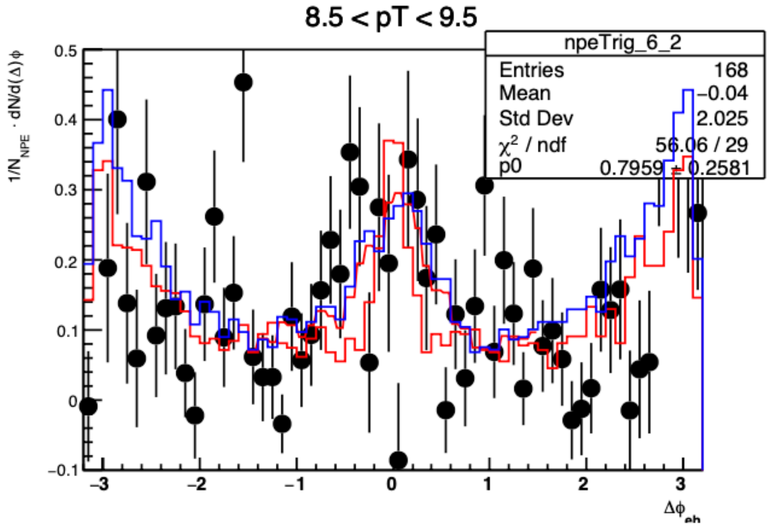
Fit function: $(r_B * \mathrm{PYTHIA_B} + (1 - r_B) * \mathrm{PYTHIA_D}) * \mathrm{Norm}$

- r_B is the B contribution, i.e. B/(B+D), as a parameter in fit function
- Norm acts as an overall normalization

