Inclusive jets in *p-Pb* and measuring Bjorken x distributions

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12/18/2017

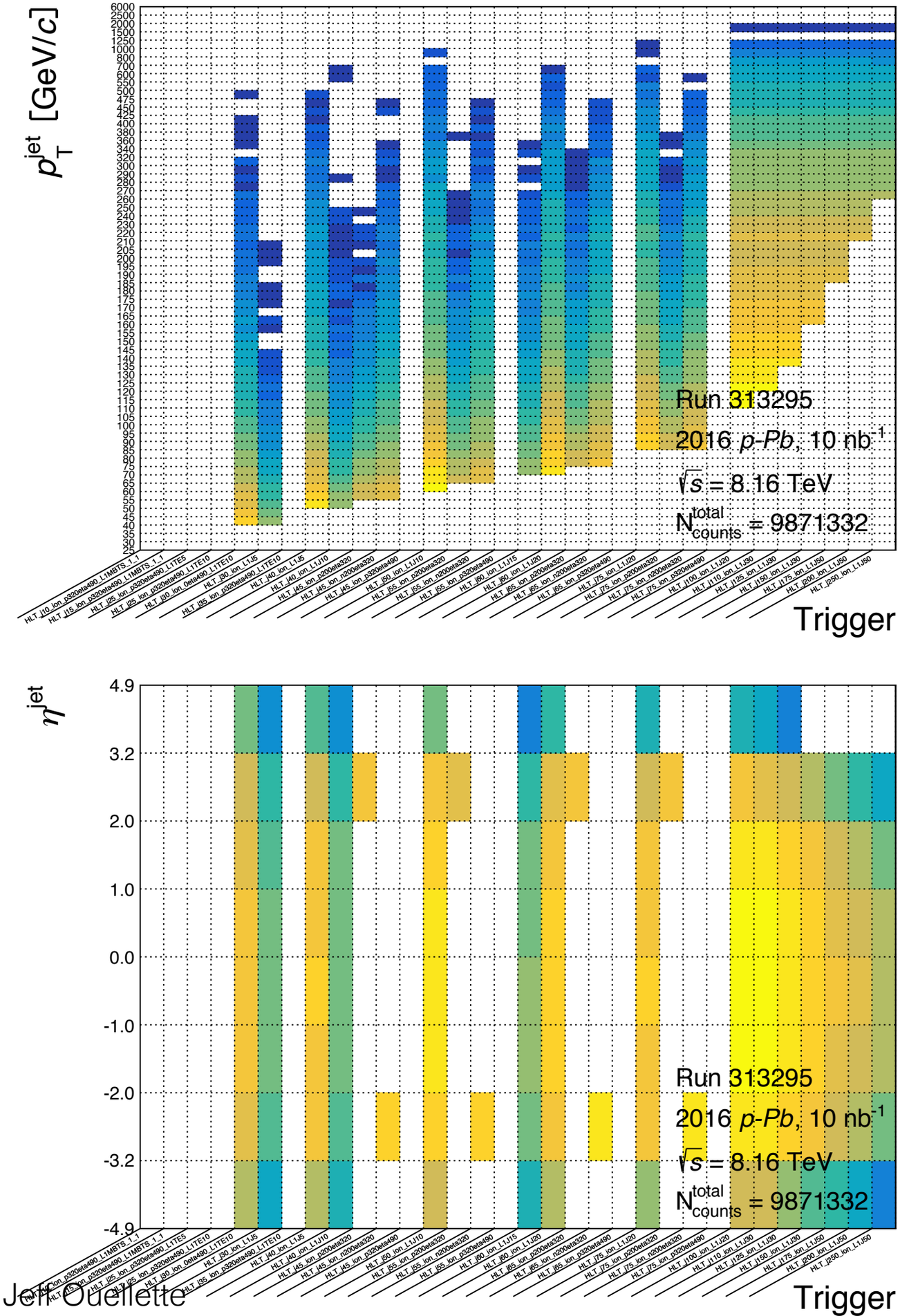
Last Time

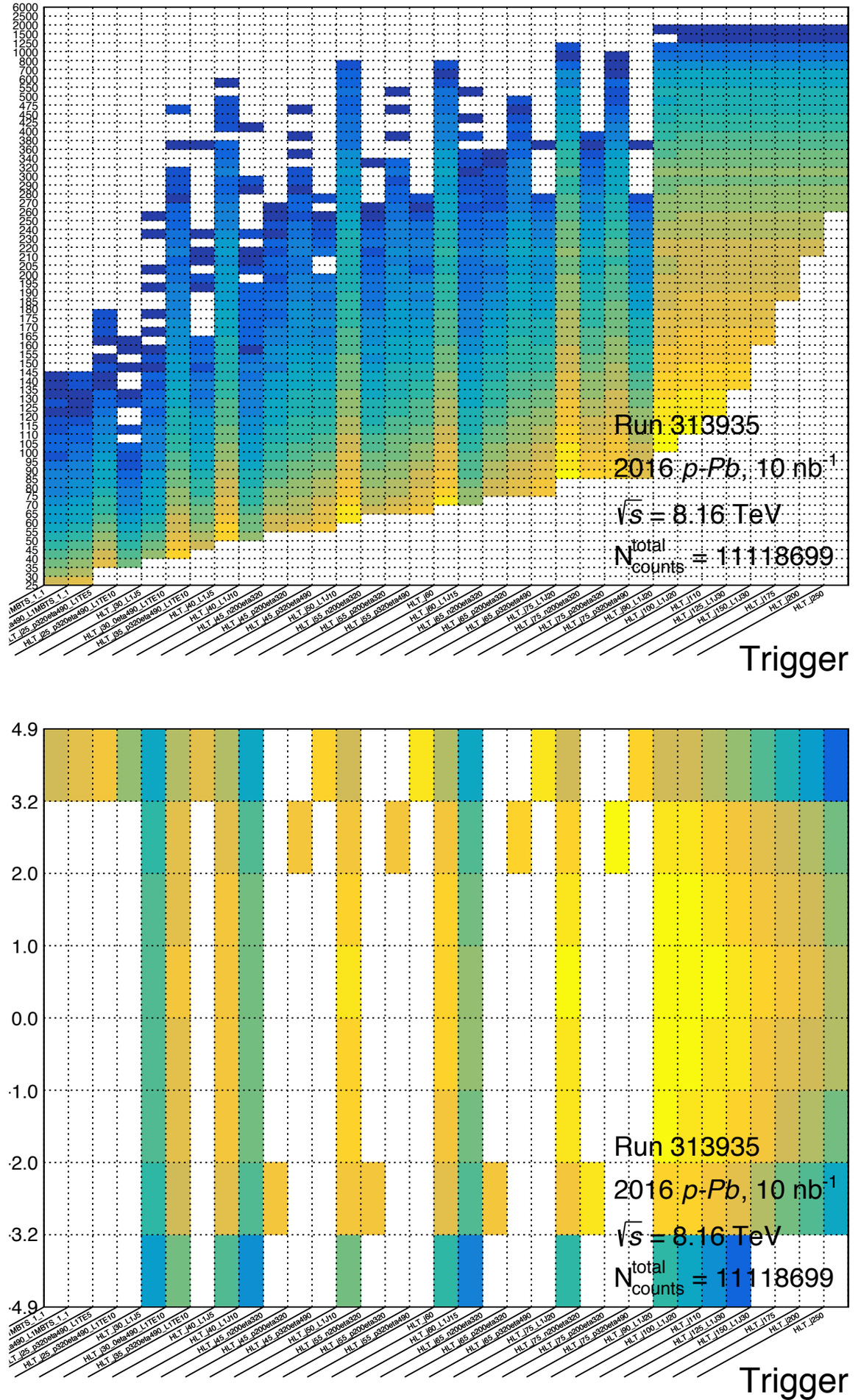
- First look at inclusive jet p_T spectra
- (Aggressive) trigger strategy implemented, but not all triggers were being used yet

