

Measurement of the differential cross-section of highly boosted top quarks as a function of their transverse momentum using the ATLAS detector in $\sqrt{s}=8$ TeV proton-proton collisions*

ATLAS-CONF-2014-057

Francesco Spanò



Papers by ATLAS and CMS on diffxsec

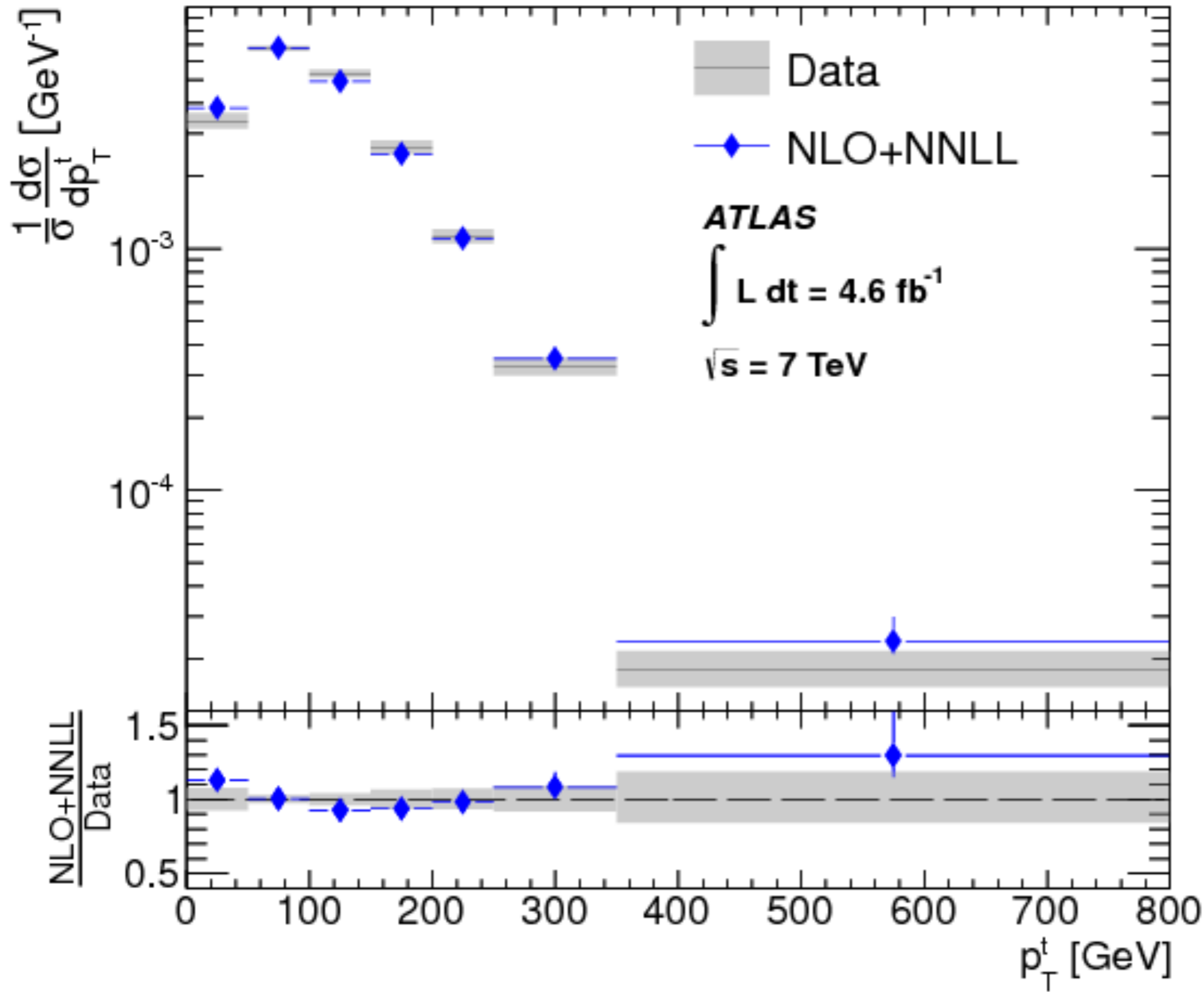


ATLAS

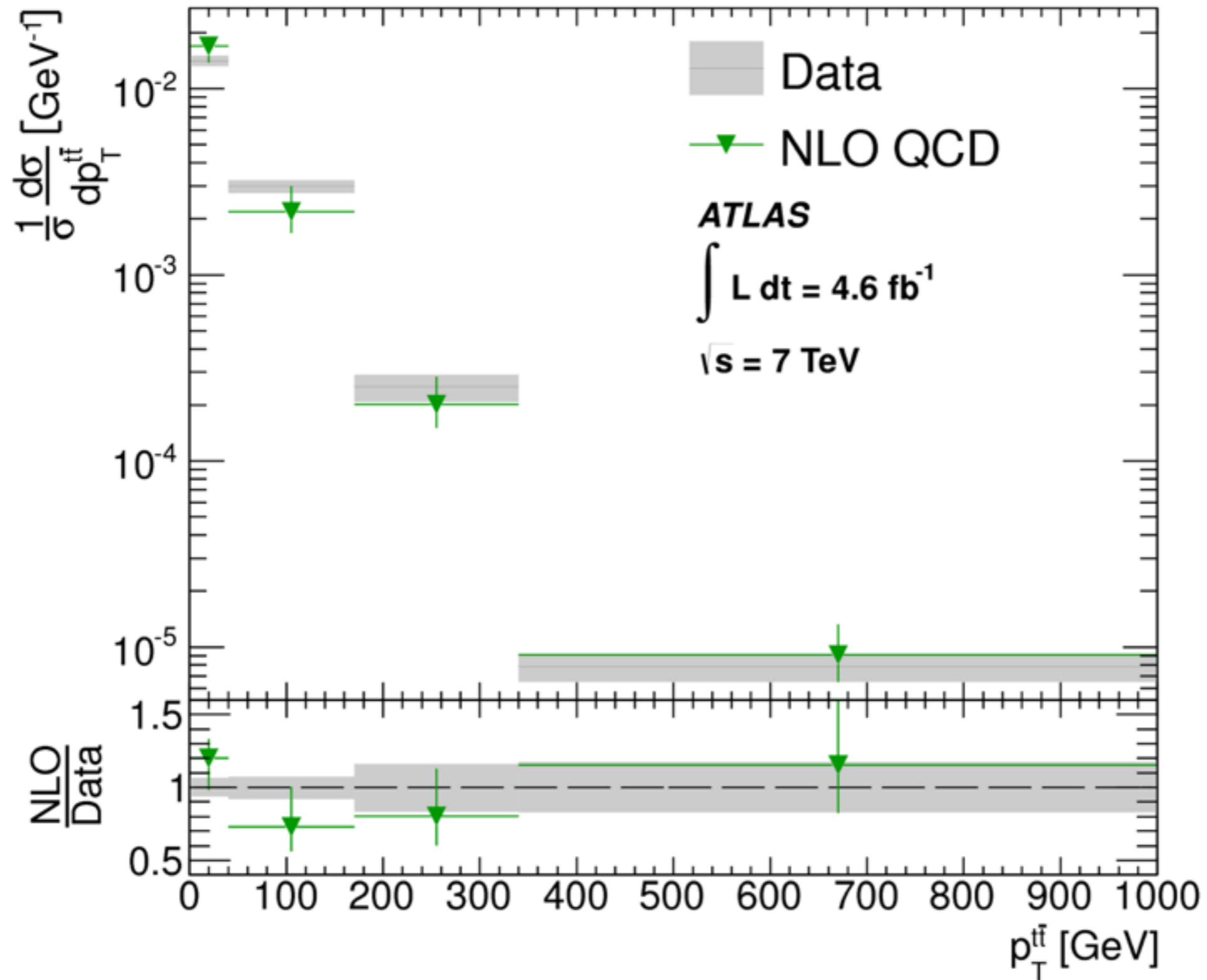
- *Measurement of the differential cross-section of highly boosted top quarks as a function of their transverse momentum using the ATLAS detector in $\sqrt{s} = 8$ TeV proton-proton collisions* ATLAS-CONF-2014-057:
- *Differential top-antitop production cross-section measurements in pp collisions at $\sqrt{s} = 7$ TeV as a function of pseudo-top-quark observables in the single-lepton channel using the ATLAS detector.* ATLAS-CONF-2014-059
- *Comprehensive measurements of t-channel single top-quark production cross sections at $\sqrt{s} = 7$ TeV with the ATLAS detector* <http://arxiv.org/abs/1406.7844>, accepted by Phys. Rev D.