yellow points: run6 data/0.9(random number), fit with function, 1par

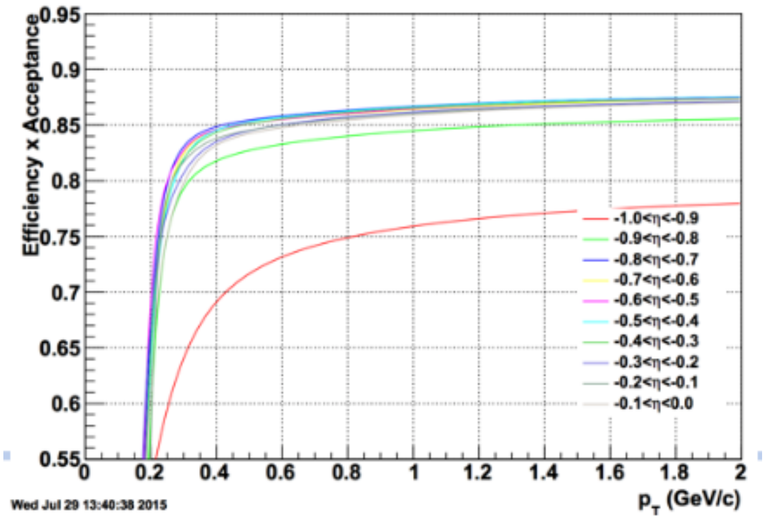


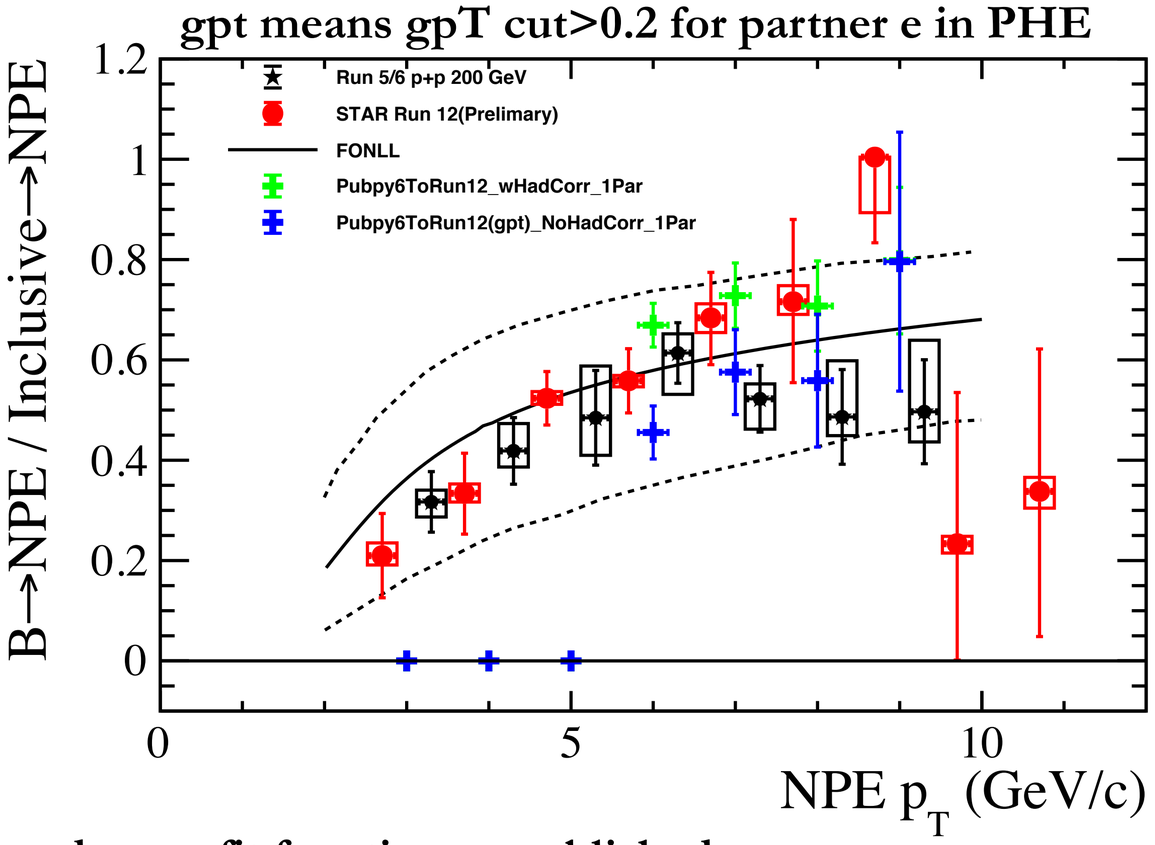




same py6 template and same fit function as published paper.
run12 data without hadron efficiency correction -> b fraction is consistent with run6 result (high pT is due to low stat.?)

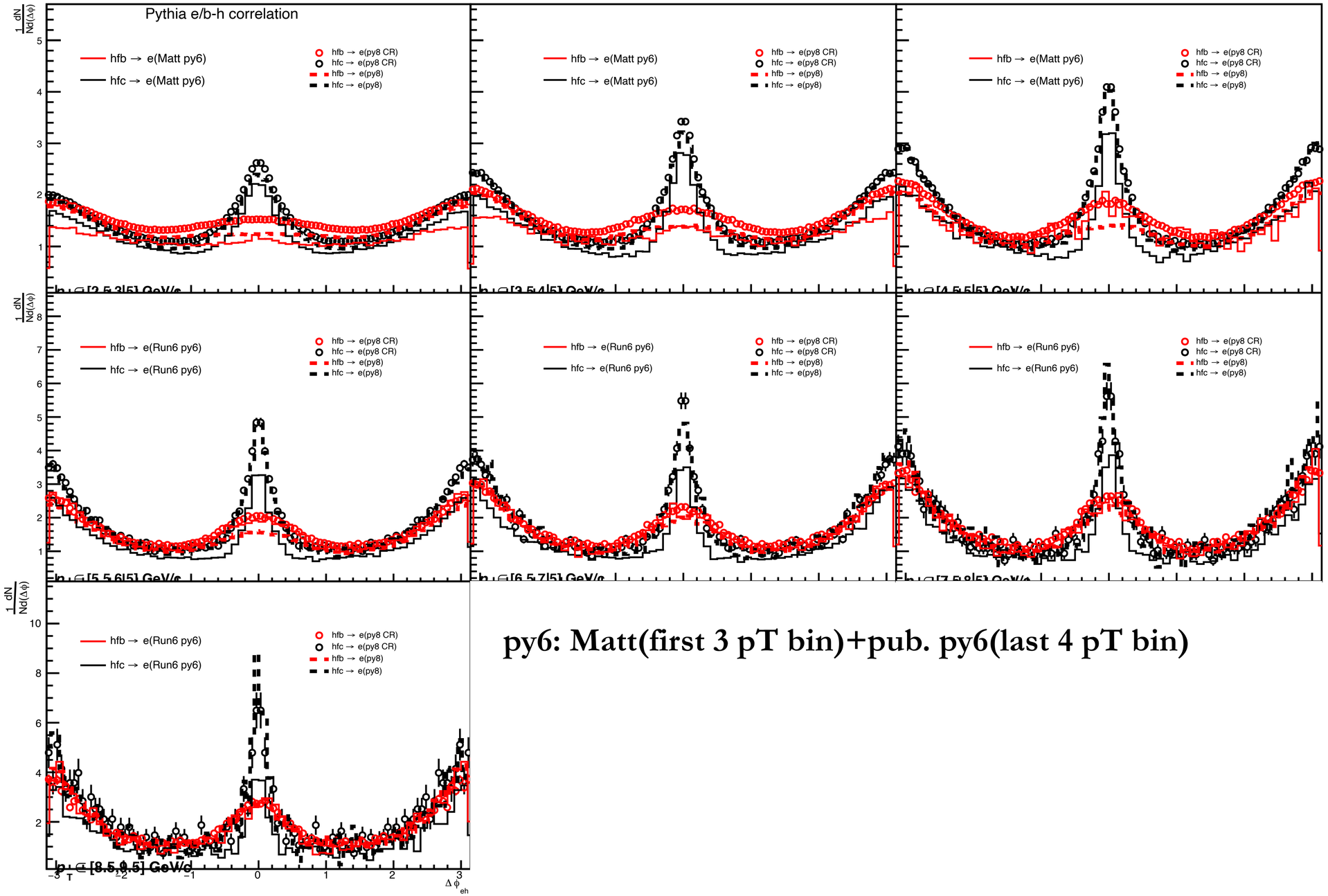
*** pythia 6 from paper only have last 4 pT bin**