  → all triggers now acquired/ being used in analysis

  → trigger inefficiencies avoided (for now) by assuming 100% above p_T+10GeV
- First estimation of Bjorken x_a & x_p scaling factors from dijet production

  → problems from last time due to typo in code, now fixed
- Goals were to implement more triggers into strategy, examine FCAL energy deposition

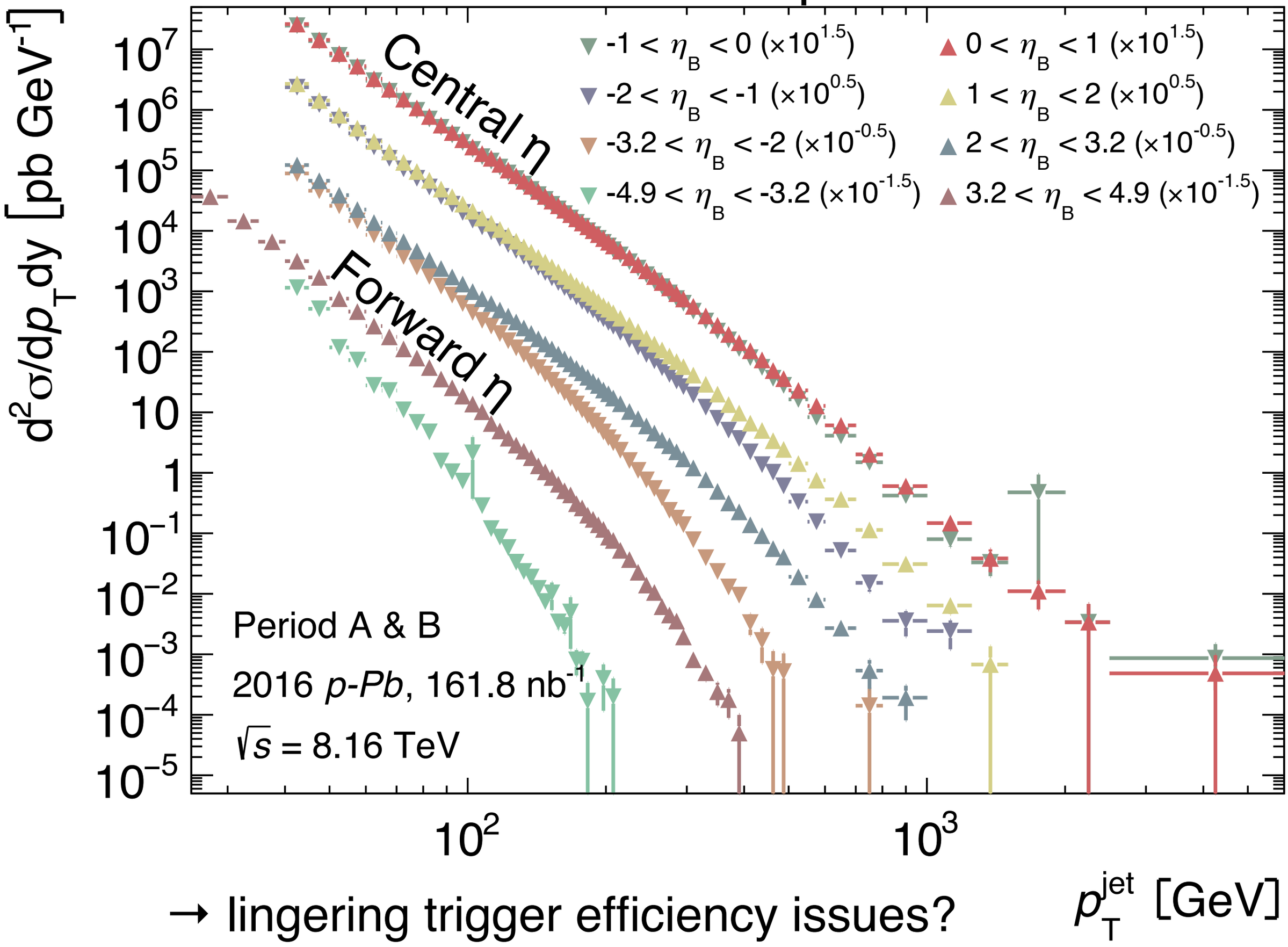

p_T^{jet} [GeV/c]
Run 313295
2016 p-Pb, 10 nb^{-1}
$\sqrt{s}$ = 8.16 TeV
N_{counts}^{total} = 9871332
Trigger


Run 313935
2016 p-Pb, 10 nb^{-1}
$\sqrt{s}$ = 8.16 TeV
N_{counts}^{total} = 11118699
Trigger

η^{jet}
Run 313295
2016 p-Pb, 10 nb^{-1}
$\sqrt{s}$ = 8.16 TeV
N_{counts}^{total} = 9871332
Trigger