- *Measurement of the top-anti-top production cross-section as a function of jet multiplicity and jet transverse momentum produced in 7 TeV proton-proton collisions with the ATLAS detector* <http://arxiv.org/abs/1407.0891>
- *Measurements of top-quark pair differential cross-sections in the l+jets channel in pp collisions at $\sqrt{s} = 7$ TeV using the ATLAS detector* Phys. Rev. D 90, 072004
- *Measurements of top quark pair relative differential cross-sections with ATLAS in pp collisions at $\sqrt{s} = 7$ TeV* Eur. Phys. J. C (2013) 73: 2261

CMS

- *Measurement of the differential ttbar cross section in the lepton+jets channel at 8 TeV* CMS PAS TOP-12-027
- *Measurement of the differential ttbar cross section in the dilepton channel at 8 TeV* CMS PAS TOP-12-028
- *Differential measurement of the cross section of single top-quark production in the t-channel at 8 TeV* CMS PAS TOP-14-004
- *Measurement of differential top-quark pair production cross sections in pp collisions at $\sqrt{s} = 7$ TeV* EPJ C73 (2013) 2339



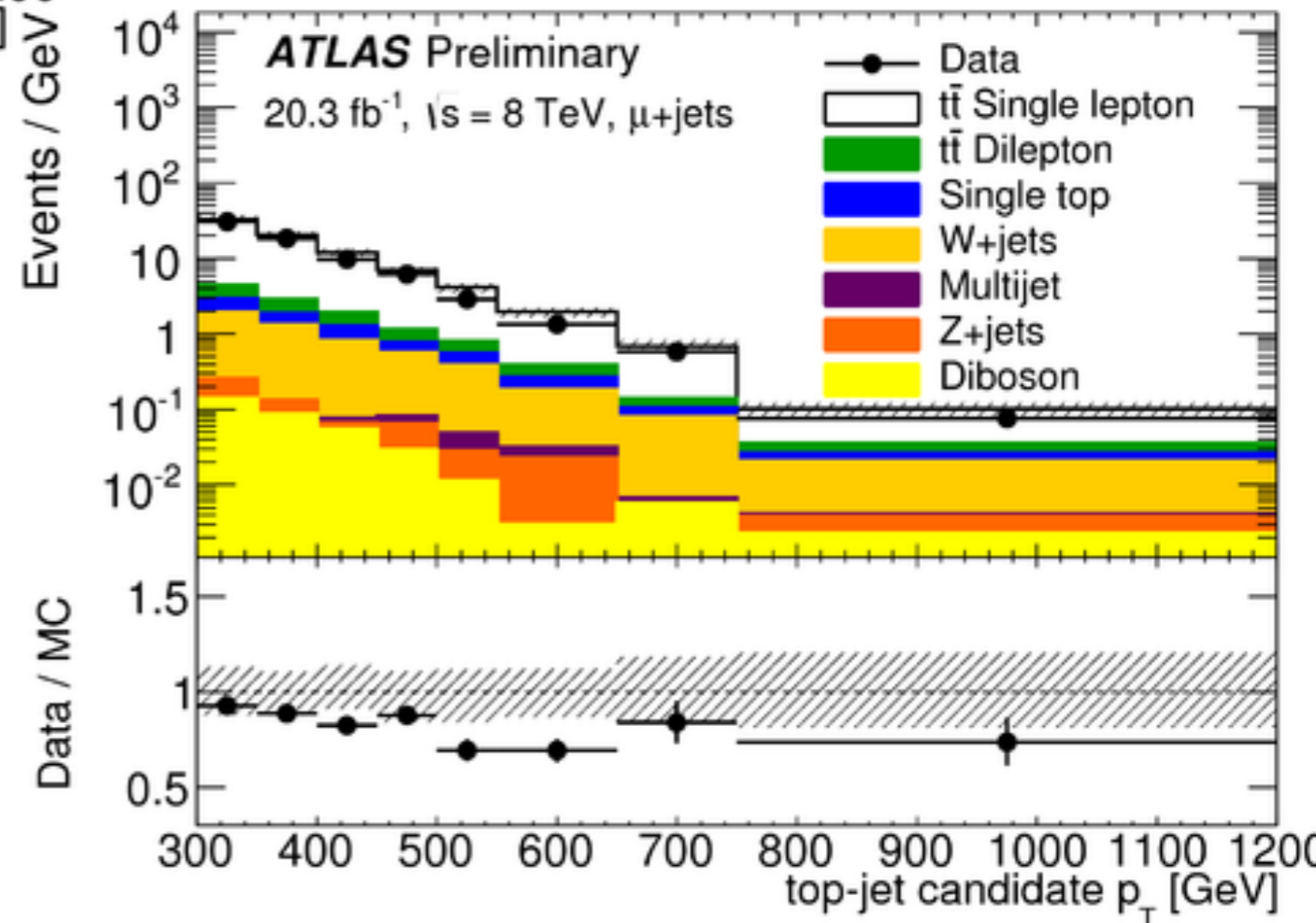
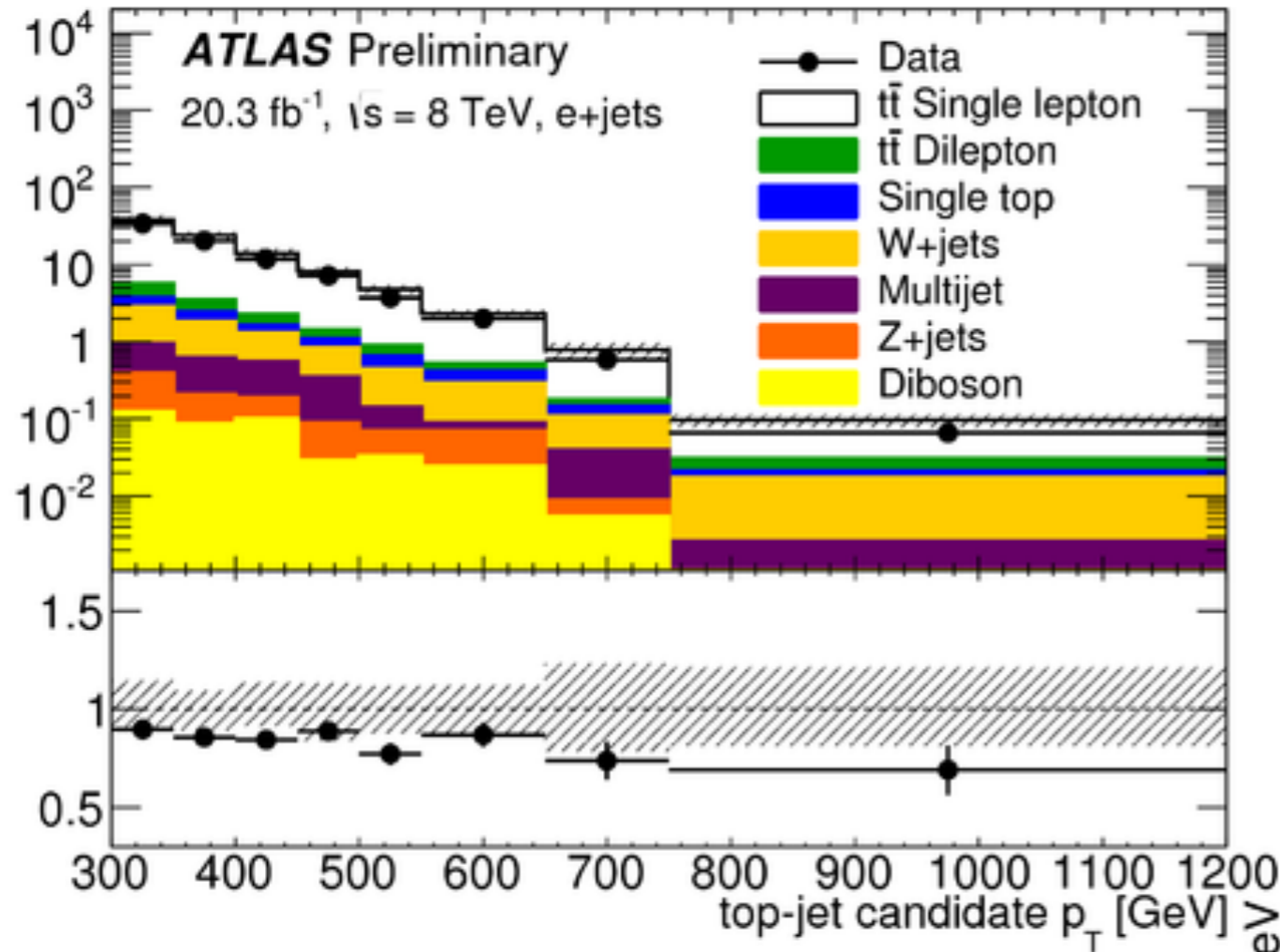
[Phys. Rev. D 90, 072004](#)



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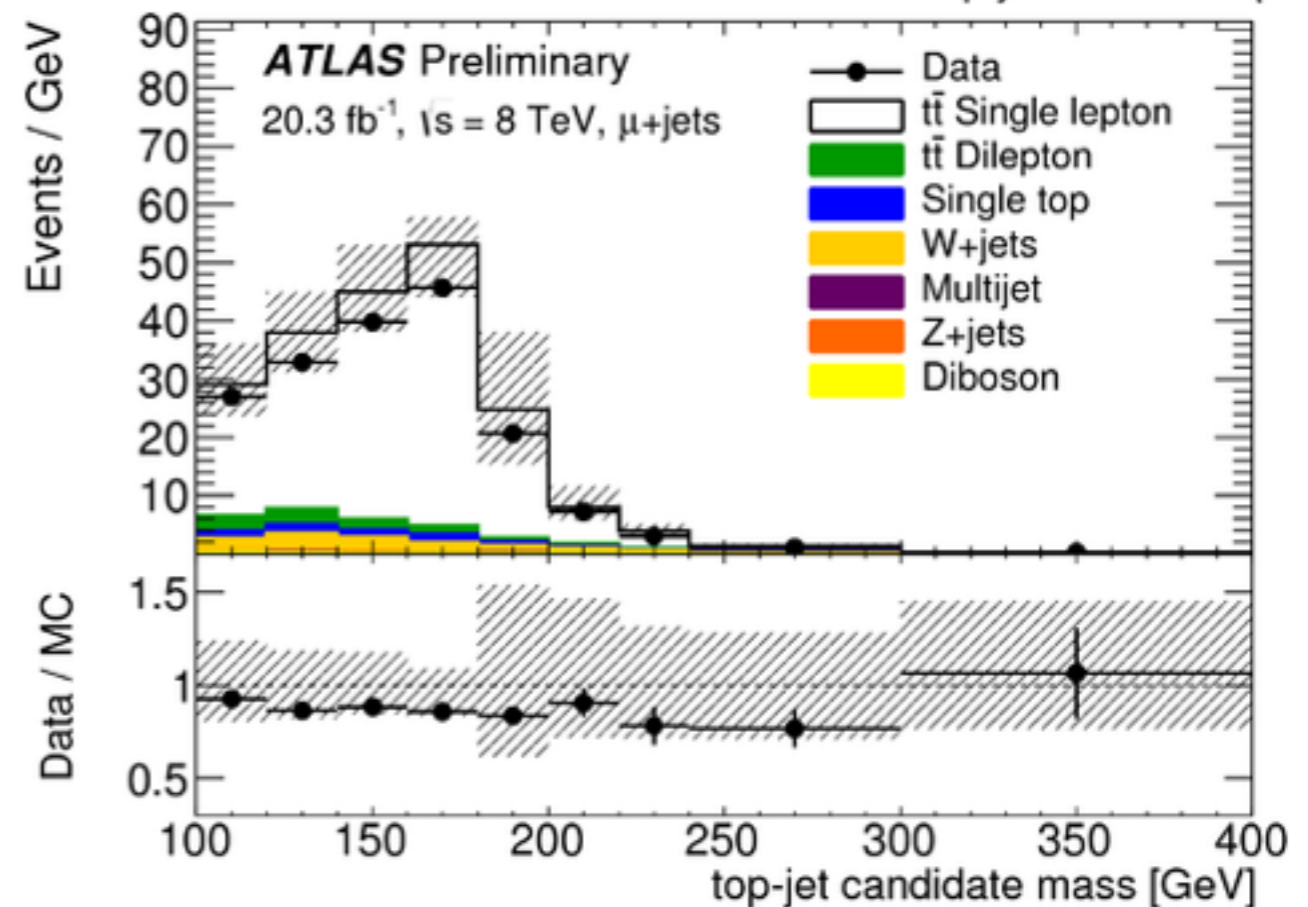
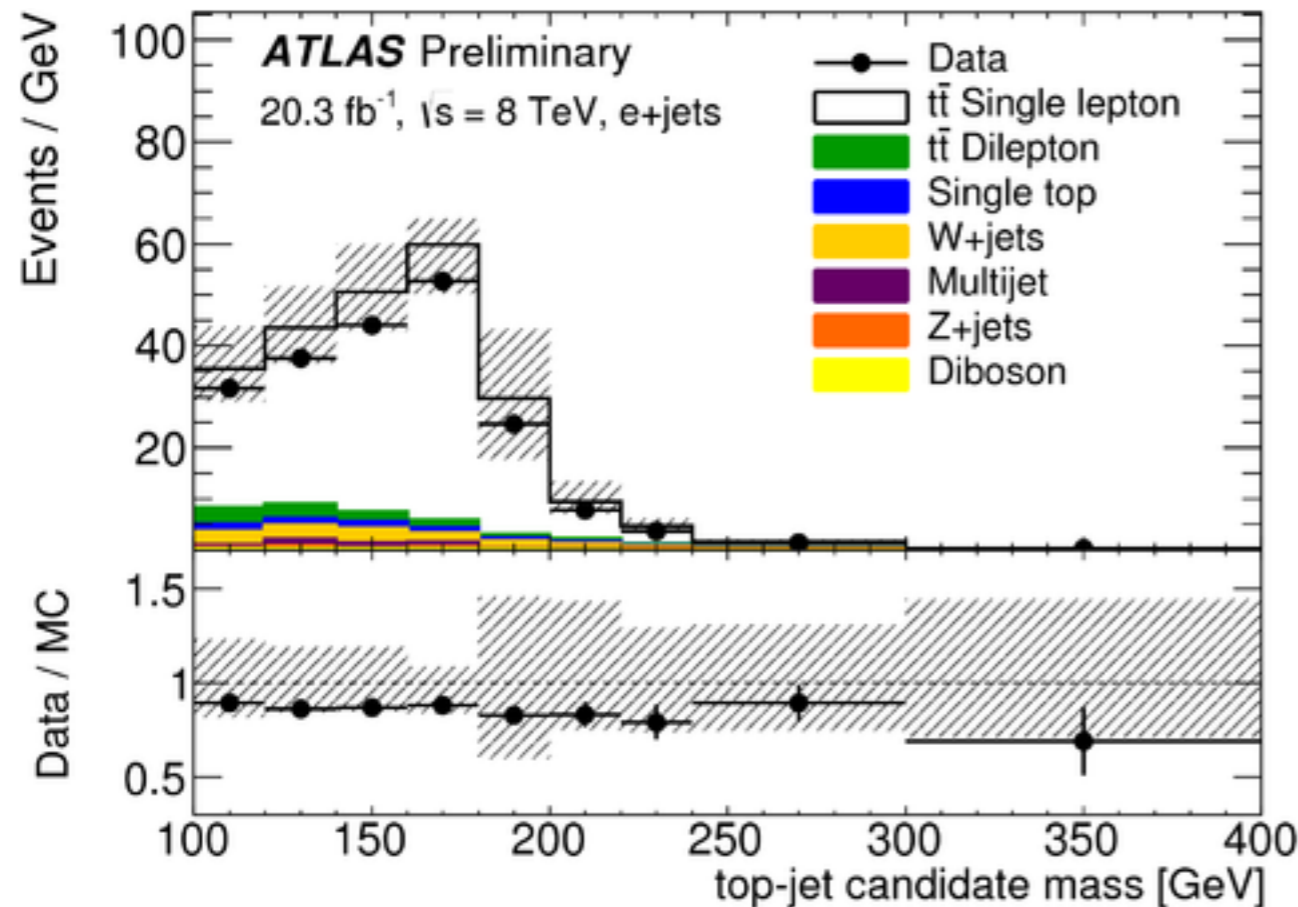