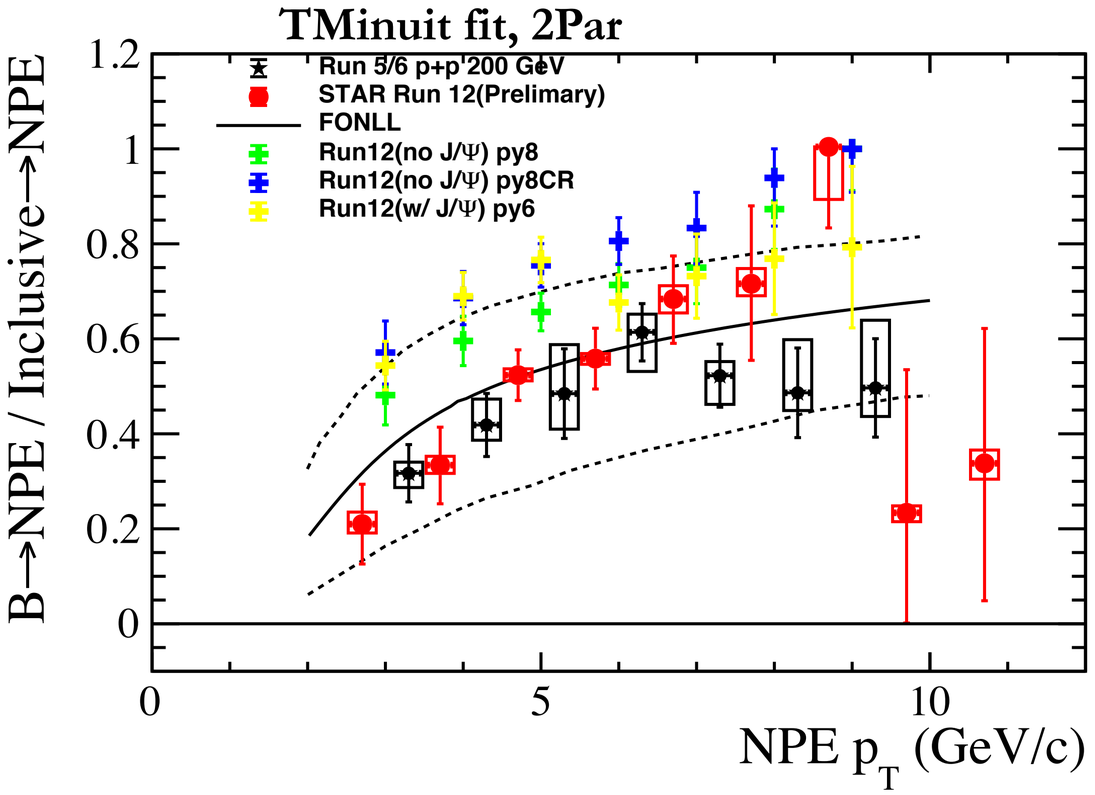


same py6 template and same fit function as published paper.
run12 with hadron efficiency correction, b fraction is larger

* pythia 6 from paper only have last 4 pT bin



py6: Matt(first 3 pT bin)+pub. py6(last 4 pT bin)



- npe = open hf + prompt J/psi; not directly from py8(which is used in preliminary result)
- will update yellow point later(with prompt jpsi subtracted from data)