Summary of LPCC MB&UE WG Meeting

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23rd November, 2015
MPI@LHC, Trieste

LPCC MB&UE WG

http://indico.cern.ch/event/65178/

Brief Timeline

- Evolved from a cross-collaboration meeting organised by Rick, Arthur and D.K before first LHC data taking

- Was very useful in synchronising Run 1 analysis strategies from different experiments, enabling us to cross check each others results
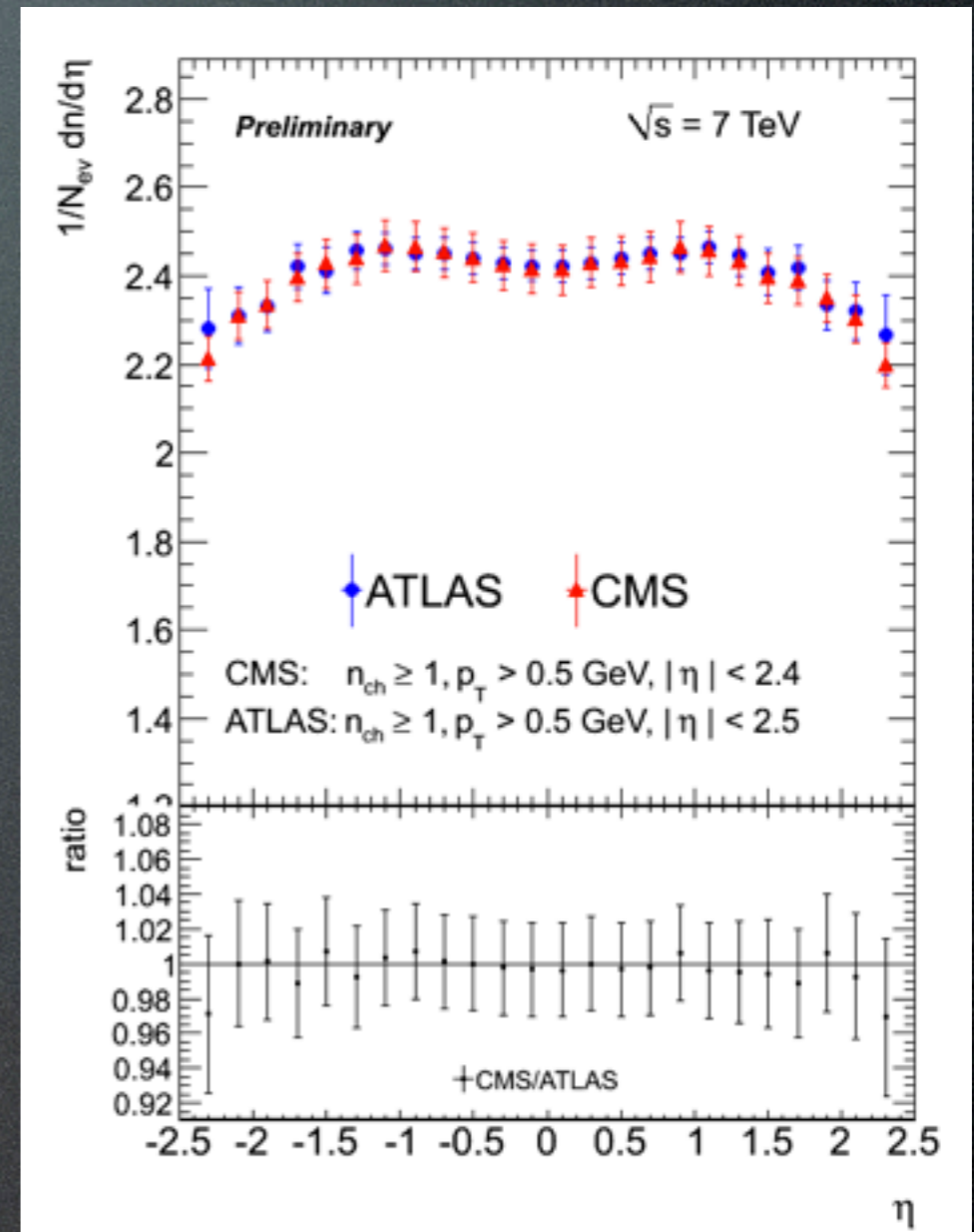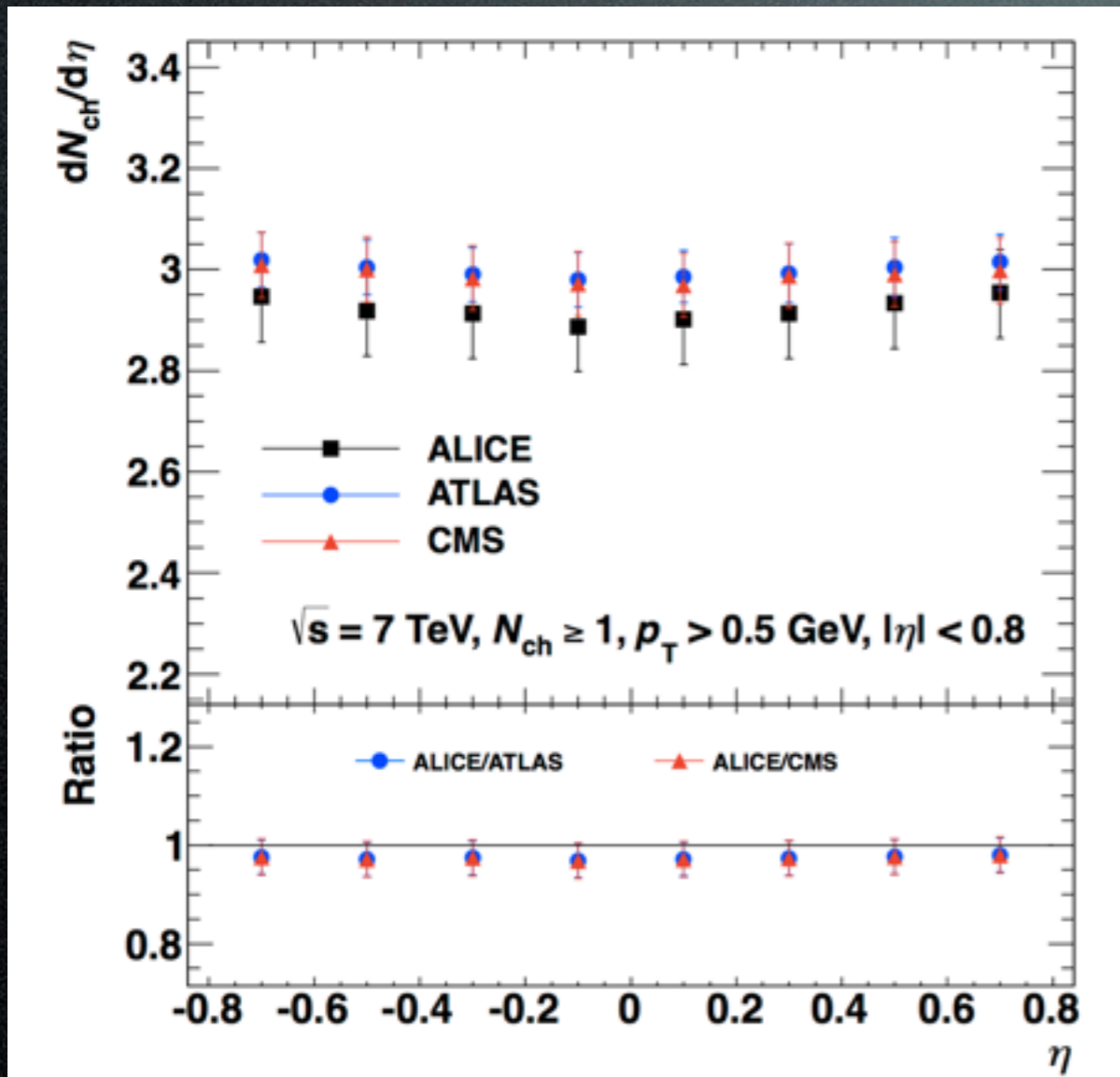
- Hoping to carry on to Run 2