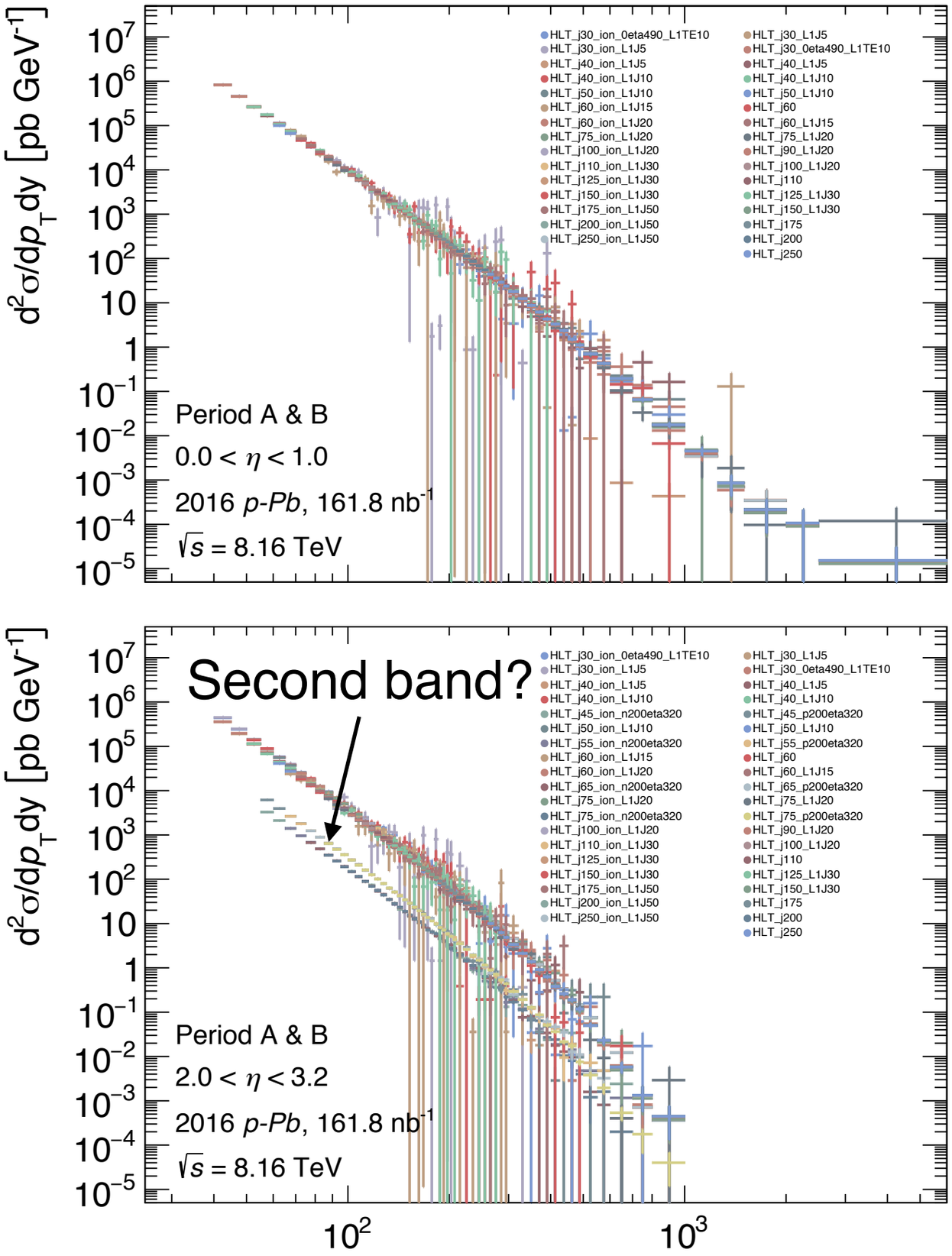
Run 313935
2016 p-Pb, 10 nb^{-1}
$\sqrt{s}$ = 8.16 TeV
N_{counts}^{total} = 11118699
Trigger

