

# Cascade developer meeting

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# Conferences

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- REF 2022 (<https://indico.desy.de/event/32950/>)
  - open for registration
  - abstract submission opens soon

# CASCADE news

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- cascade-3.2.3 (on hepforge)
  - Bug in merging procedure found: normalization in hepmc file was wrong → corrected (thanks to Armando)
- New features: 3.2.4 (to be released)
  - possibility to switch starting scale for IPS to shat of process
  - possibility for running IPS with collinear pdfs (instead of TMDs)
  - optional hadronization with pythia8

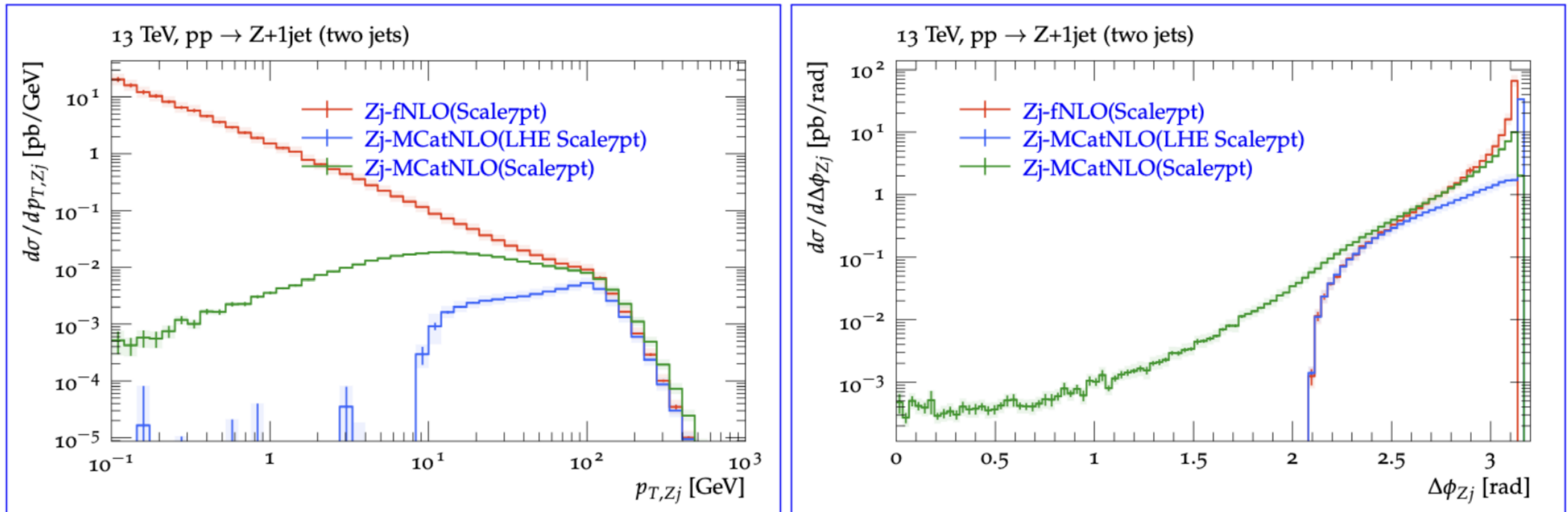
# Status on Z+j paper

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- Z+j correlation paper on arXiv: [2204.01528](#)
  - send to EPJC (including references to Z+j TMD calculations)
  - Referee comments received on 29 April

# Updates

- Text updates in Intro, Section 1+2
- Fig 2: LHE prediction included, finer binning for  $\Delta\phi$



- Mention of “winner-takes-all” results
- Appendix:
  - argue on NLO accuracy
  - show only 1 and 2nd jet

# Any further comments to new paper draft ?

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# Comments on “winner-takes-all”

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- Francesco:

- could one be sensitive to the differences in shape between wta and standard jets if one looked at the large Delta-phi region with fine binning?