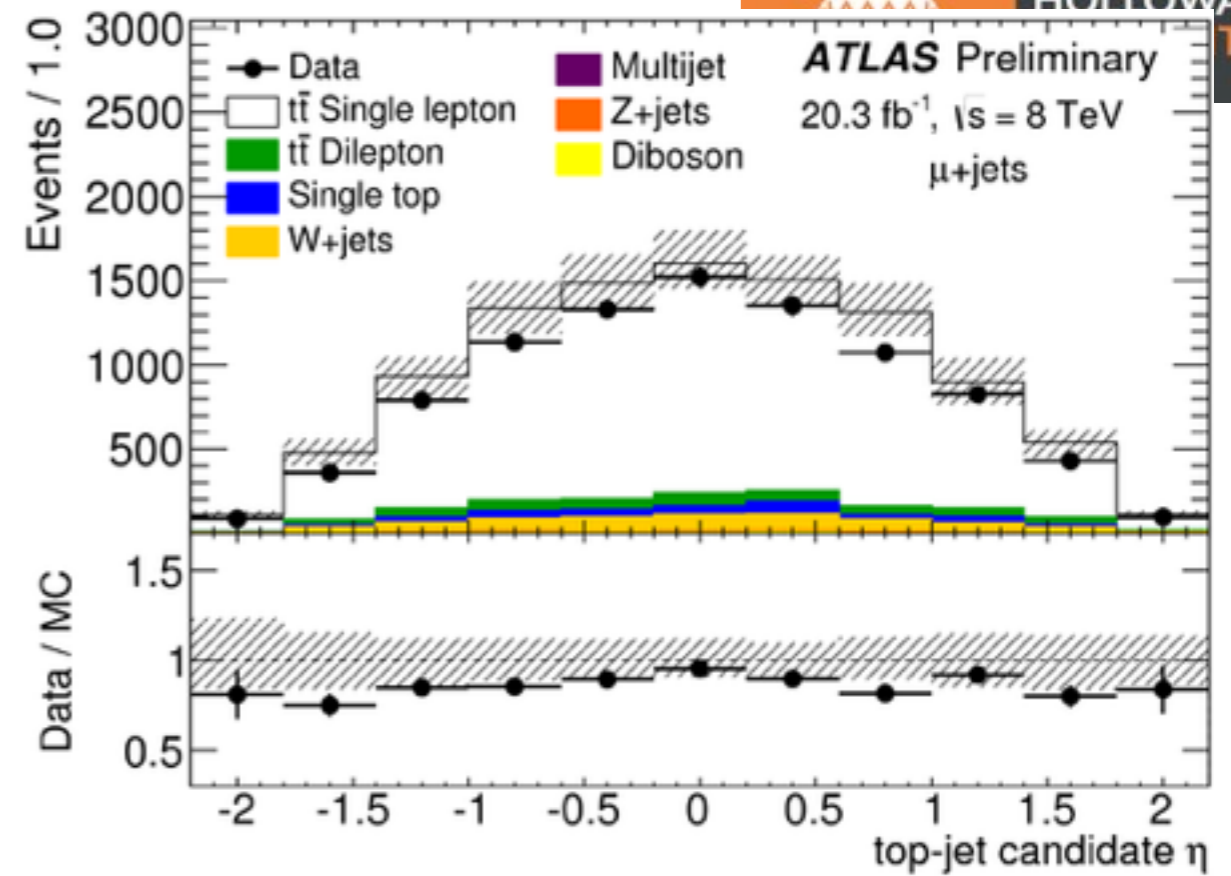
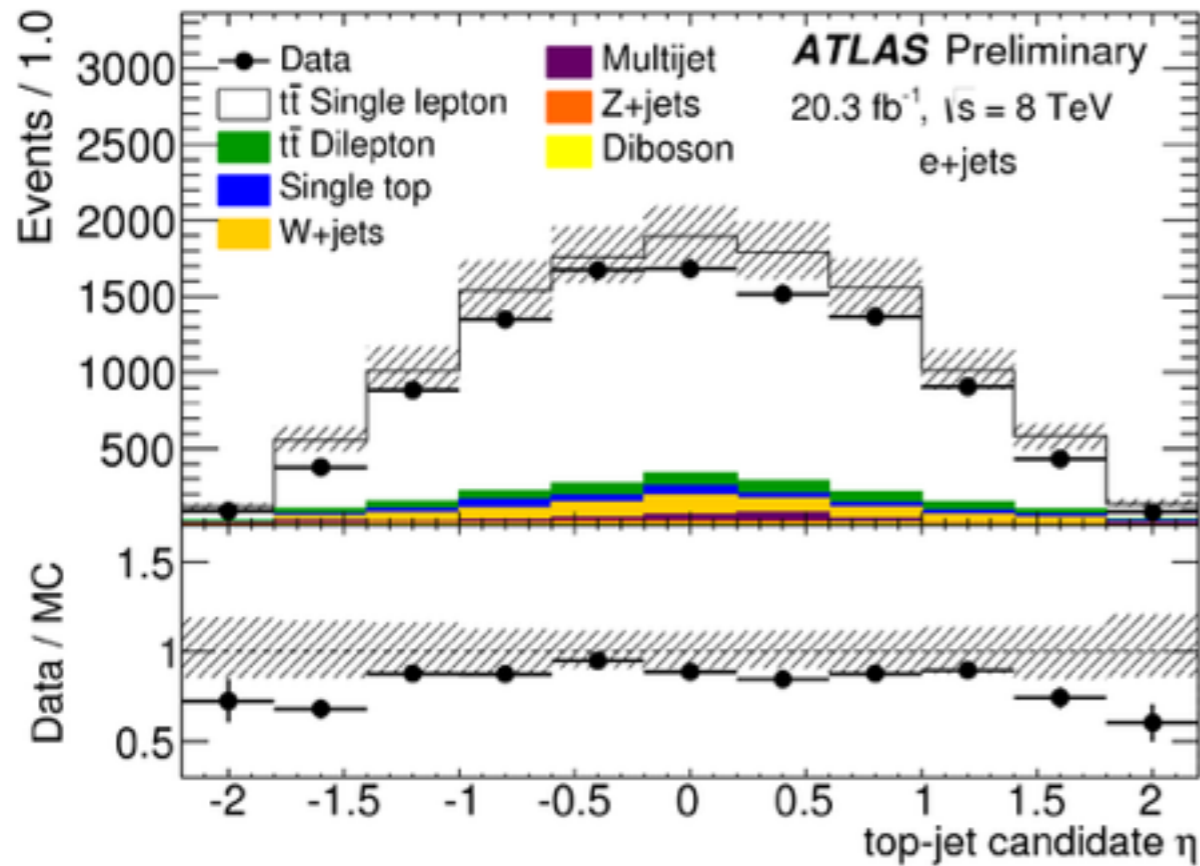
Data vs Prediction

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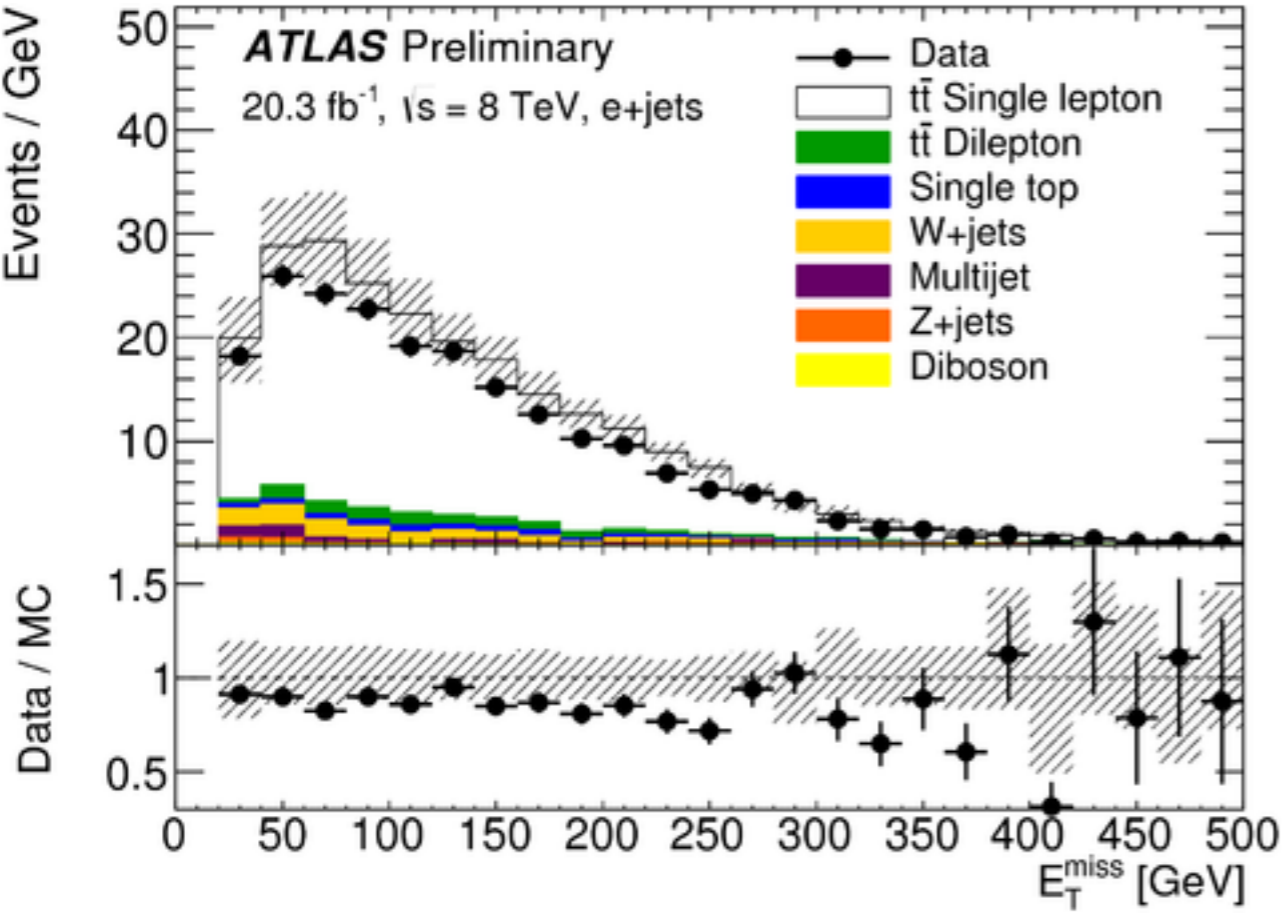


	e+jets	μ +jets
$t\bar{t} \ell$ +jets	4020 \pm 460	3500 \pm 400
$t\bar{t}$ dilepton	227 \pm 36	210 \pm 26
