Resolution Update

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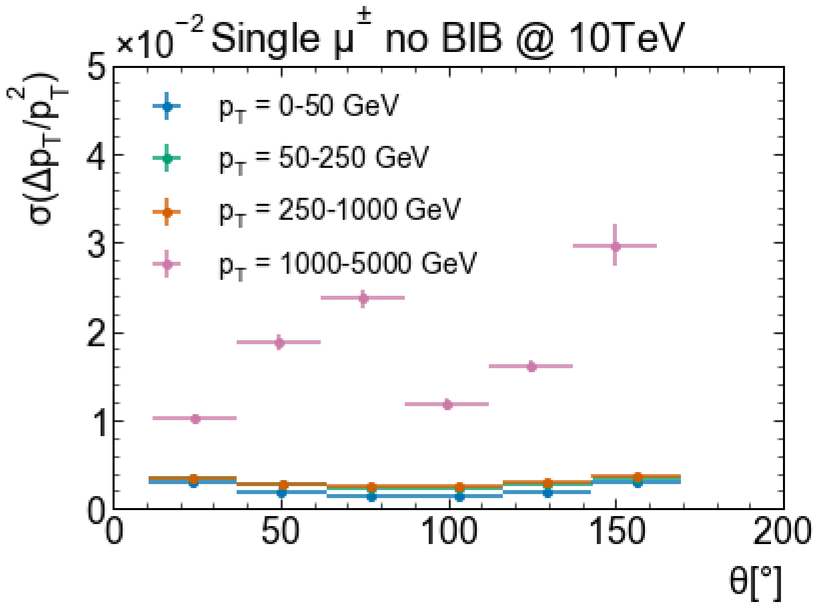
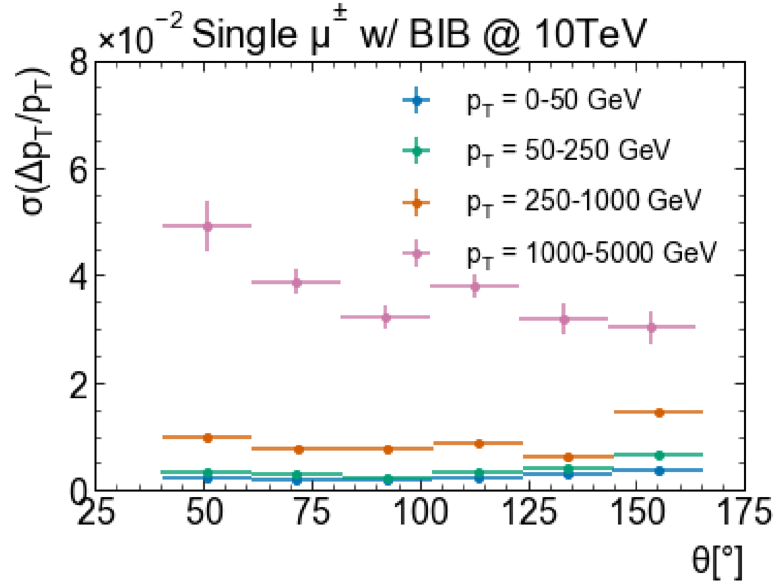
1-5 TeV Dataset

- Less data: the pT and theta distributions are thrown independently so sometimes you'd generate particles with p>5 TeV which would be unphysical, so these combinations are filtered away
- Very asymmetrical resolutions