The emphasis is on **common**...

- Selection (analysis phase space)

- Object definition

- Binning

- Plots

- MC model(s) to compare to
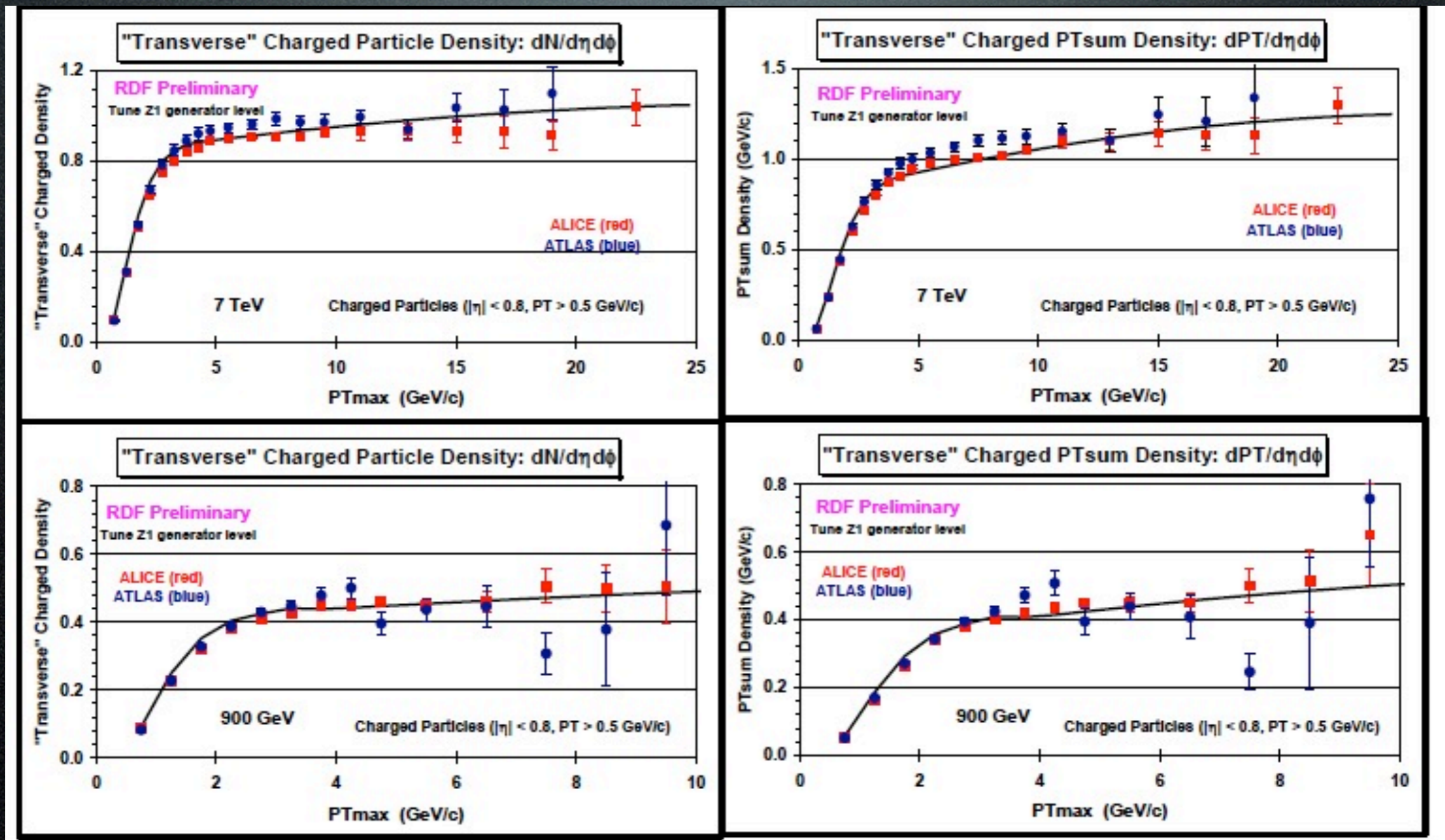
But not...

Common Plots from Run 1

Very good agreement between the experiments

Common Plots from Run 1

Similarly for UE, we all agree!

Run 2

- First open meeting on 19th November (last Thursday) http://indico.cern.ch/event/393716/

- Only preliminary results from the experiments, not much common yet.

- What did we agree on*?

*I hope we did ;-)

Suggestions

- No longer consider charged particles $30 < \tau < 300$ ps as primary particles: decays treated as secondary particles. (then providing MC-dependent correction factors will be redundant for cross-experiment comparison)

- Common phase spaces: $|\eta| < 0.8$, $p_T > 0.5$, 1 GeV

- Low p_T: 100 or 150 MeV? Extrapolate to zero?

# New Primary particle definition in ATLAS

- Strange Baryon production rates described better by EPOS (ALICE: arXiv: 1406.3206)