W+jets	263 \pm 50	252 \pm 48
single top	136 \pm 27	134 \pm 25
Multijet	91 \pm 17	3 \pm 1
Z+jets	34 \pm 18	14 \pm 8
Dibosons	22 \pm 11	18 \pm 9
Prediction	4790 \pm 540	4130 \pm 470
Data	4148	3604

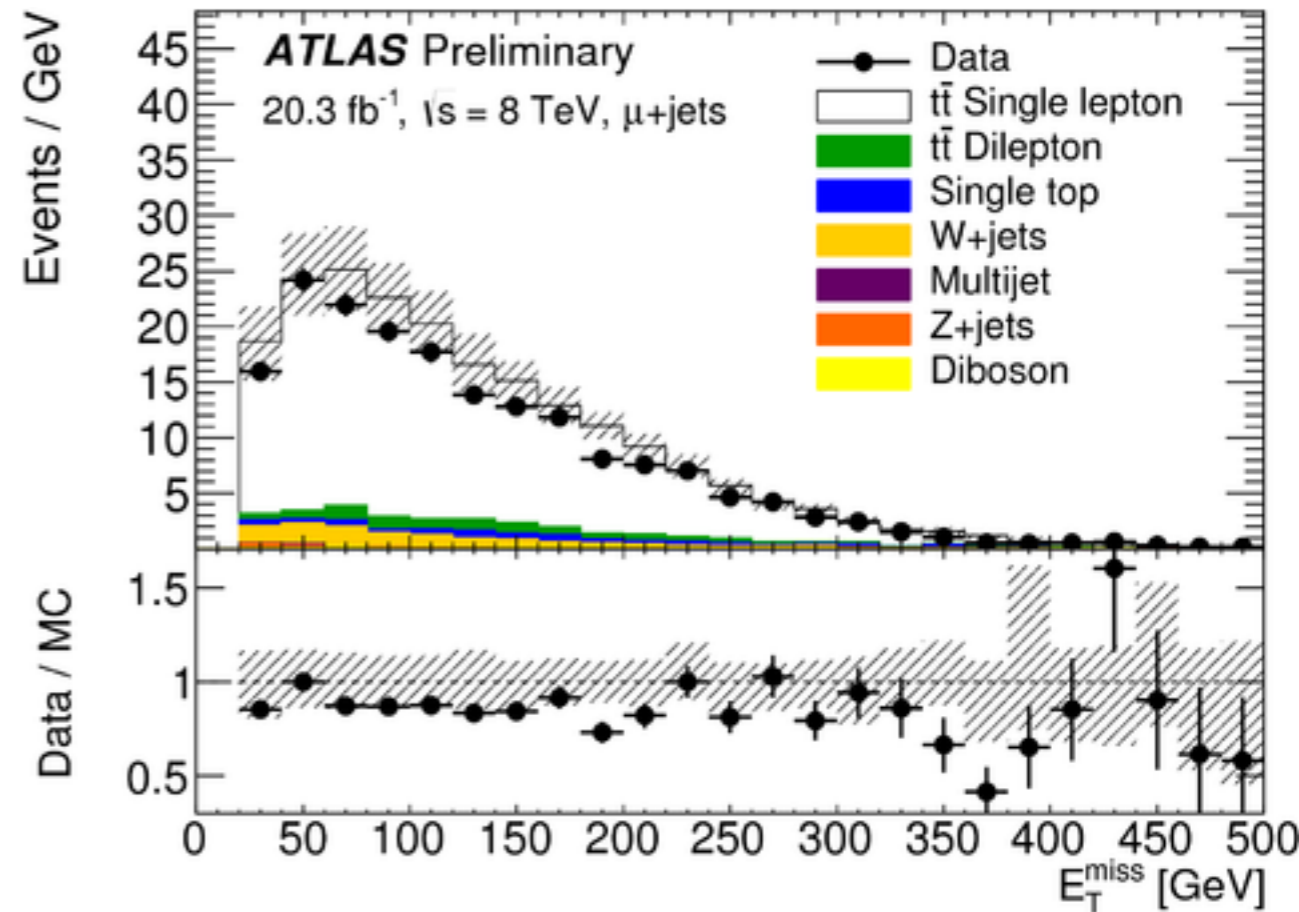
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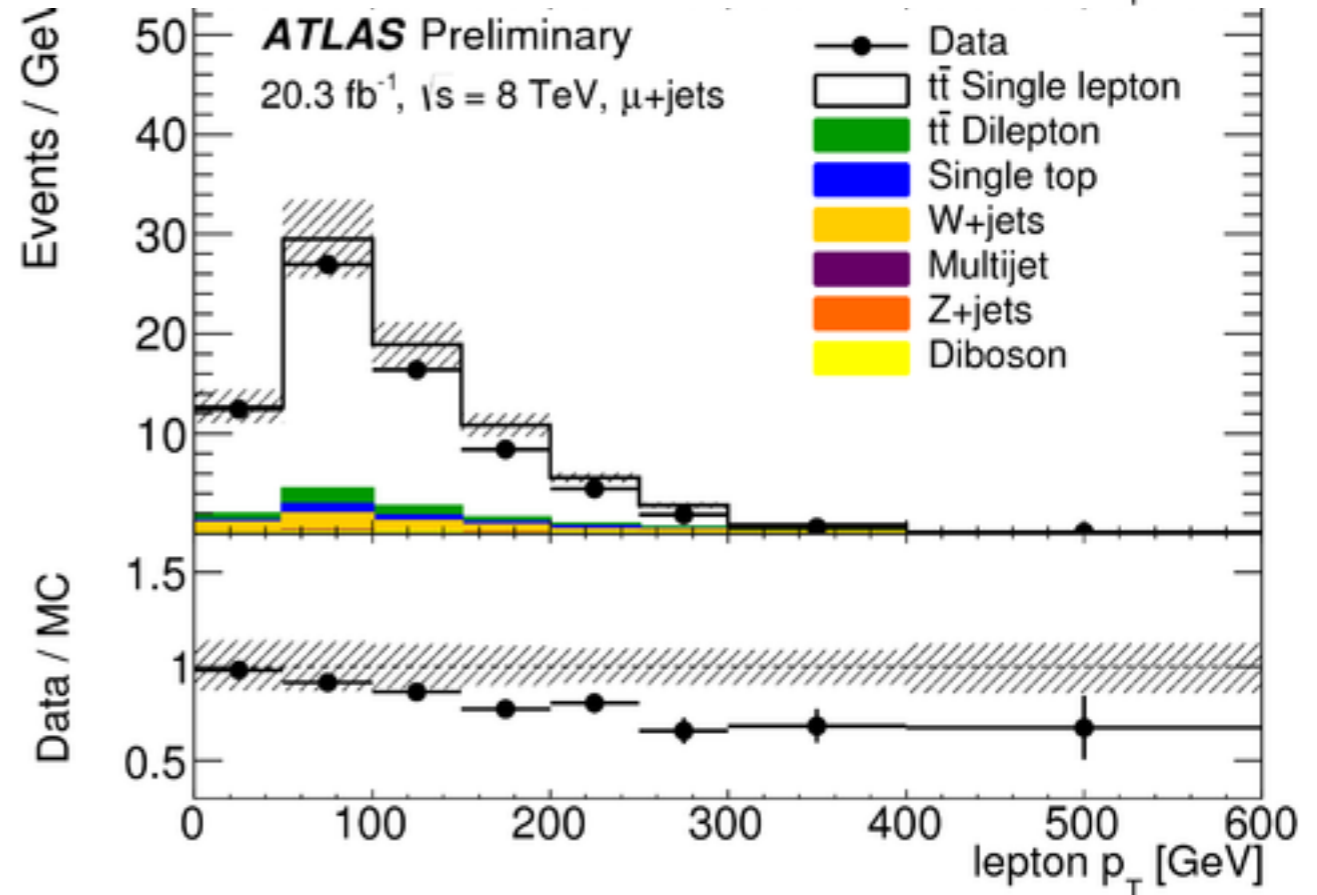
