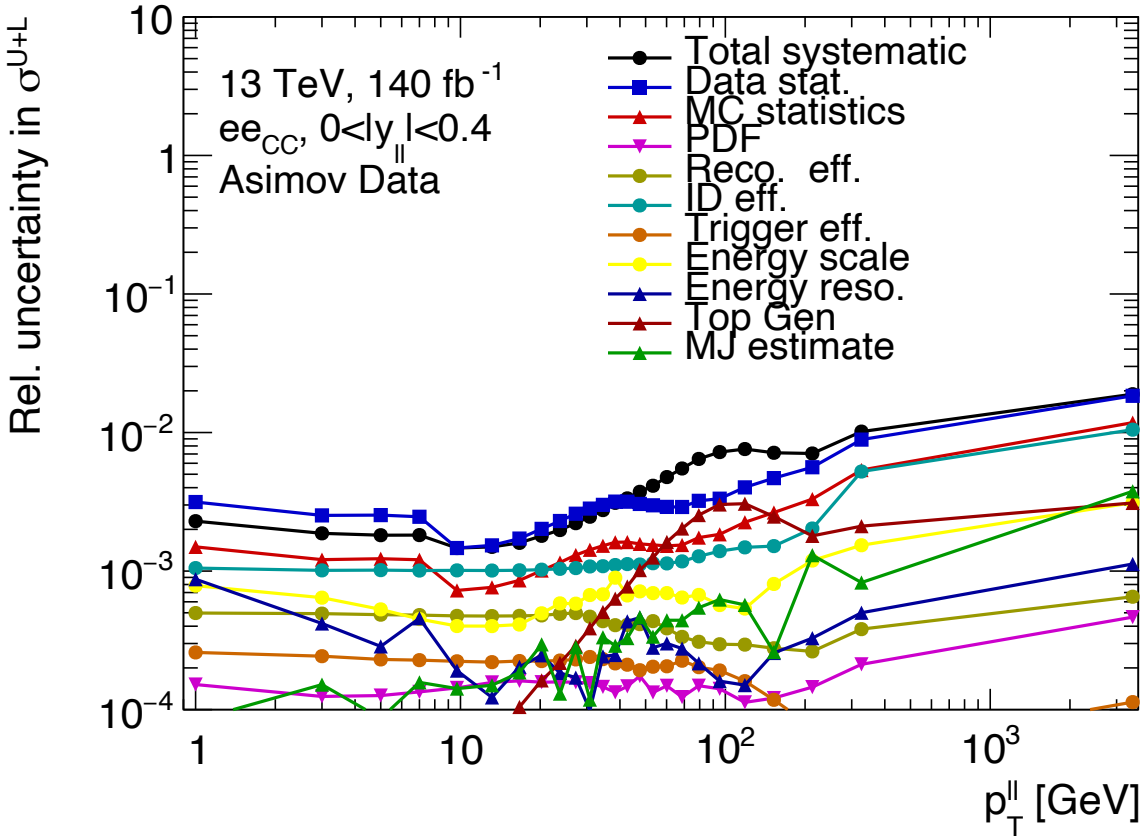