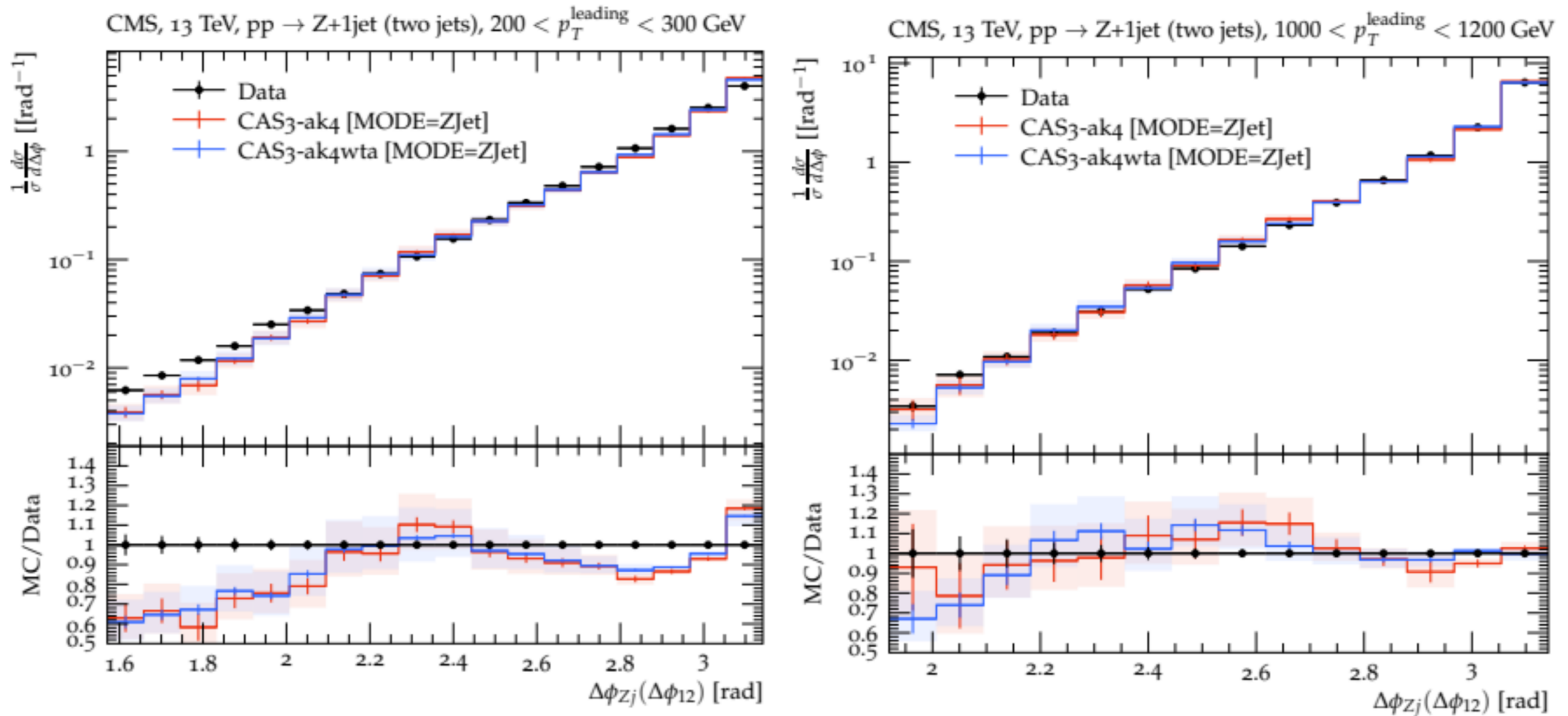
I guess this would be interesting in either case - whether there is a different shape or there isn't

if we don't see any different shape, it means the non-global logs that people worry about are not such a large effect after all, and this would be an interesting result on its own.

if we see a different shape, then we would have one more tool to disentangle potential factorization breaking effects by using the jet definition as well - which would overall strengthen the case we are trying to make for measuring Delta-phi

- we have already results from the studies of Laura and Kaspar (school interns a few weeks ago)