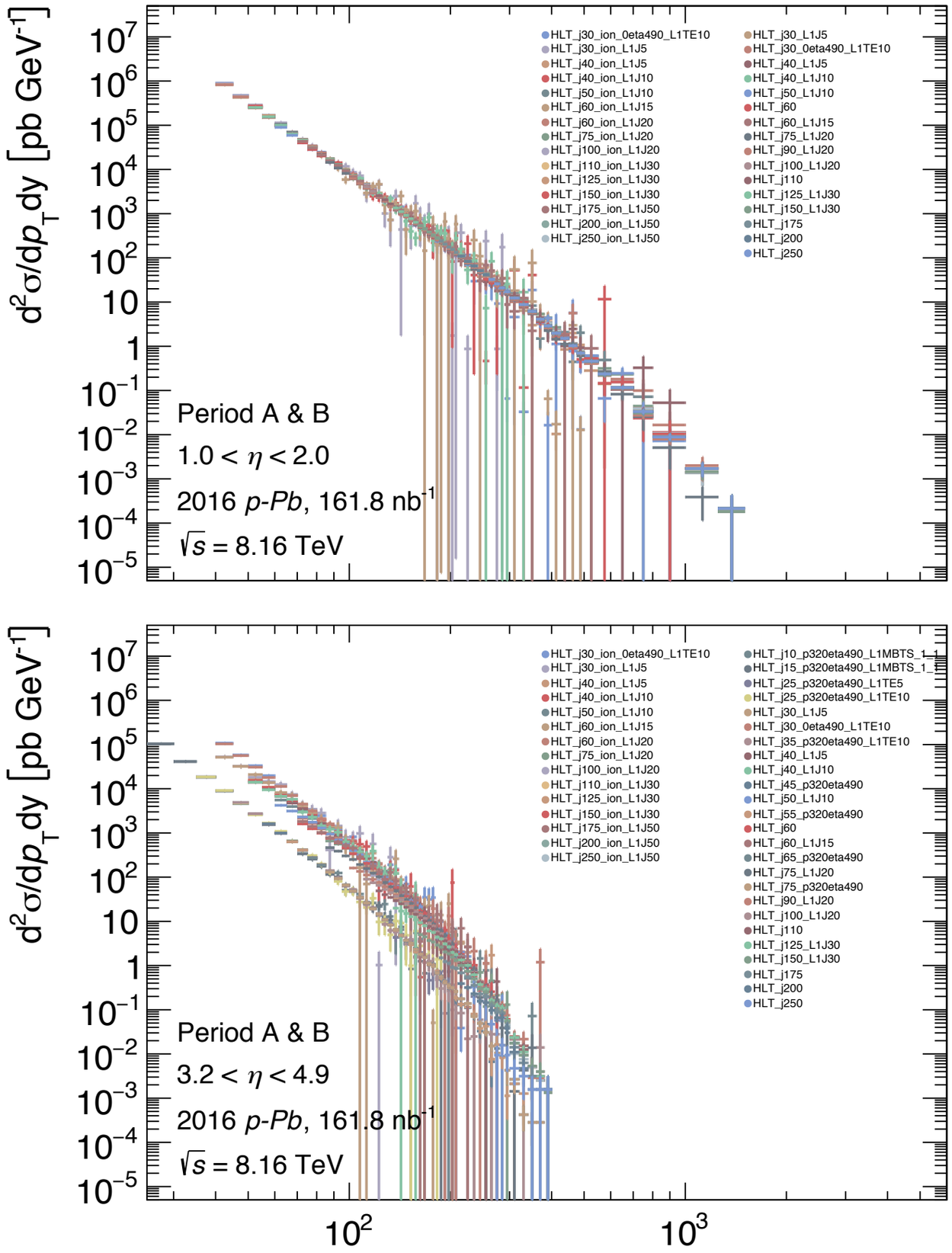
“All triggers” Inclusive p_T Spectrum



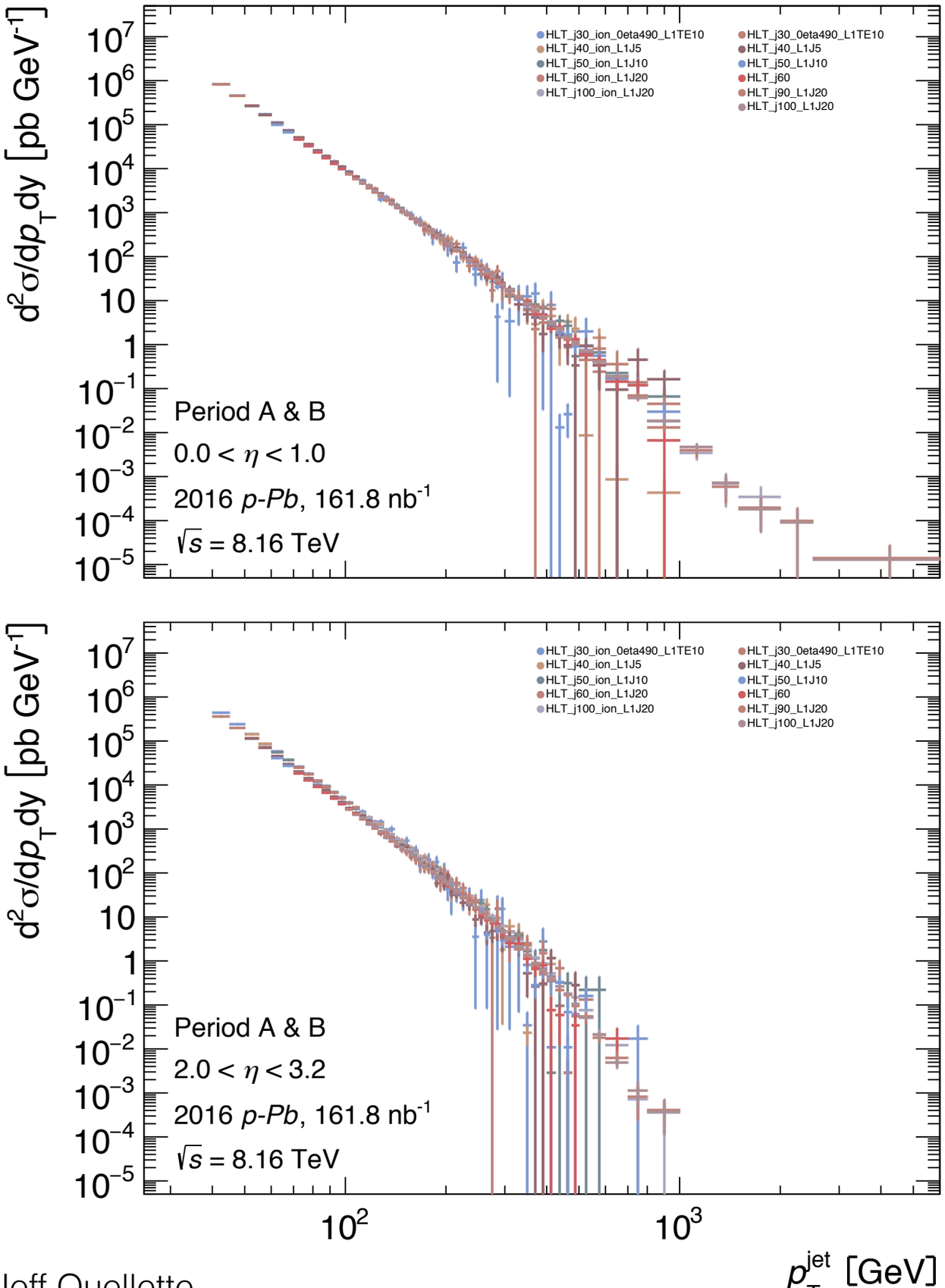
→ lingering trigger efficiency issues?