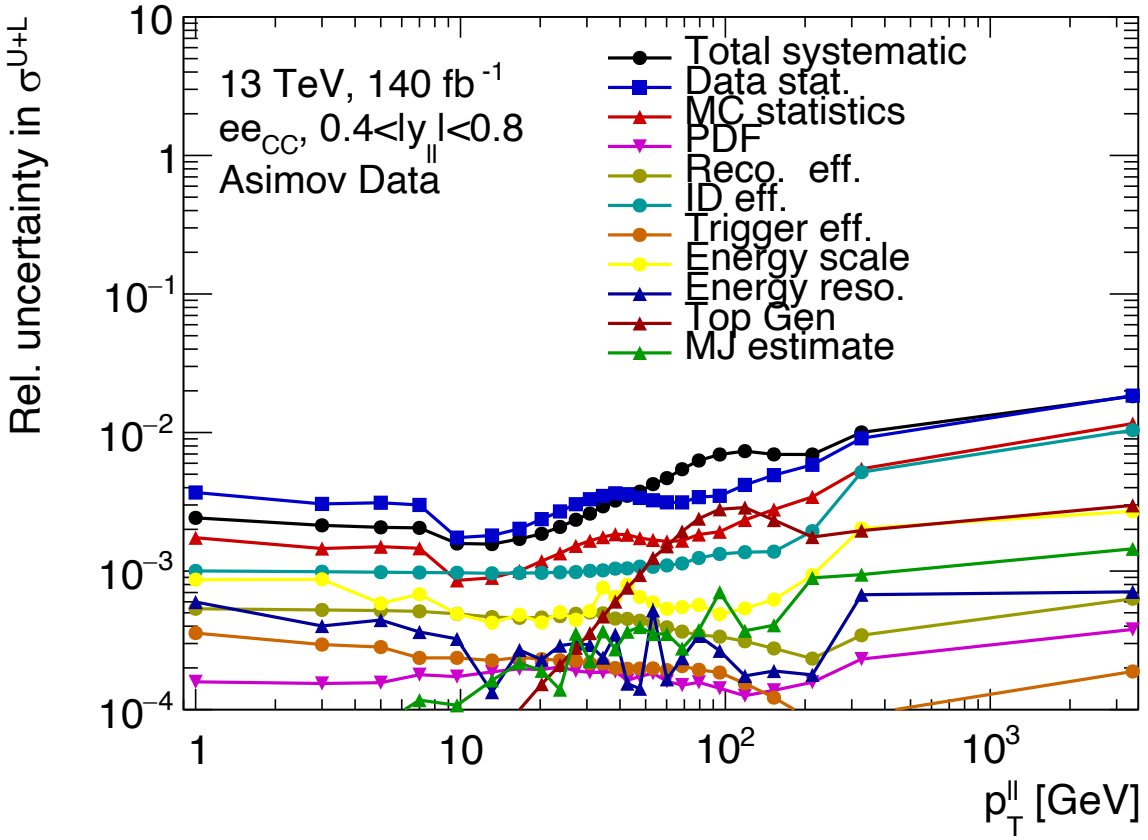
Hallelujah!