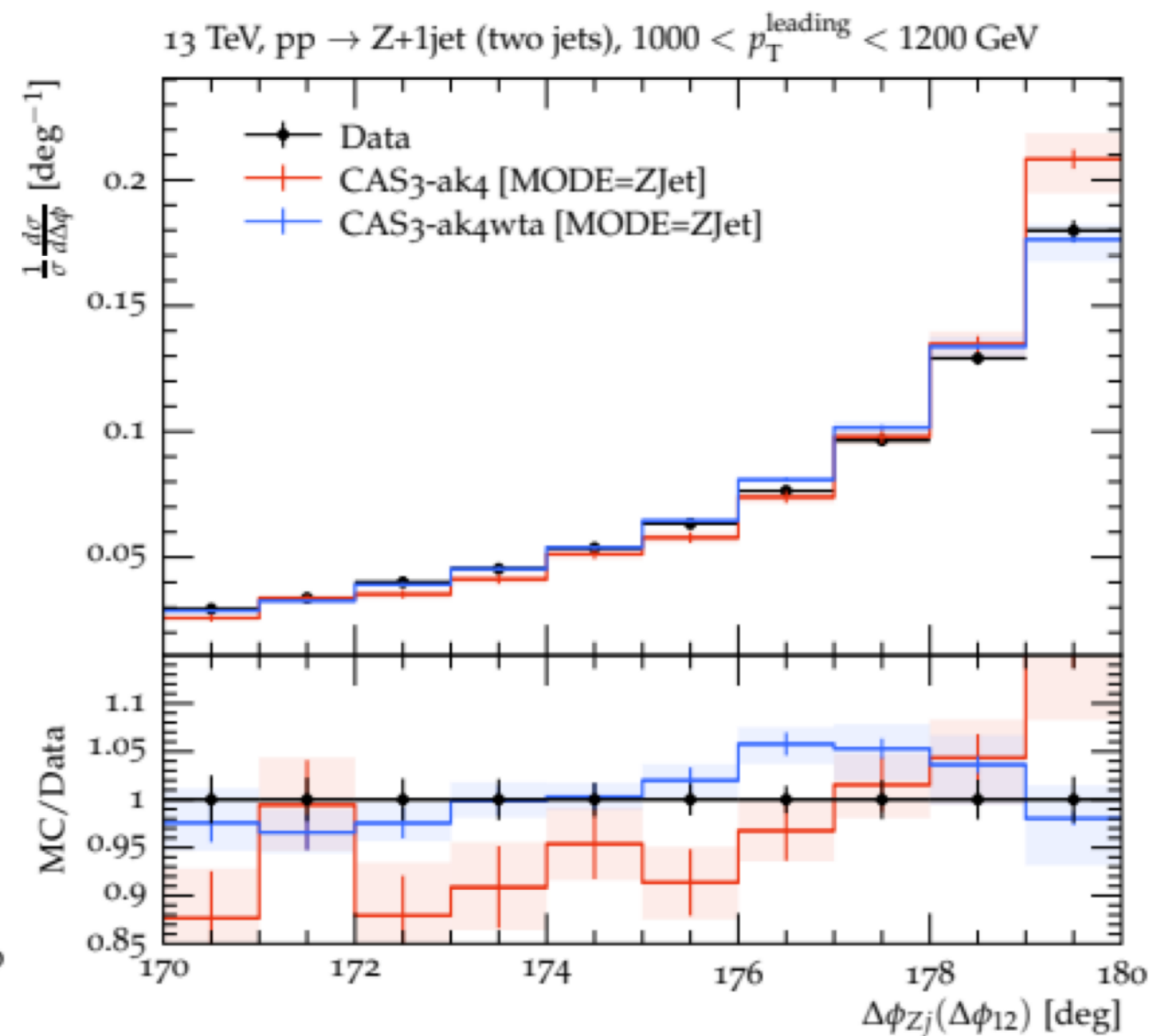
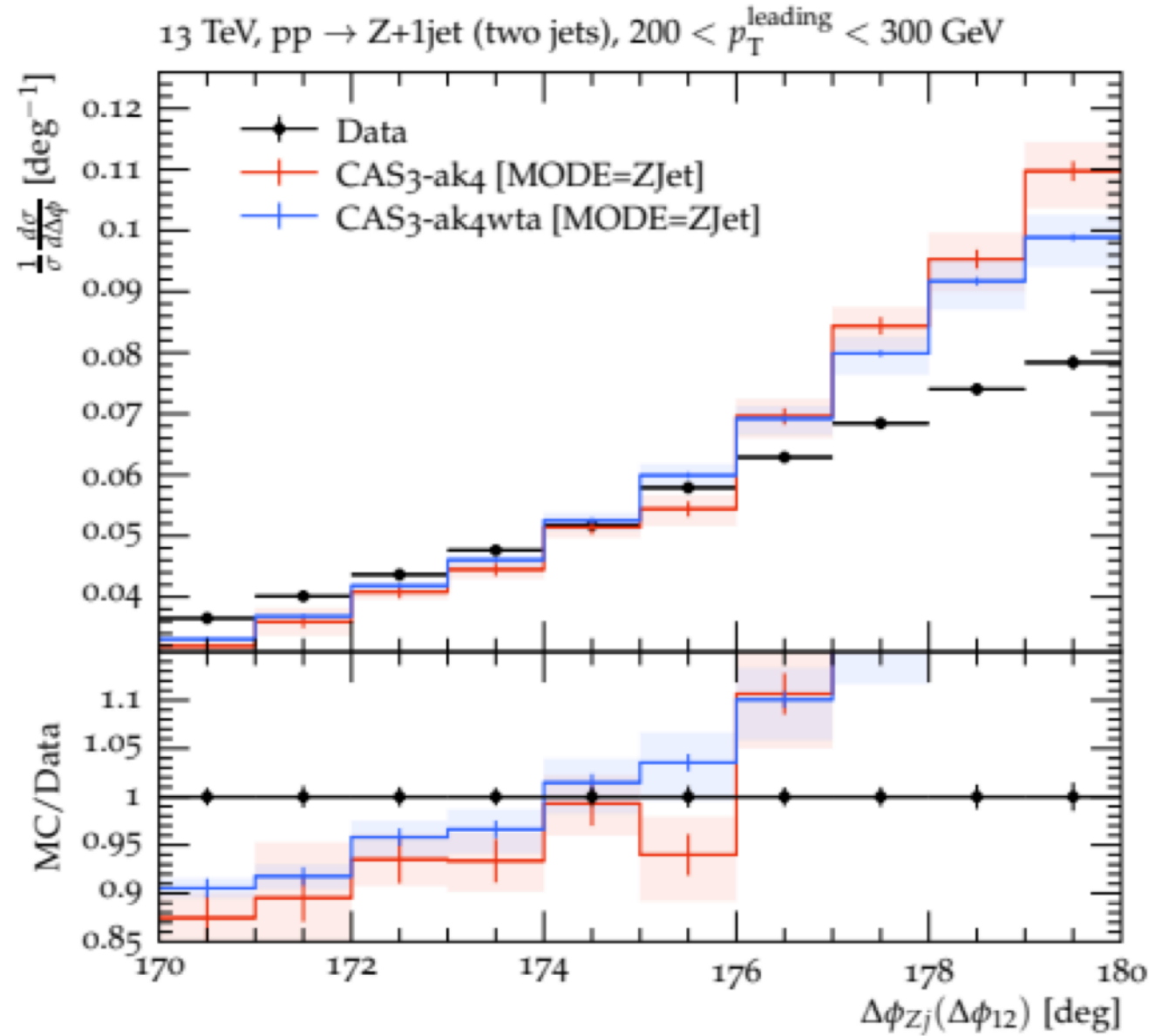
# Comments on “winner-takes-all”



- overall shapes are very similar



# Comments on “winner-takes-all” back-to-back



- shape different, especially last bin
- from this alone, we cannot conclude that effect of factorization breaking are smaller, we would need to run also on multijets to see if the ratio changes...

# AOB

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- Further news ?