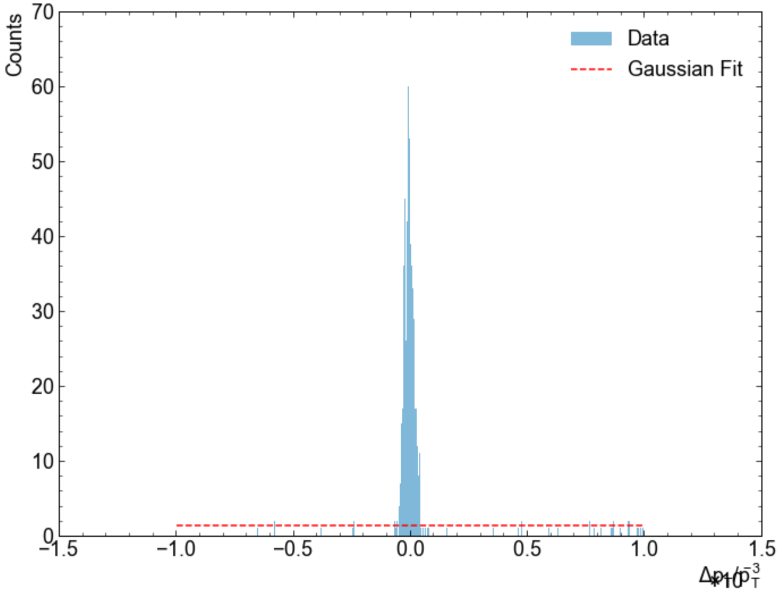


NB: this is $\sigma(\Delta p_T/\, p_T)$,
not $\sigma(\Delta p_T/{p_T}^2)$

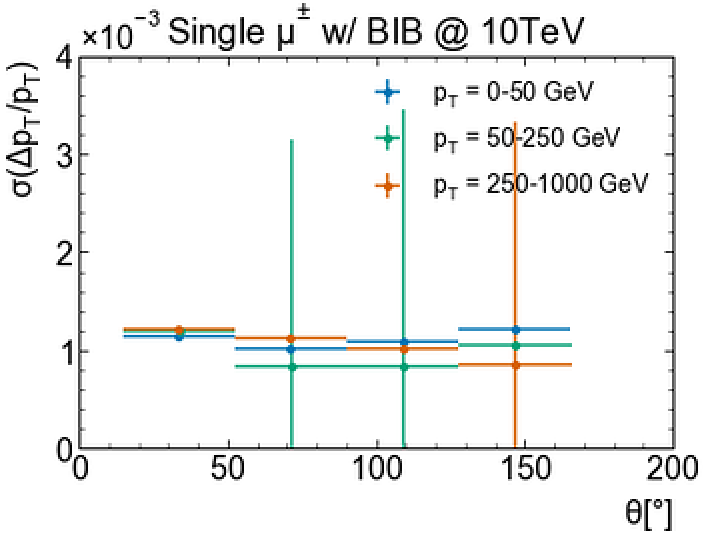


$\sigma(\Delta p_T/{p_T}^2)$

- With high pT, when dividing by pT^2, it seems scipy's curvefit function struggles to find a good fit when looking at BIB

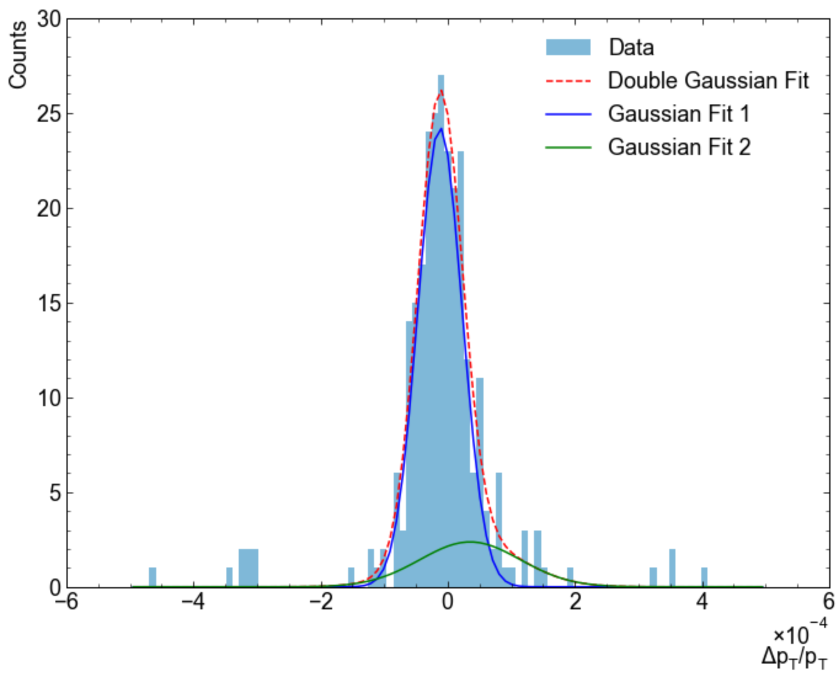


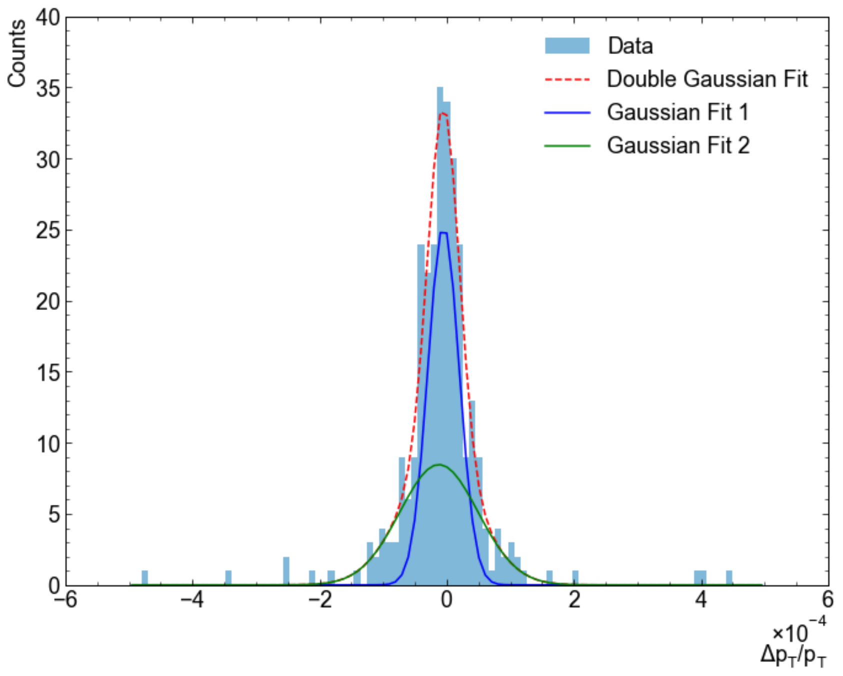
NB: this is $\sigma(\Delta p_T/{p_T}^2)$, not $\sigma(\Delta p_T/\ p_T)$



