Run 3 Minbias

Use low pile-up run, trigger on MBTS, measure track distributions
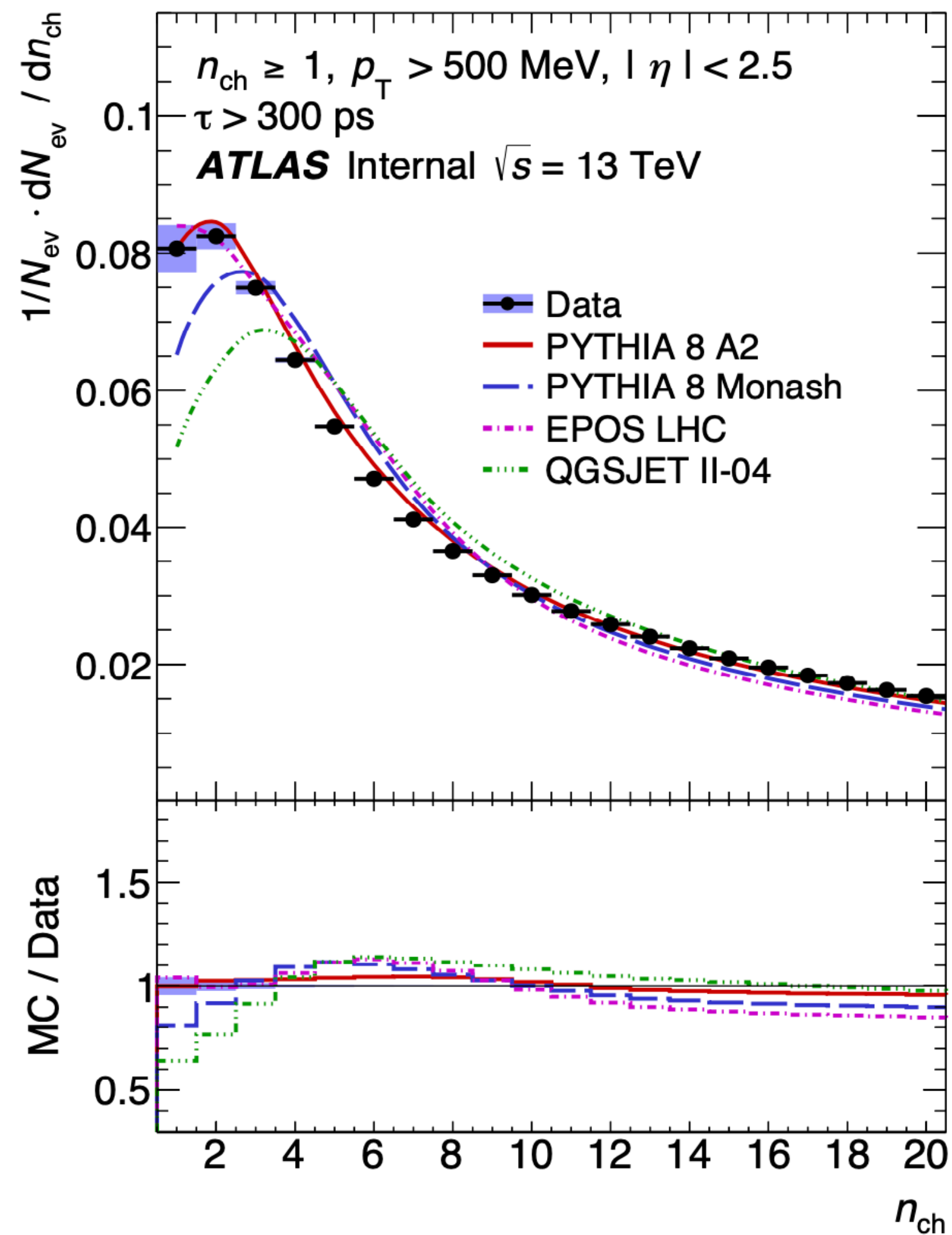