As seen in Roberto's talk earlier
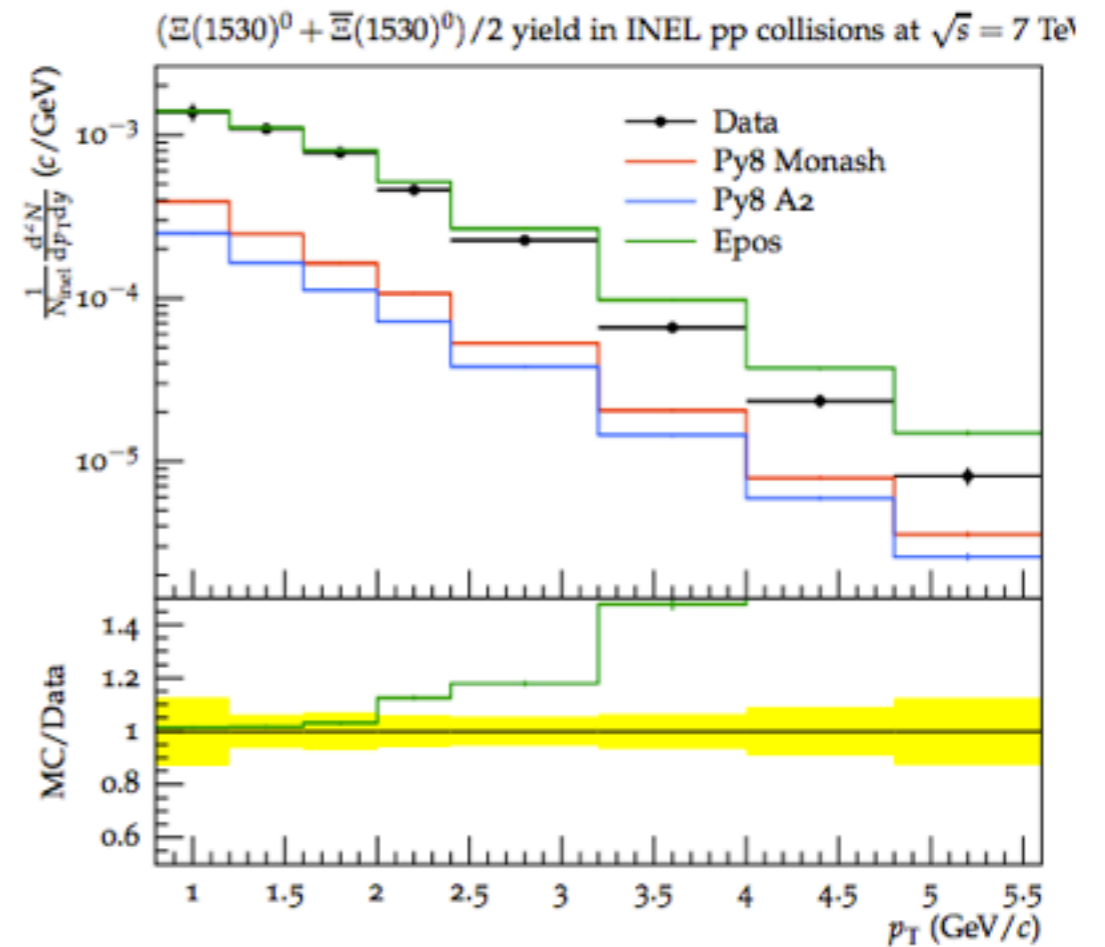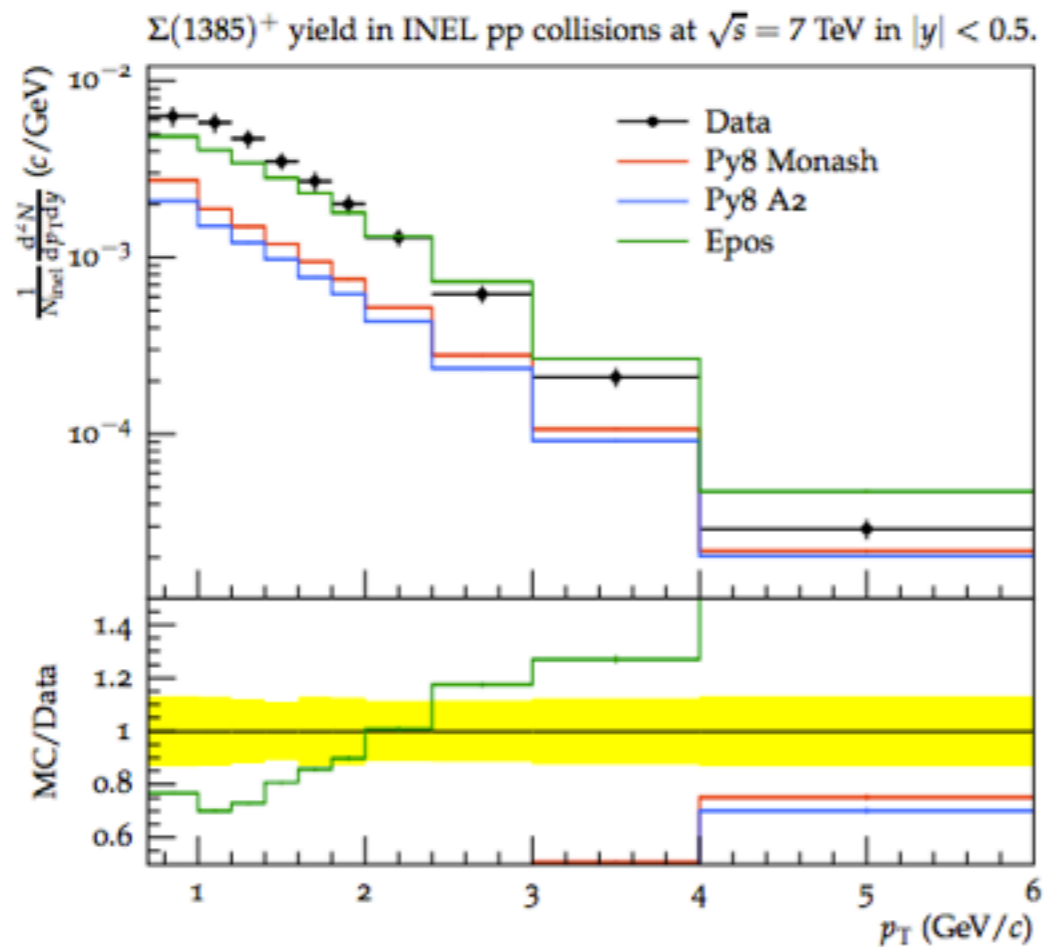
Ideas/Discussion Points