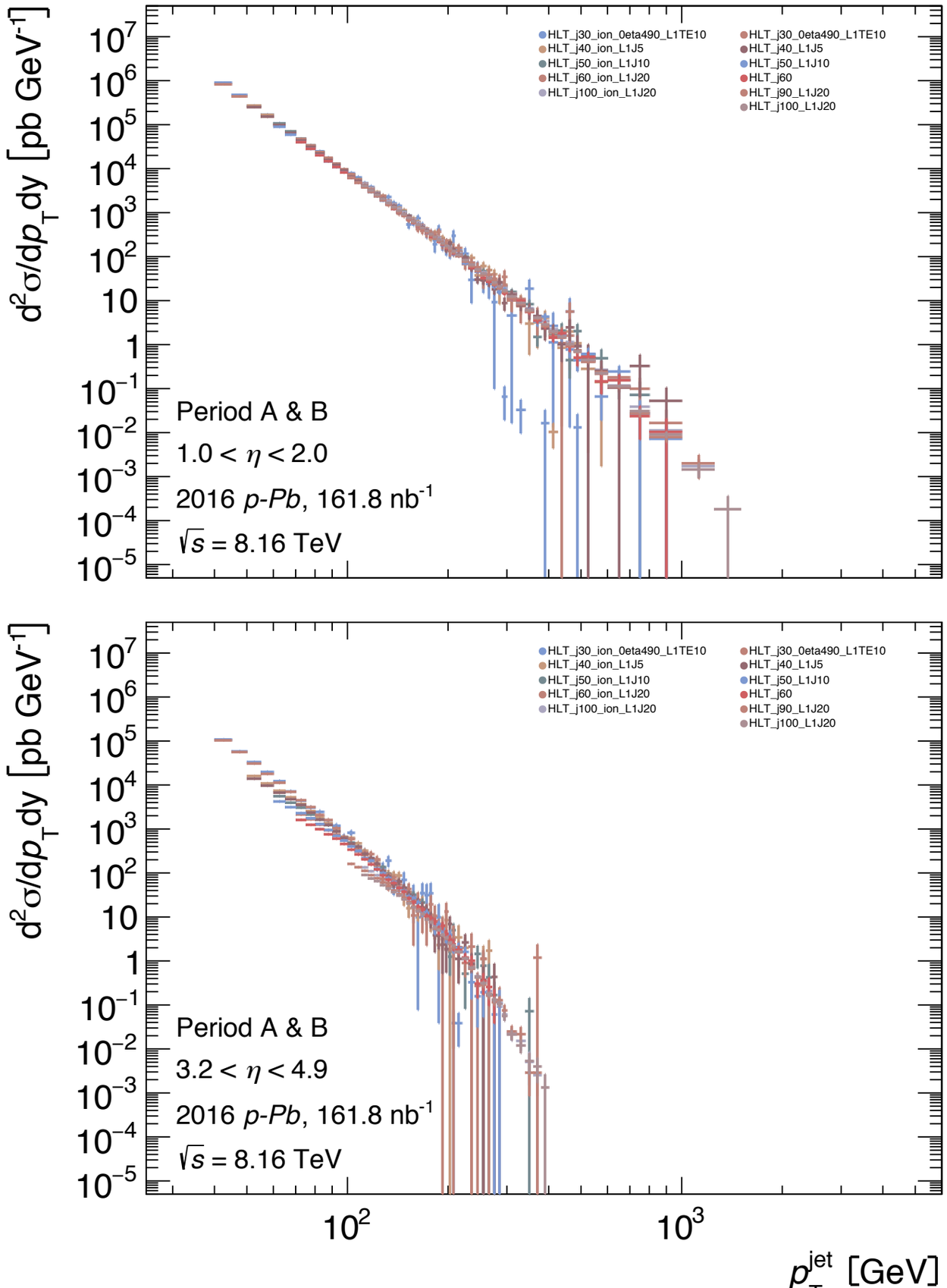
“All triggers” scheme



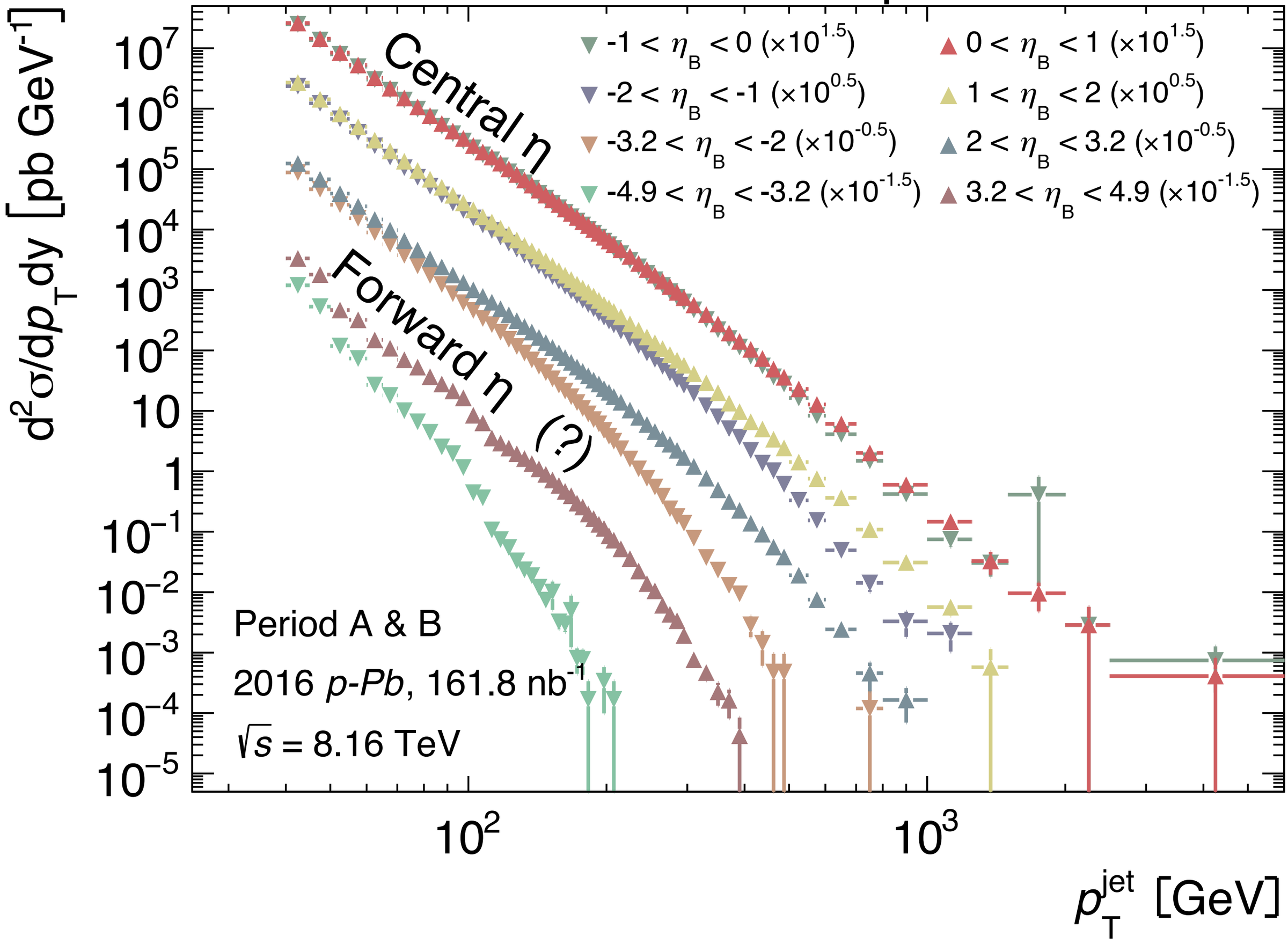


Simplified scheme - drops rerun, eta specific, and non-analysis triggers

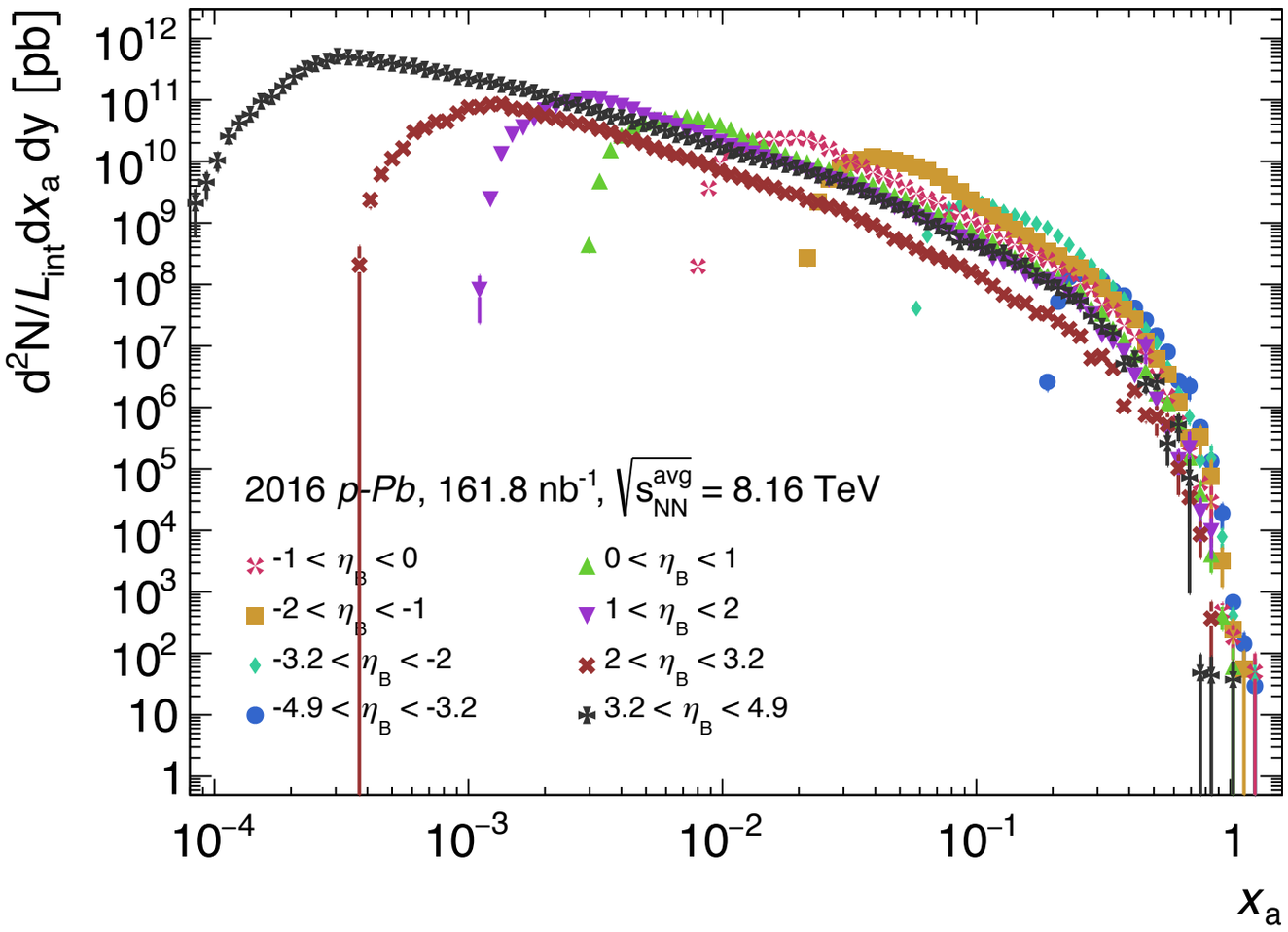