p → p

$\mathbb{P}$

p → X
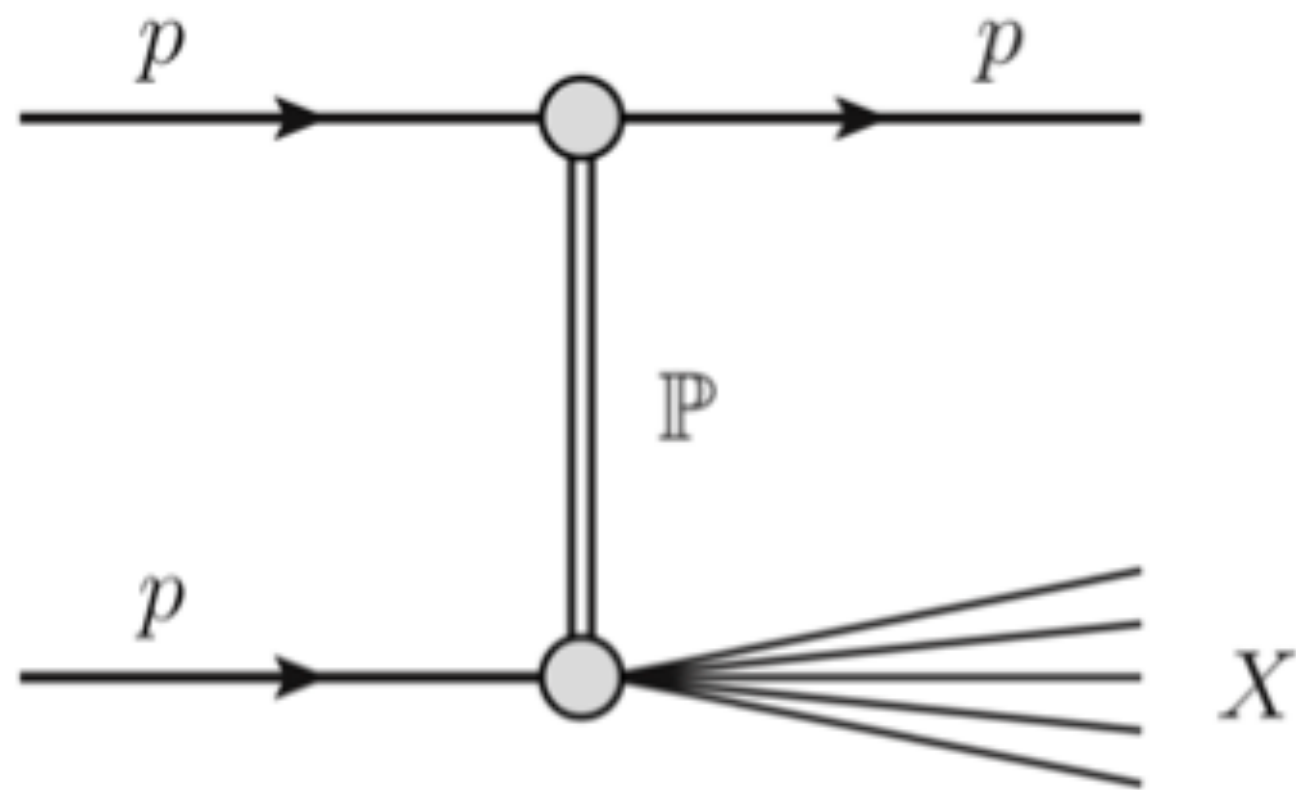
Example of minimum bias process: Single diffraction

https://indico.cern.ch/event/1467719

MBTS

MBTS
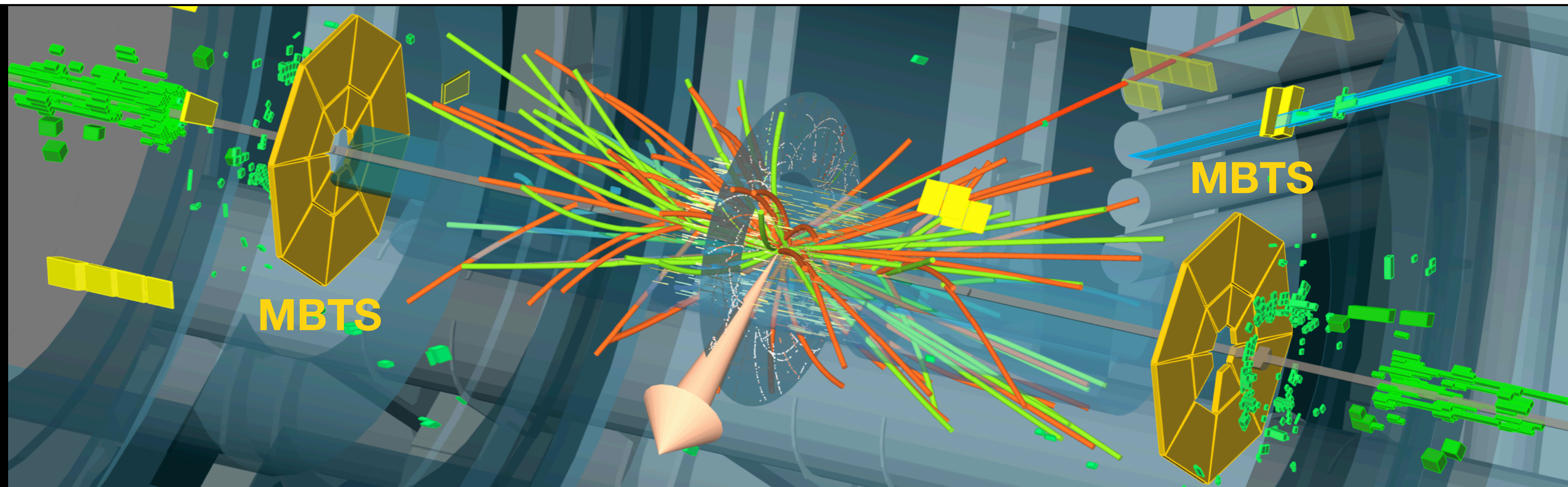
Number of charged particles

Run 2

$n_{ch} \geq 1$, $p_T > 500$ MeV, $|\eta| < 2.5$
$\tau > 300$ ps
ATLAS Internal $\sqrt{s} = 13$ TeV