- Any unfolded distribution from inelastic cross-section measurement? (ATLAS) MBTS hits is not a physical observable.

- Forward tagging events? ATLAS+LHCf/ALFA, CMS+TOTEM/CASTOR, ALICE, LHCb (proposed common region $3.1 < \eta < 4.5$. Different trigger, p_T measurement capabilities)

- More coordination about tuning, tune uncertainties among experiments

- How to reconcile measured lower inelastic cross-section with Pythia8 higher values

Fixing H++ on the fly!

Andrzej Siodmok
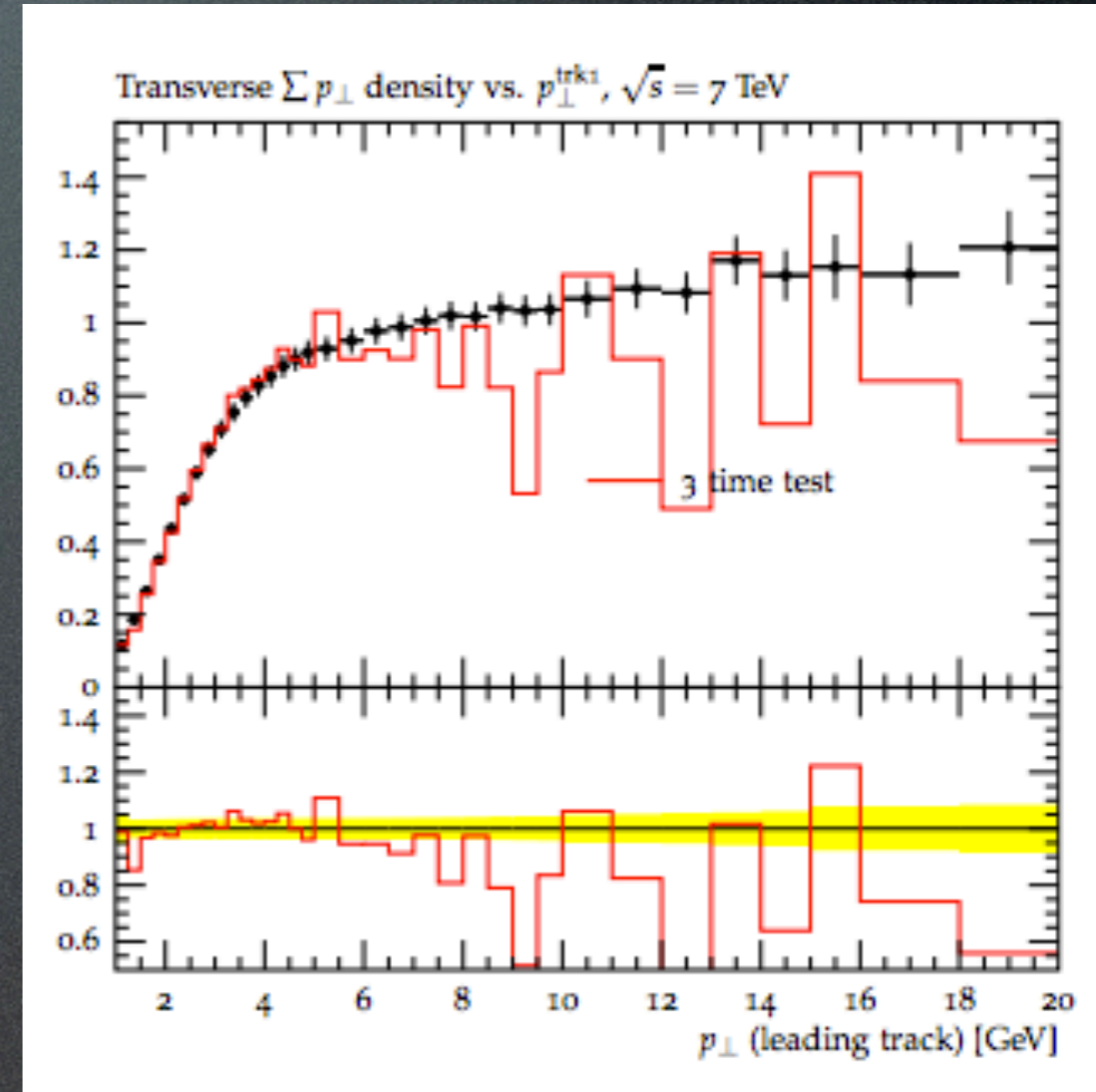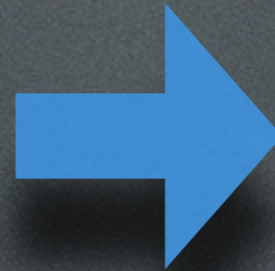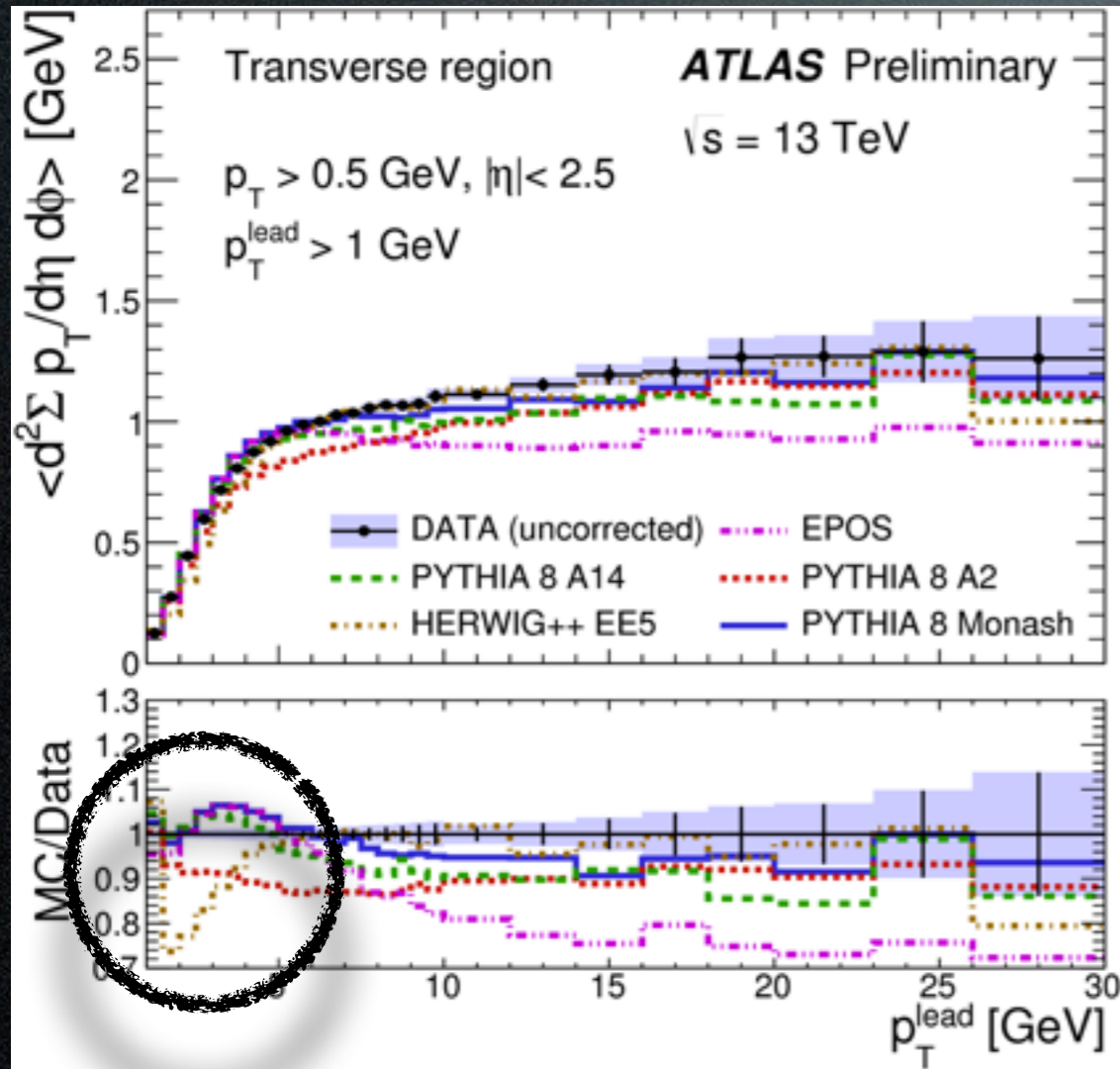
Bonus: Rescattering in Pythia8