Fixes

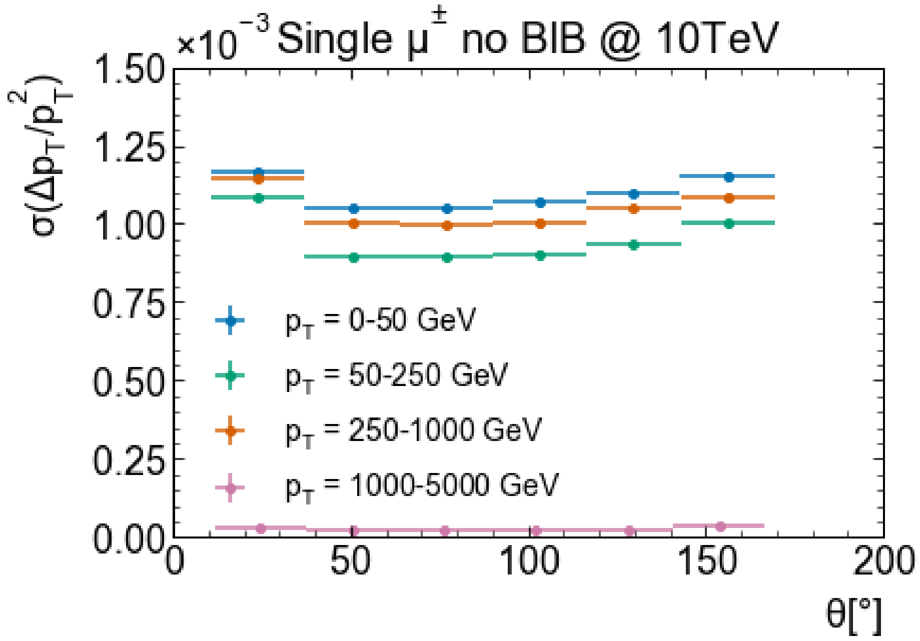
- Tried making fit more adaptable – try single gaussian first, and try double if that did not work

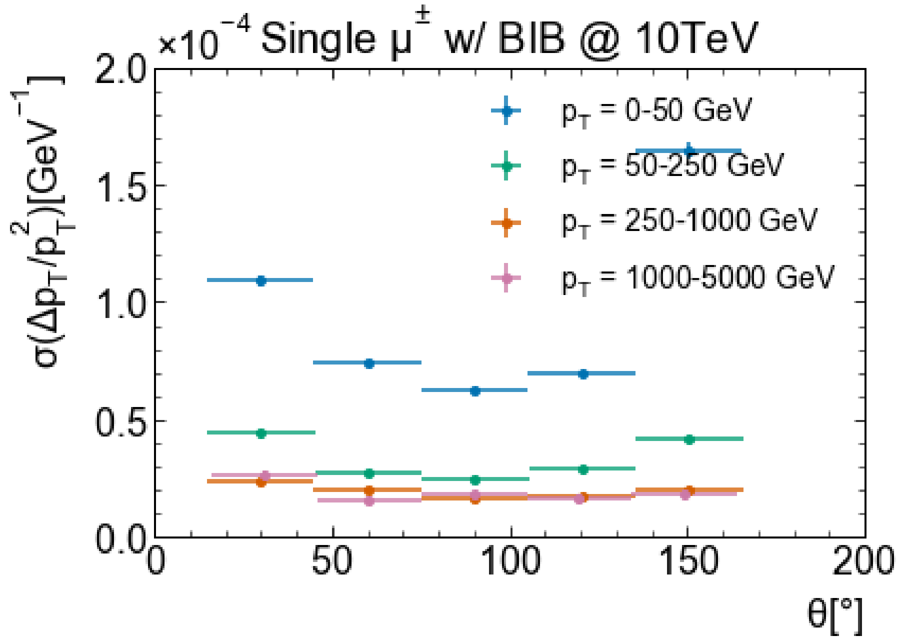




Results

- The relative pT resolution degrades with higher pT, but this occurs slower than the pT increase itself
- With BIB the effect is less pronounced





Paper Changes

- Updated paper to reflect 1-5 TeV data
- Changed all plots on paper from .png → .pdf
- Comments/questions welcome