$1/N_{ev} \cdot dN_{ev} / dn_{ch}$

- Data
- PYTHIA 8 A2
- PYTHIA 8 Monash
- EPOS LHC
- QGSJET II-04

MC / Data

n_{ch}

Run 3

$n_{ch} \geq 1$, $p_T > 500$ MeV, $|\eta| < 2.5$
$\tau > 300$ ps
ATLAS Internal $\sqrt{s} = 13.6$ TeV

$1/N_{ev} \cdot dN_{ev} / dn_{ch}$

- Data
- PYTHIA 8 A3
- EPOS
- HERWIG 7

MC / Data

n_{ch}
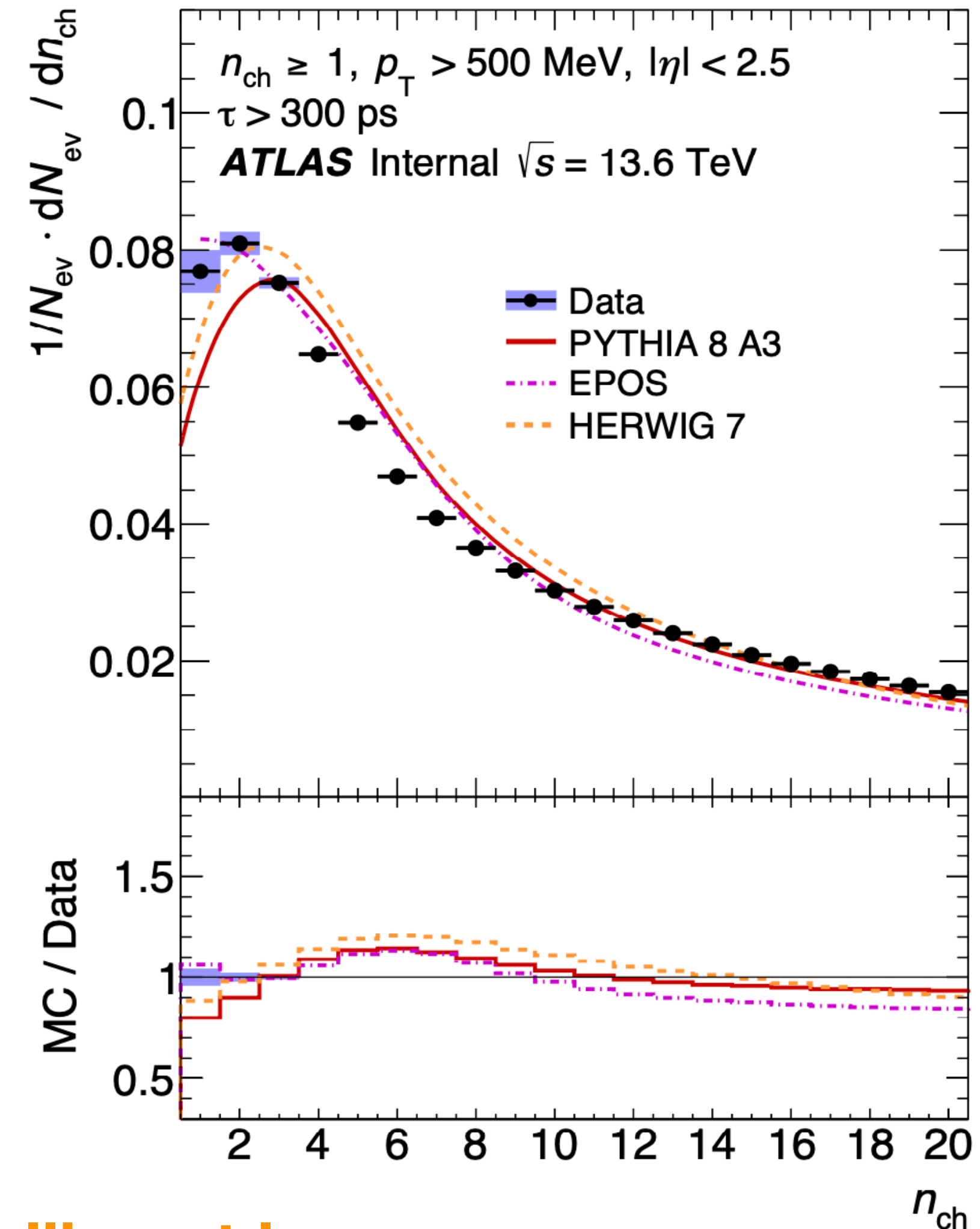
Pythia 8 A3 mis-modelling at low n_{ch}

→ Follow up if low n_{ch} was included in Pythia 8 A3 tuning or not?