3rd and 4th jet p_T balance

ATLAS Z UE
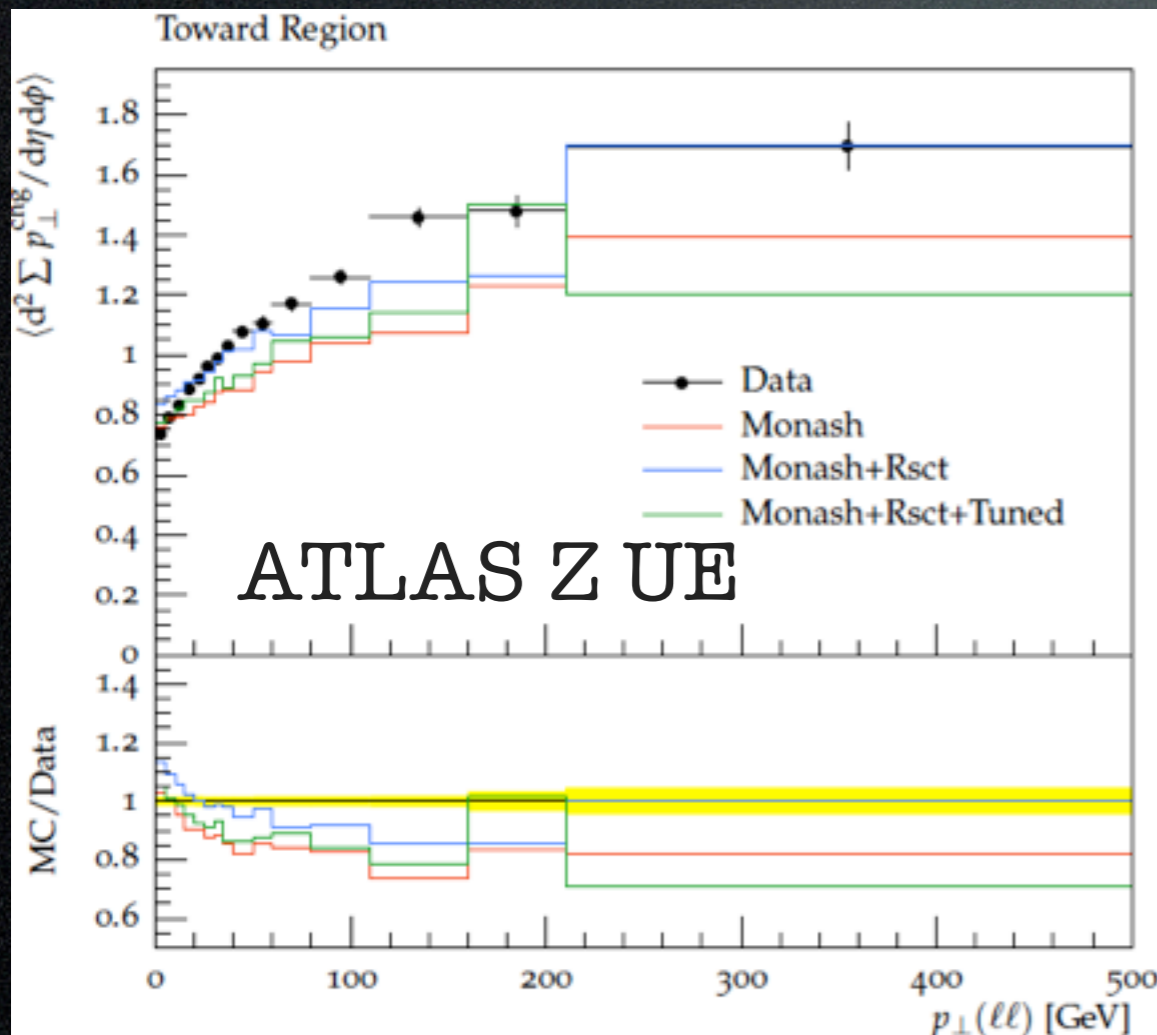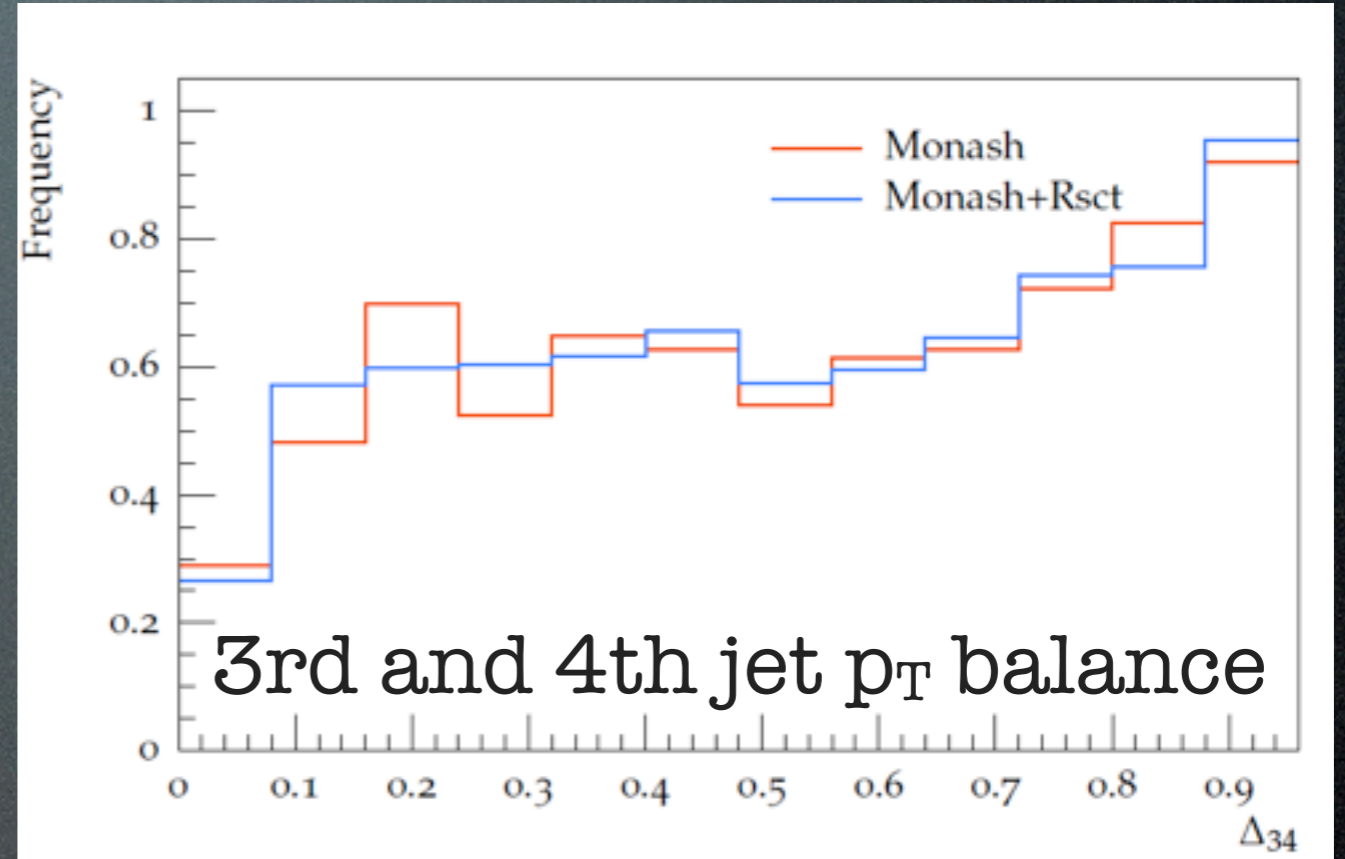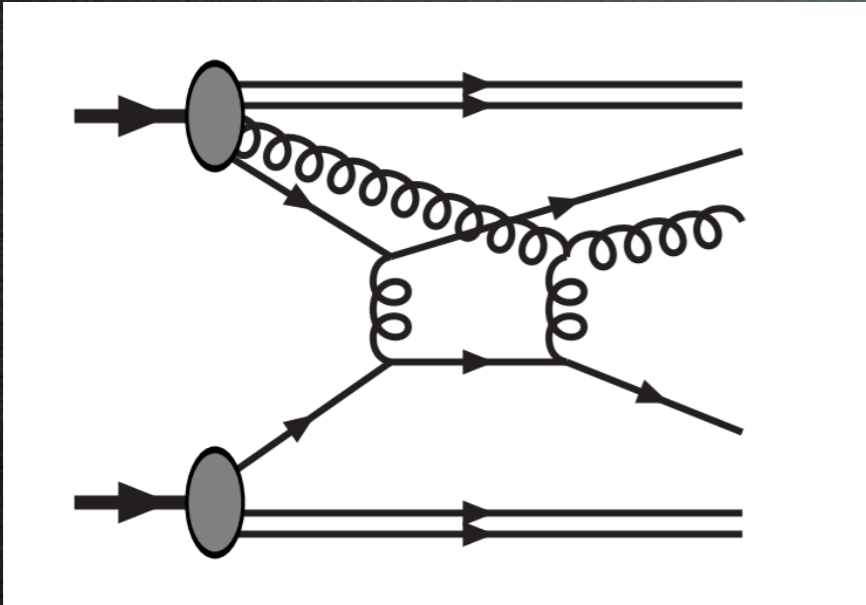
Hard to find a discriminating variable
using jets in Z+3jet events

UE activity is affected and (MPI) can be
tuned to give a similar description

http://arxiv.org/abs/1511.03215
Tasnuva Chowdhury and D.K

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