- Filip’s magic has worked with the scans and the output plots now look good!

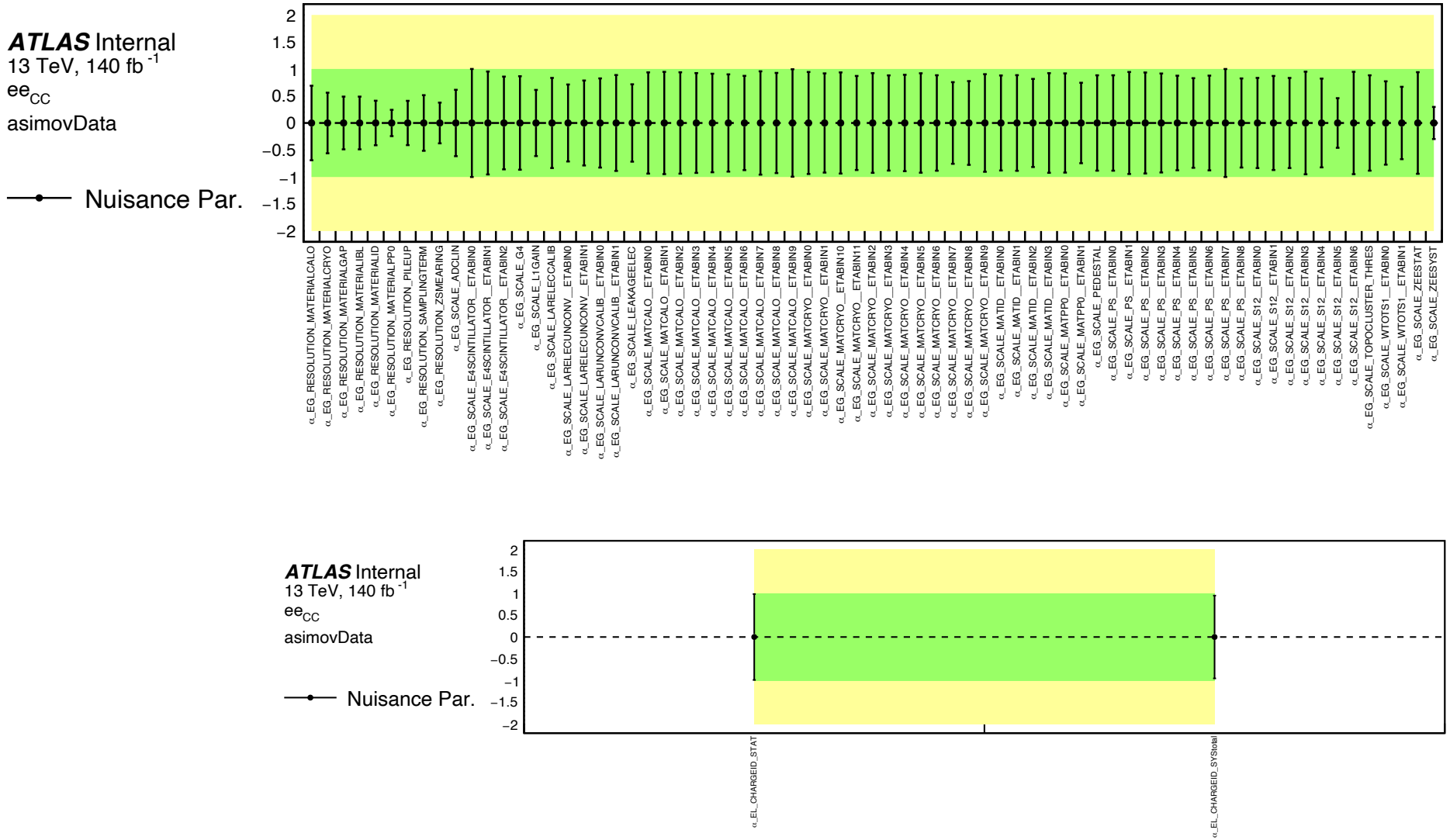
CC – Asimov Results





- Sub-percentage precision to be expected below 200 GeV pT Z!
- Statistically limited below 30 GeV pT Z, systematically limited above this
  - Large increase in systematics is driven by MC bkg (top gen in plot) uncertainty, we may be too conservative here