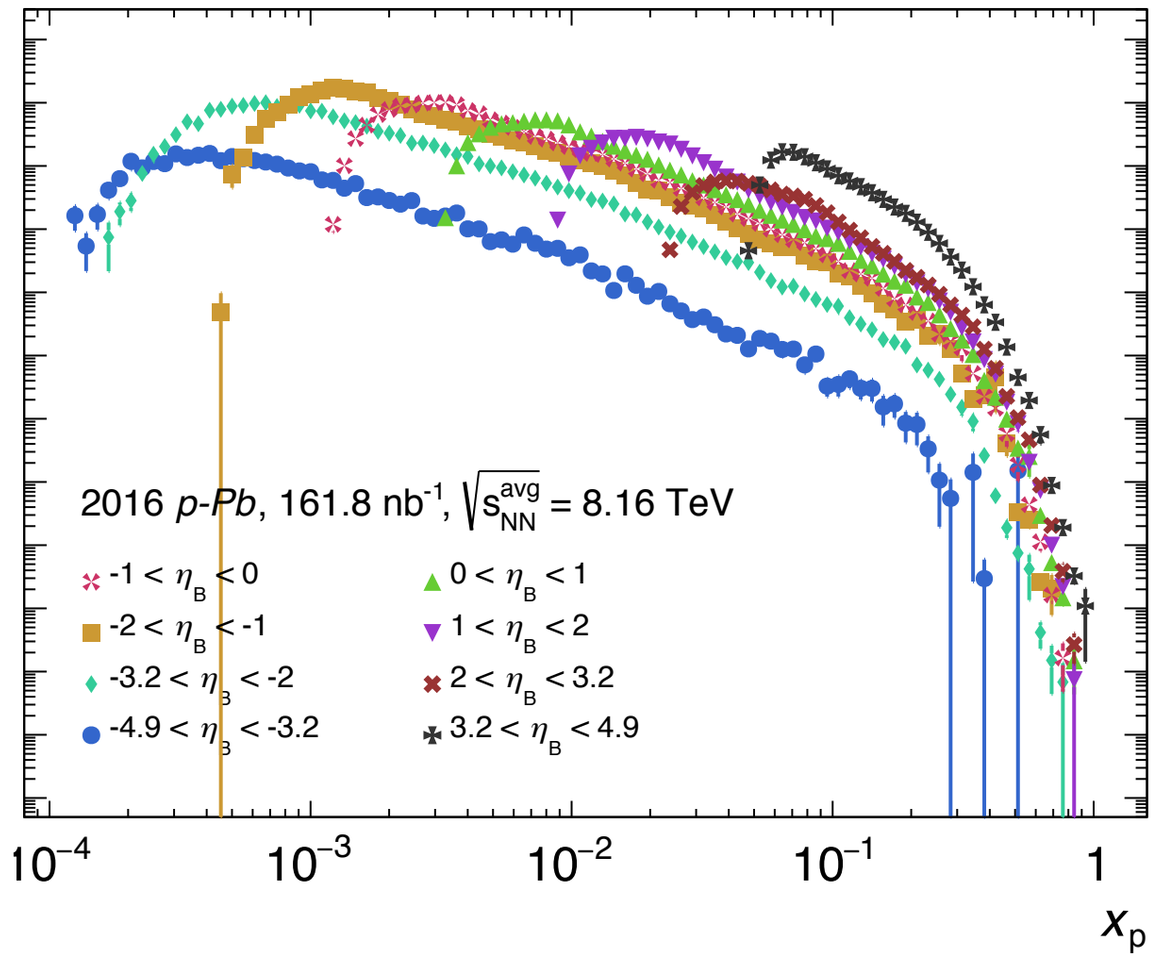


“Simplified scheme” Inclusive p_T Spectrum



Bjorken x's with "simplified" scheme

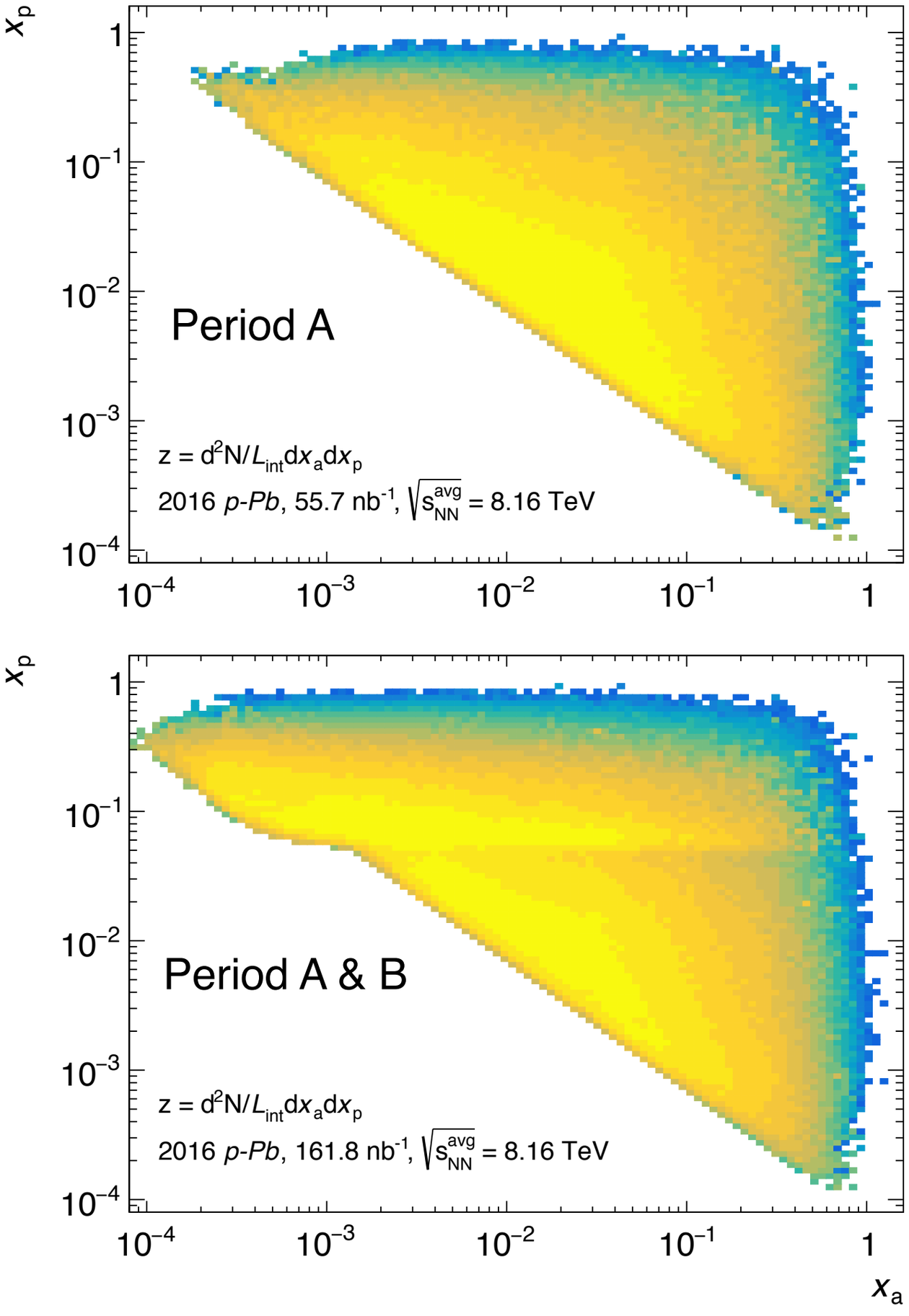


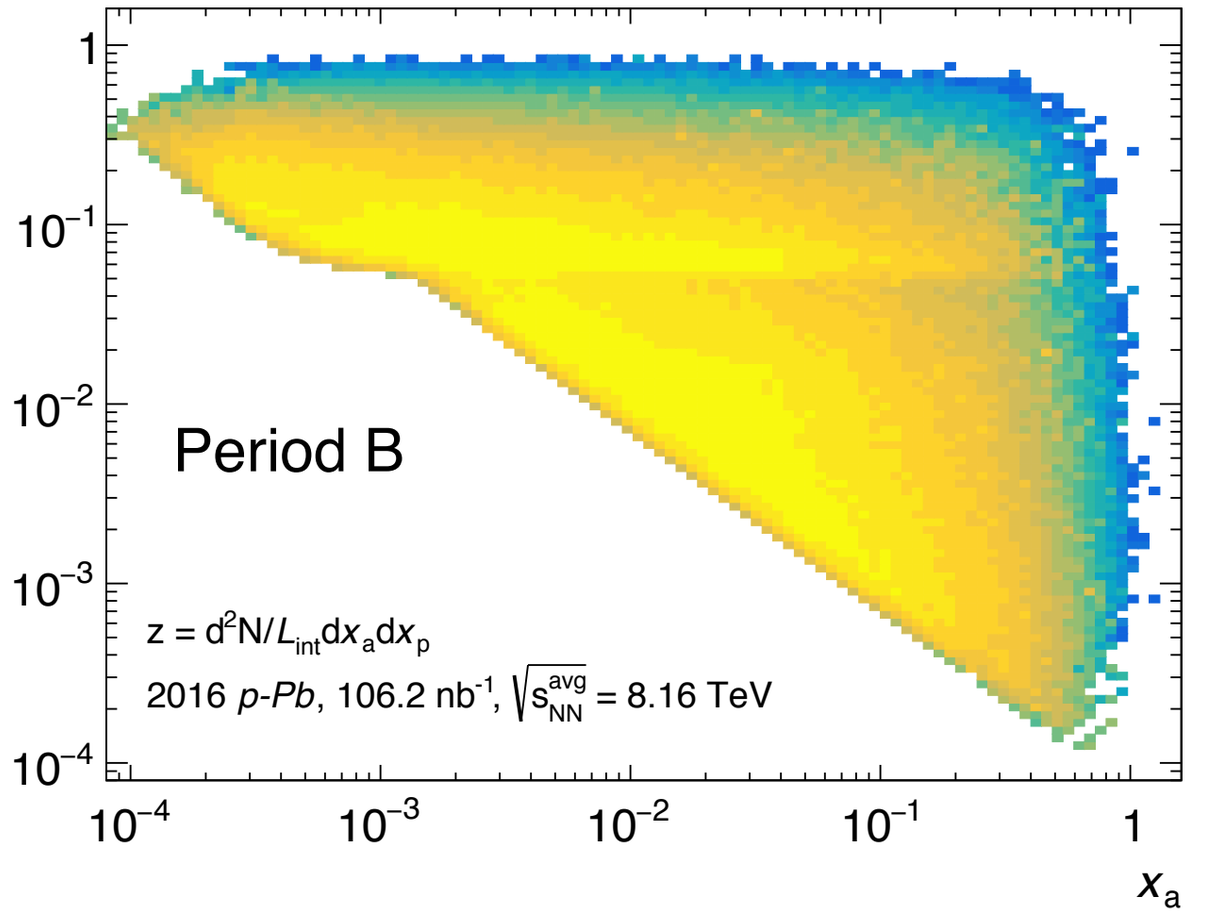