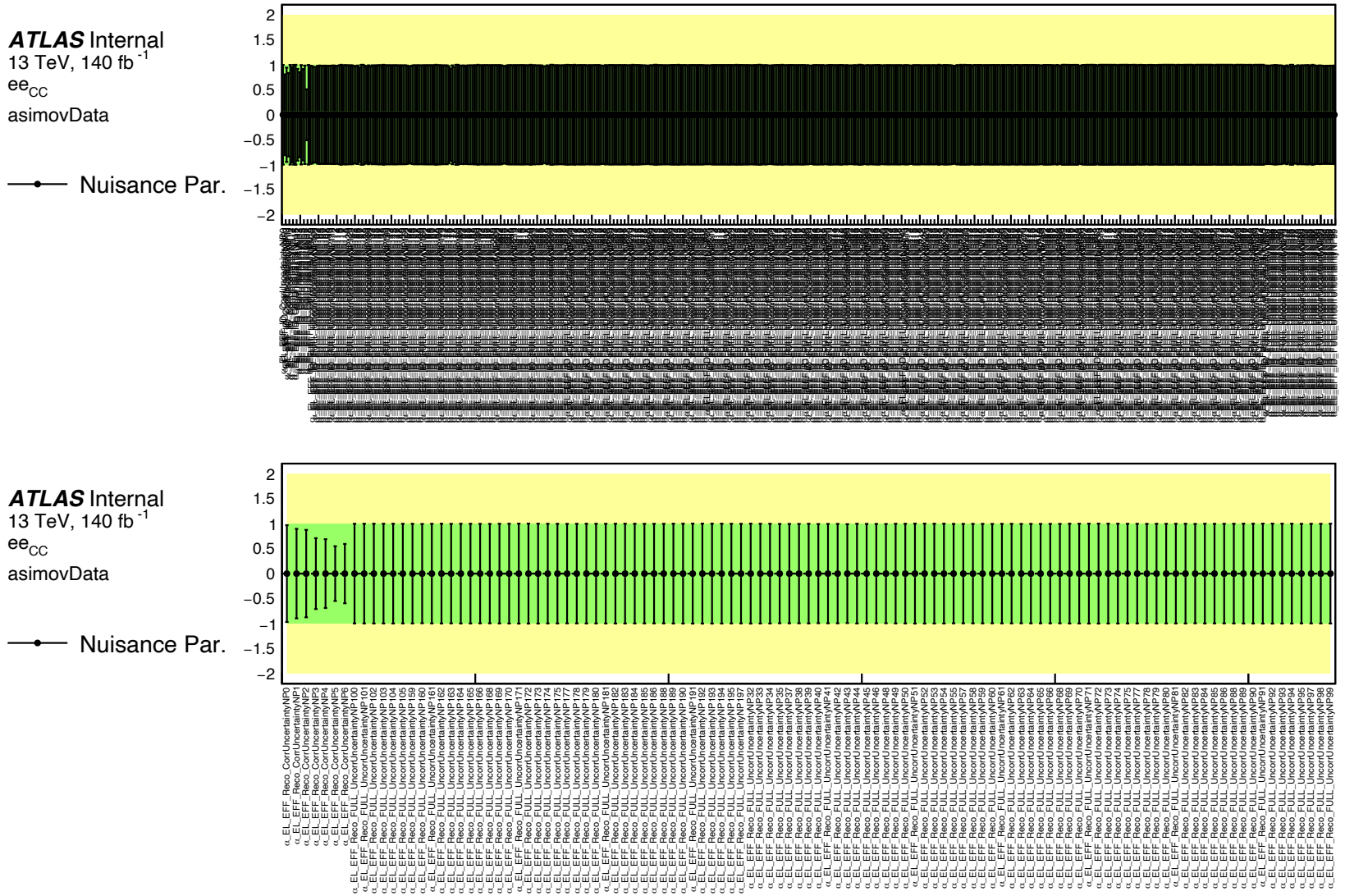
Asimov Pull Plots



Calibration

Charge ID

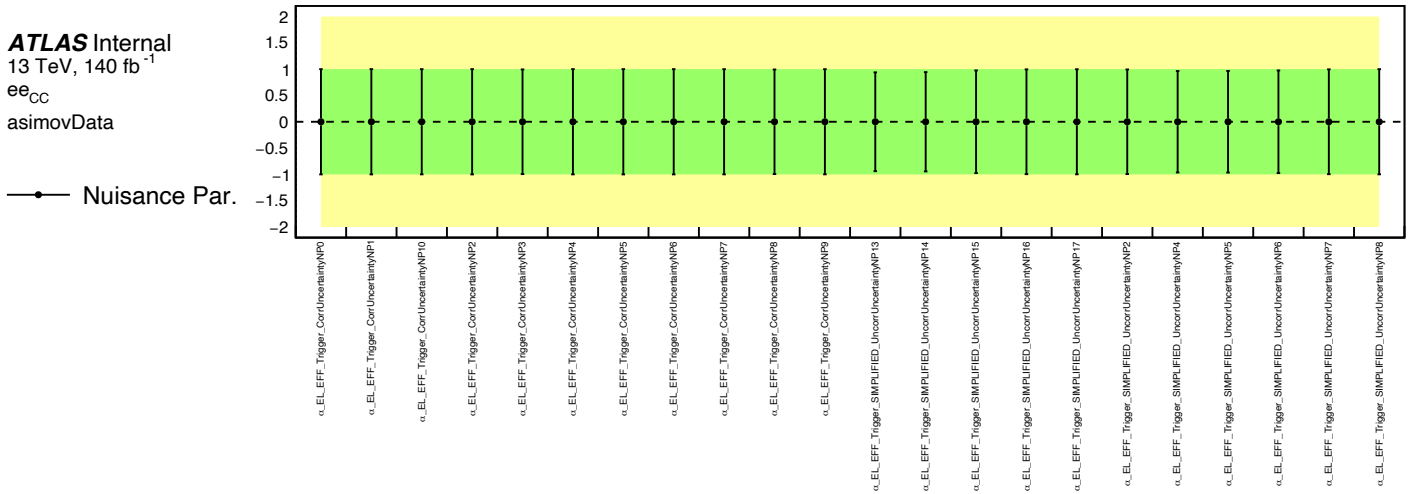
Asimov Pull Plots



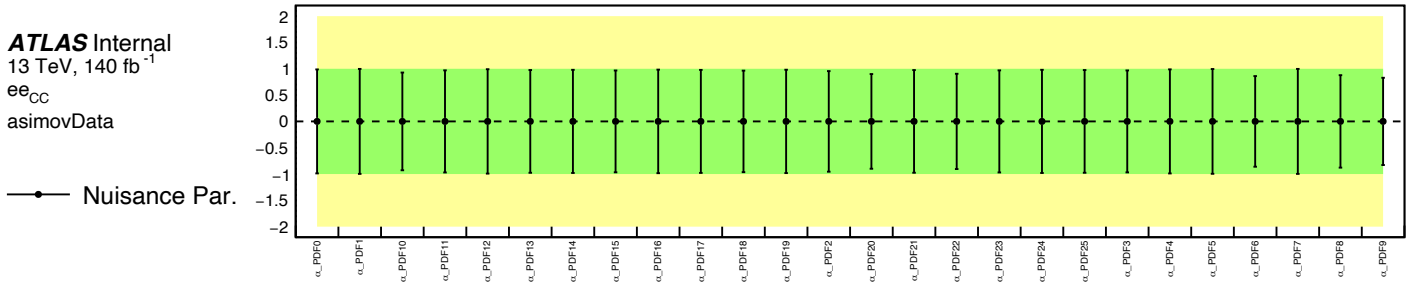
ID SFs

Reco SFs

Asimov Pull Plots

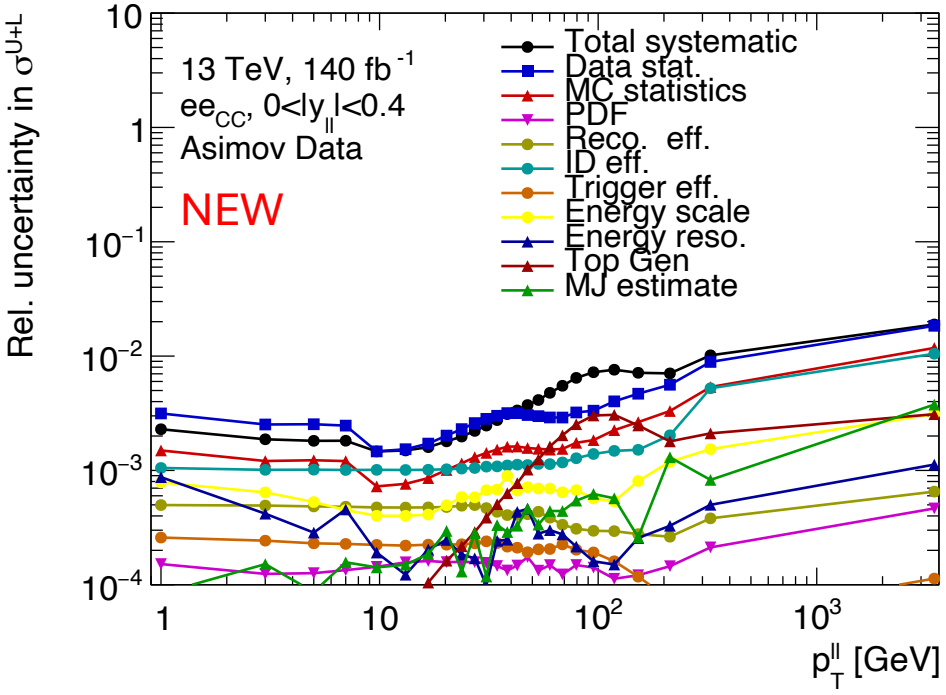


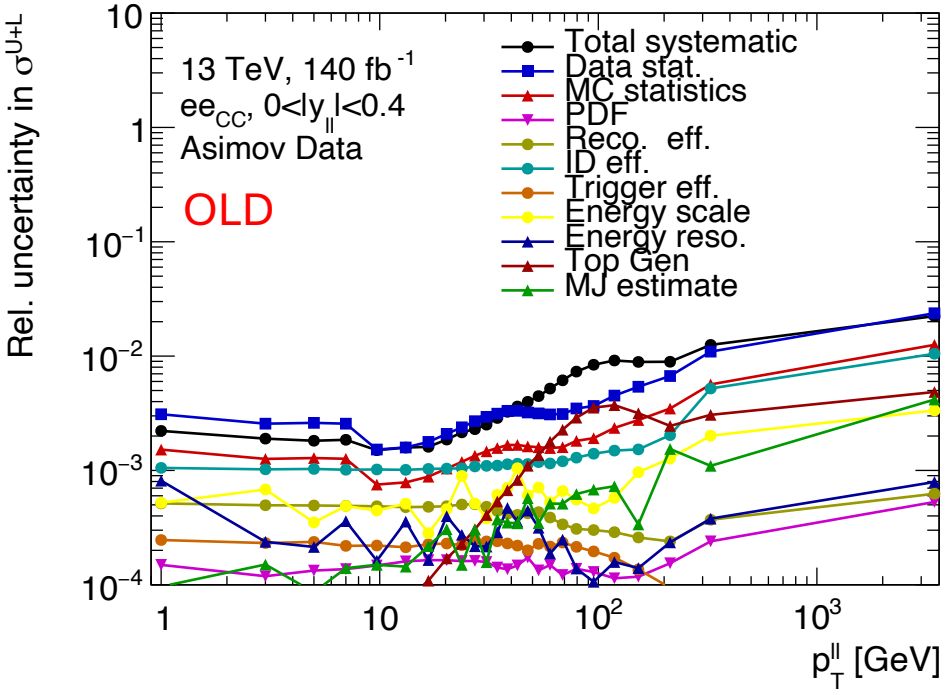
Trigger SFs



PDF variations

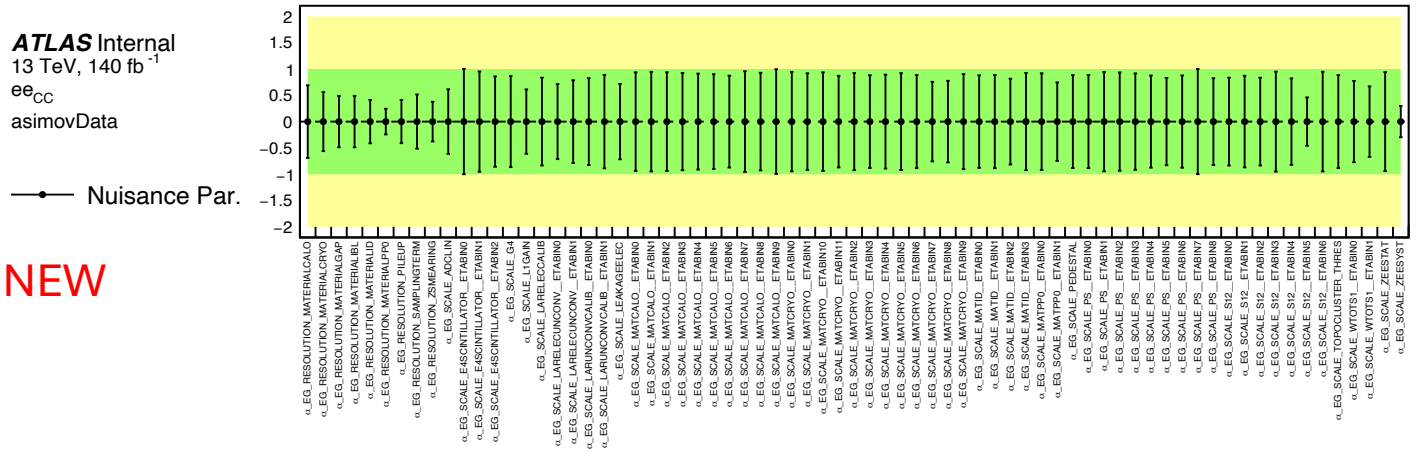
Comparison to old Ntuples

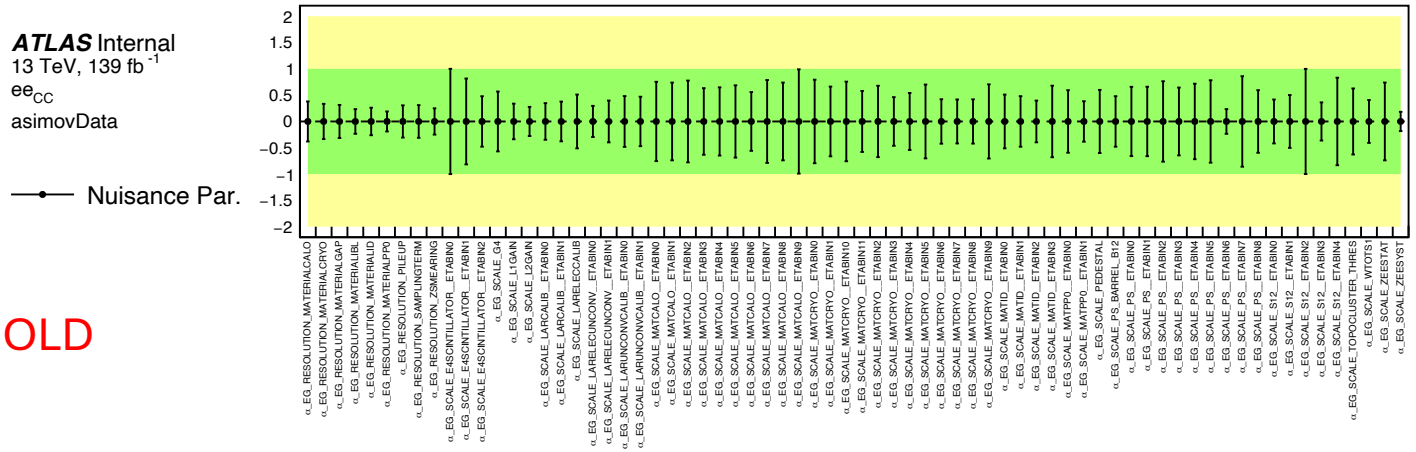




- Only difference in the ntuples is the e/gamma calibration recommendation ⇒ changes should be seen to the energy scale (yellow) and resolution (indigo).
- Both behave much more smoothly now and have decreased in magnitude(?)

Comparison to old Ntuples – Pull plots





- Slightly different set of NPs but the calibration pulls now look a lot better than previously, good job e/gamma!

CC – What needs to be done?

- Fit using observed data rather than Asimov:
  - 370 fit iterations and counting as of 02.05.24 16:42
- Compatibility with the muons
  - Previously did a statistical only fit with good agreement for the Ai but not for the XS
  - Include systematics into the fit!
  - Update to latest muon version (?), contact Alexis and Oleg to find out where the latest ntuples are and then run scans/fit workspace/fit obs data
- Start on the scans for s2w!
  - Much simpler binning to start with, 9 template bins vs 125 for the Ai, so it should be much quicker to run and get results
  - Fitting might also be simpler, (only A3 and A4 vs 8 Ai + XS) need to check in aidy first