Fill by x_i weighted by leading jet trigger prescale/luminosity

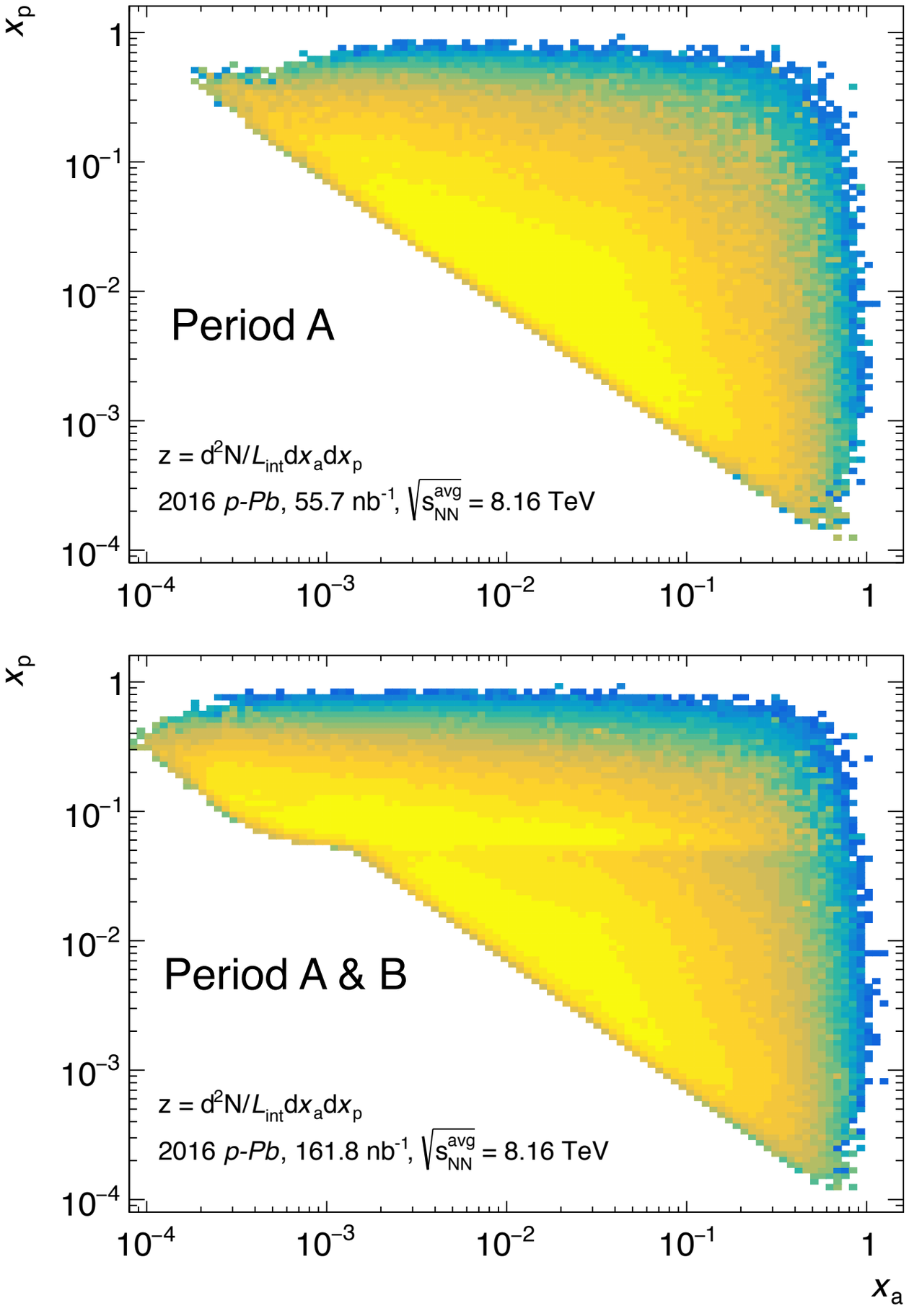
Dijet condition: $\frac{p_T^{subleading}}{p_T^{leading}} \geq 0.7$

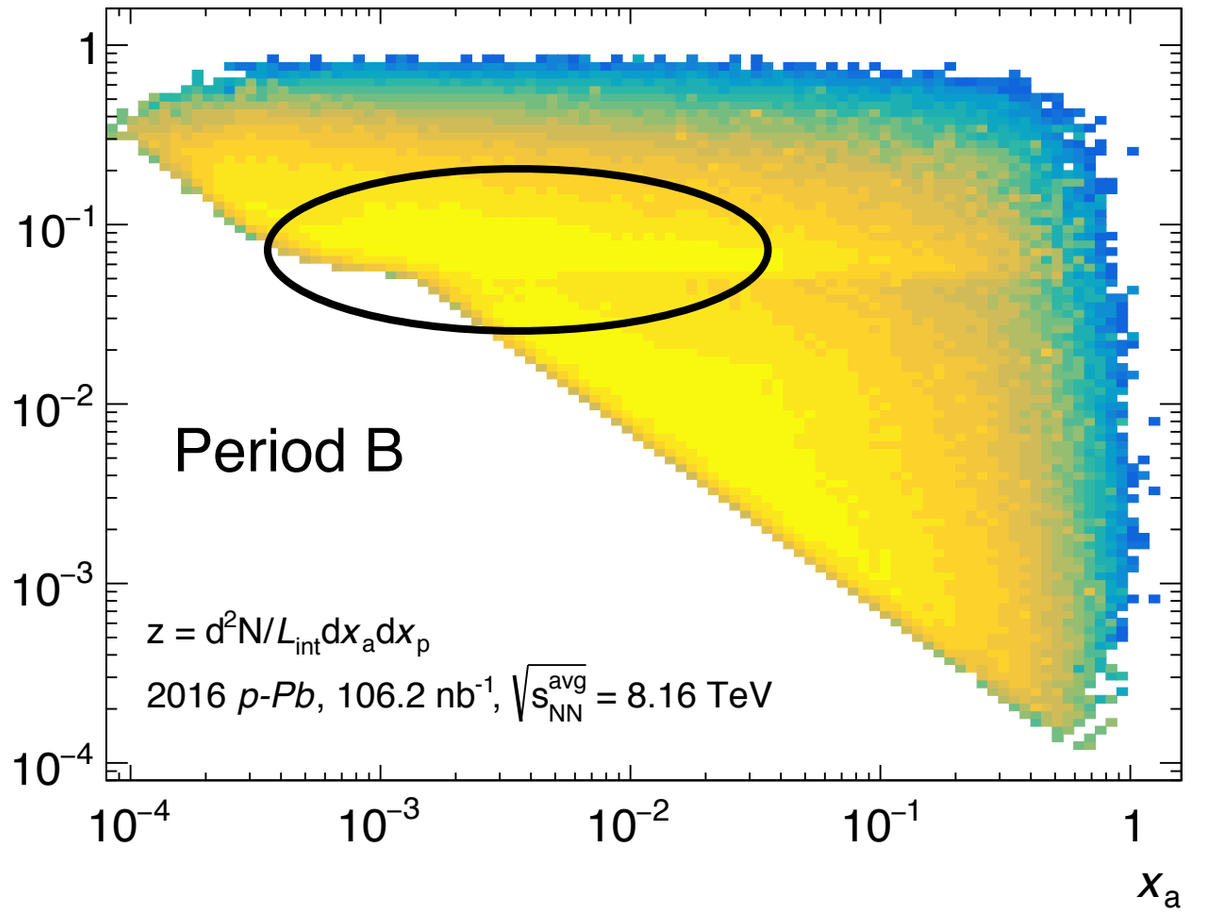
→ Excess in 3.2 < η < 4.9 bin? Only present in period B





Same filling scheme





→ Excess from largest eta bin dominates the correlation plots

Current strategy:

- estimate trigger efficiencies with min bias data sets
- scale by lumicalc as opposed to prescale/lumi