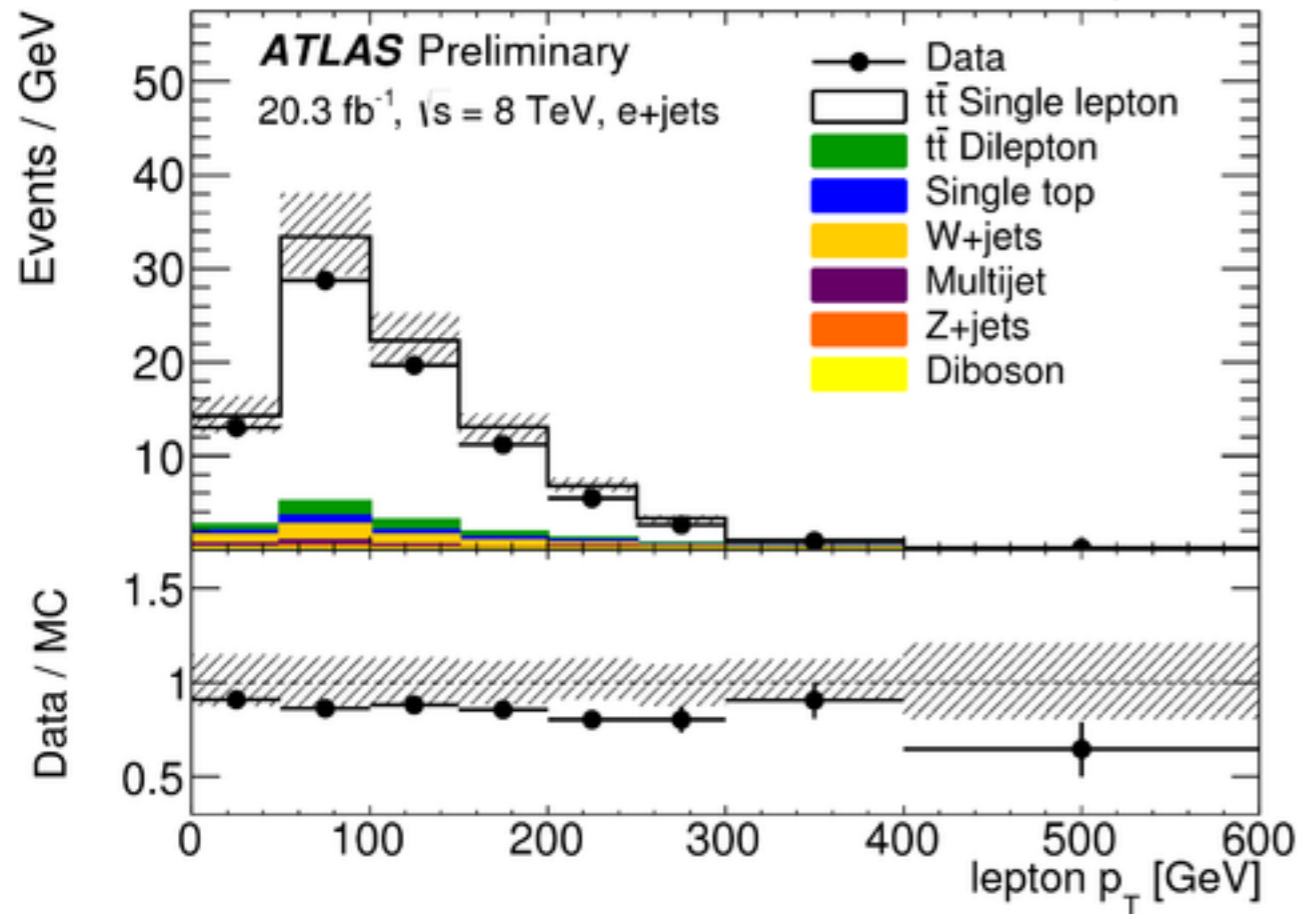
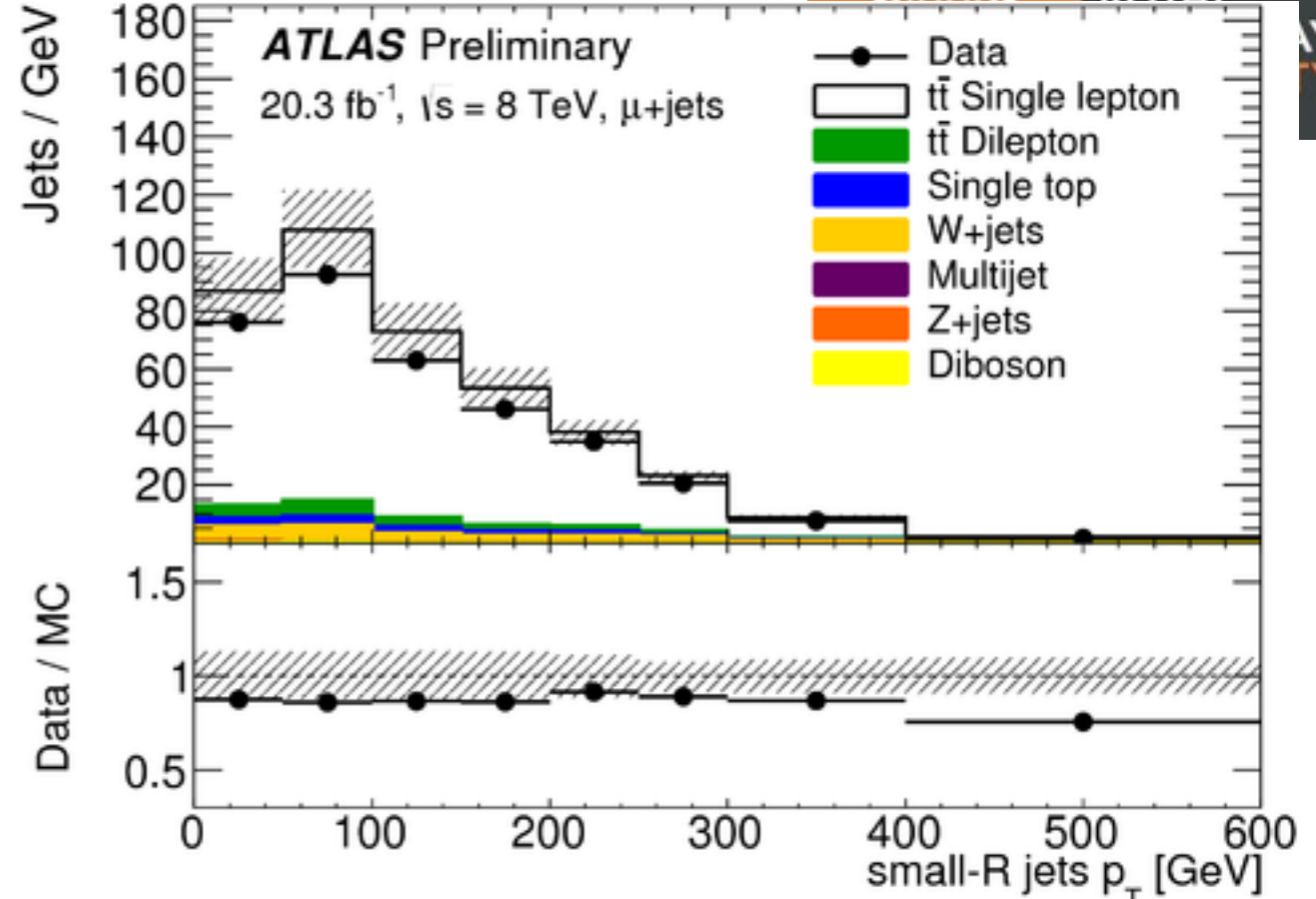
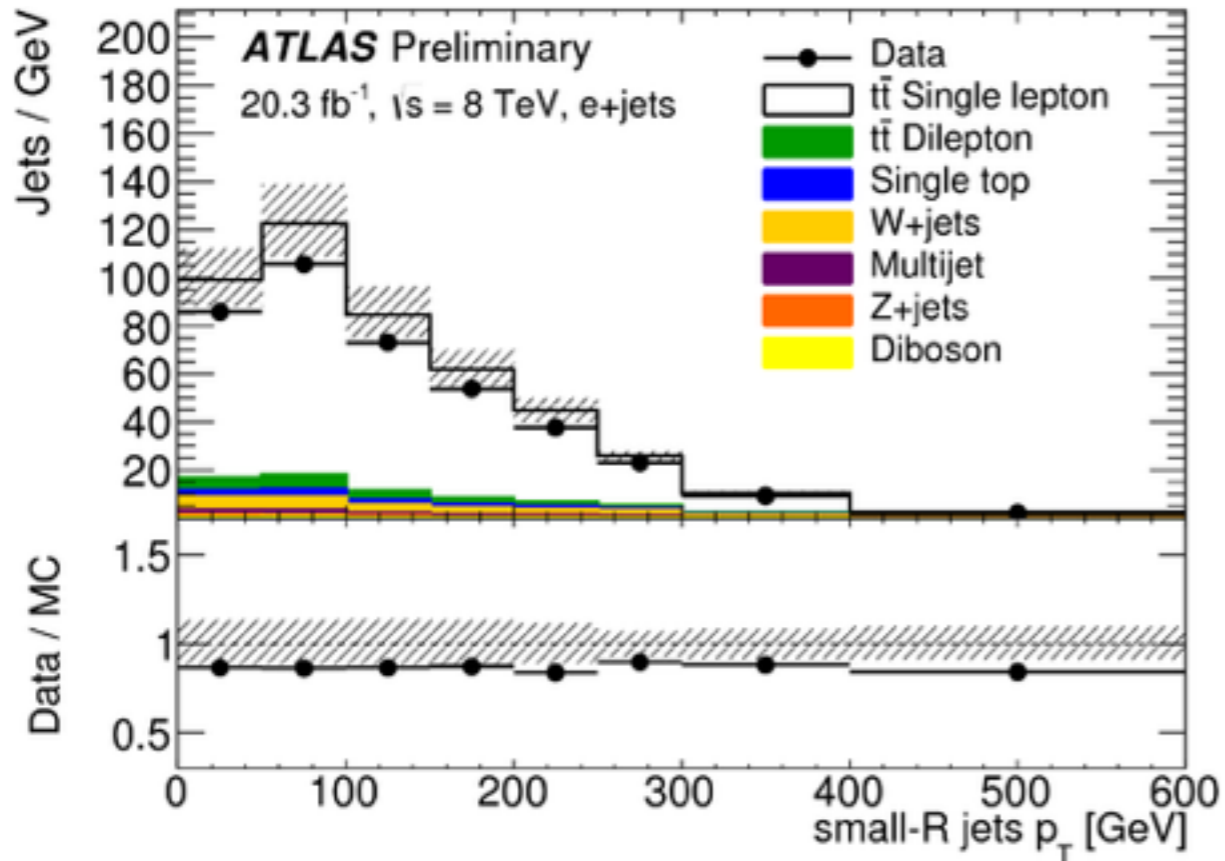
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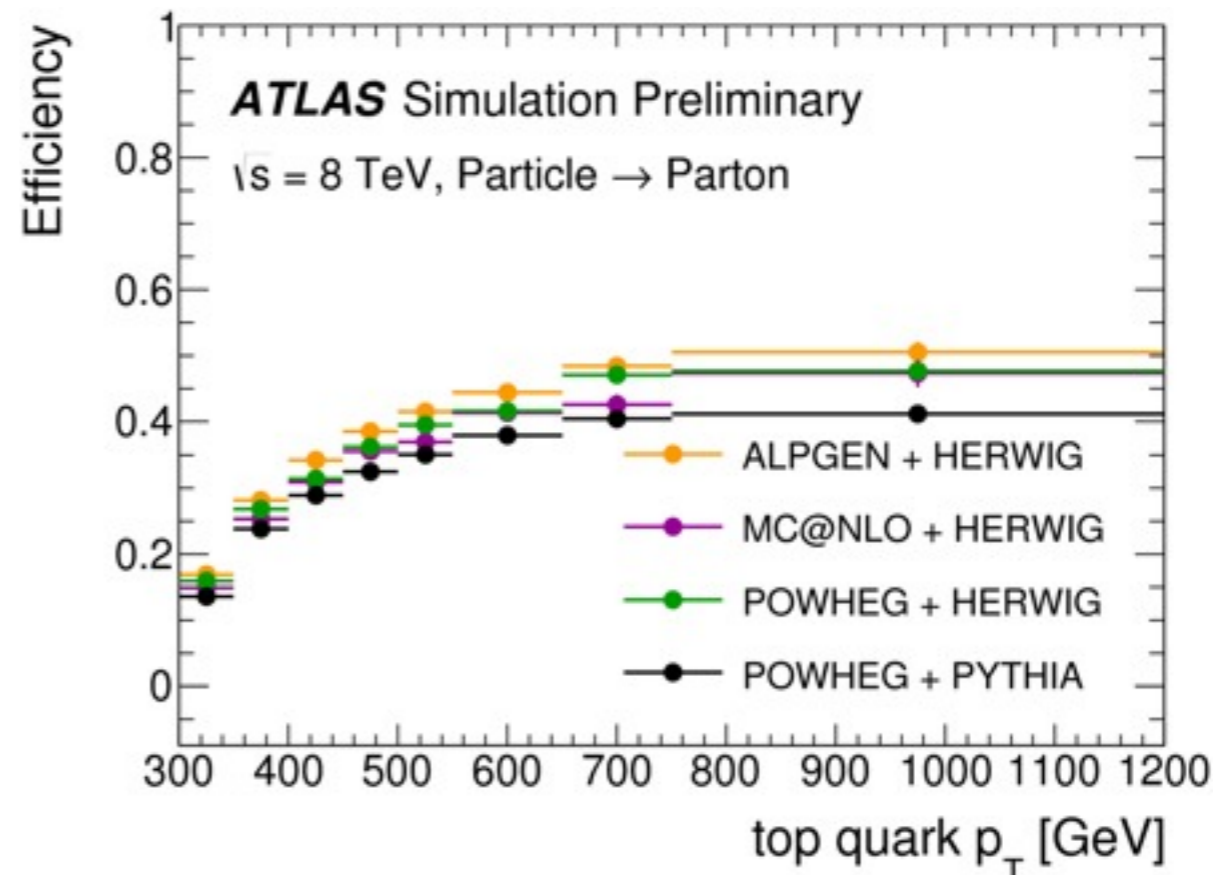
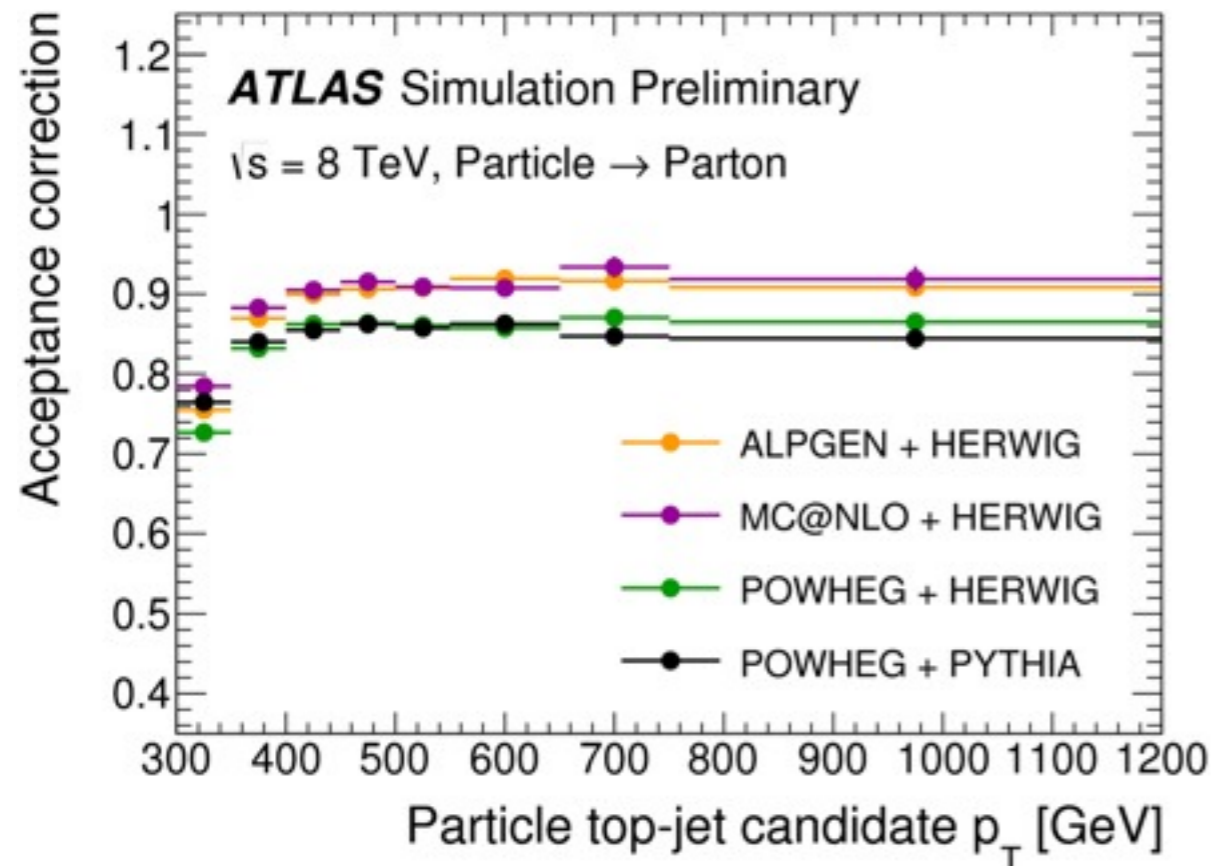
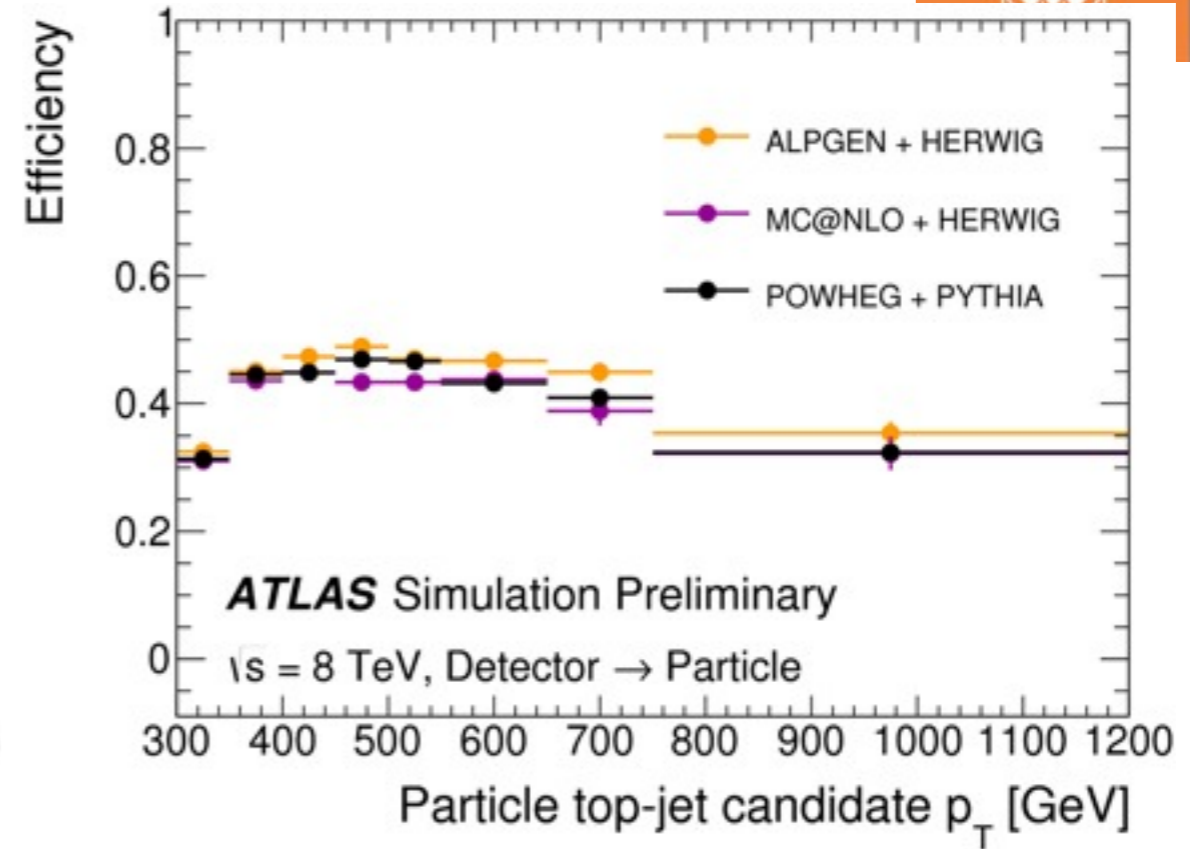
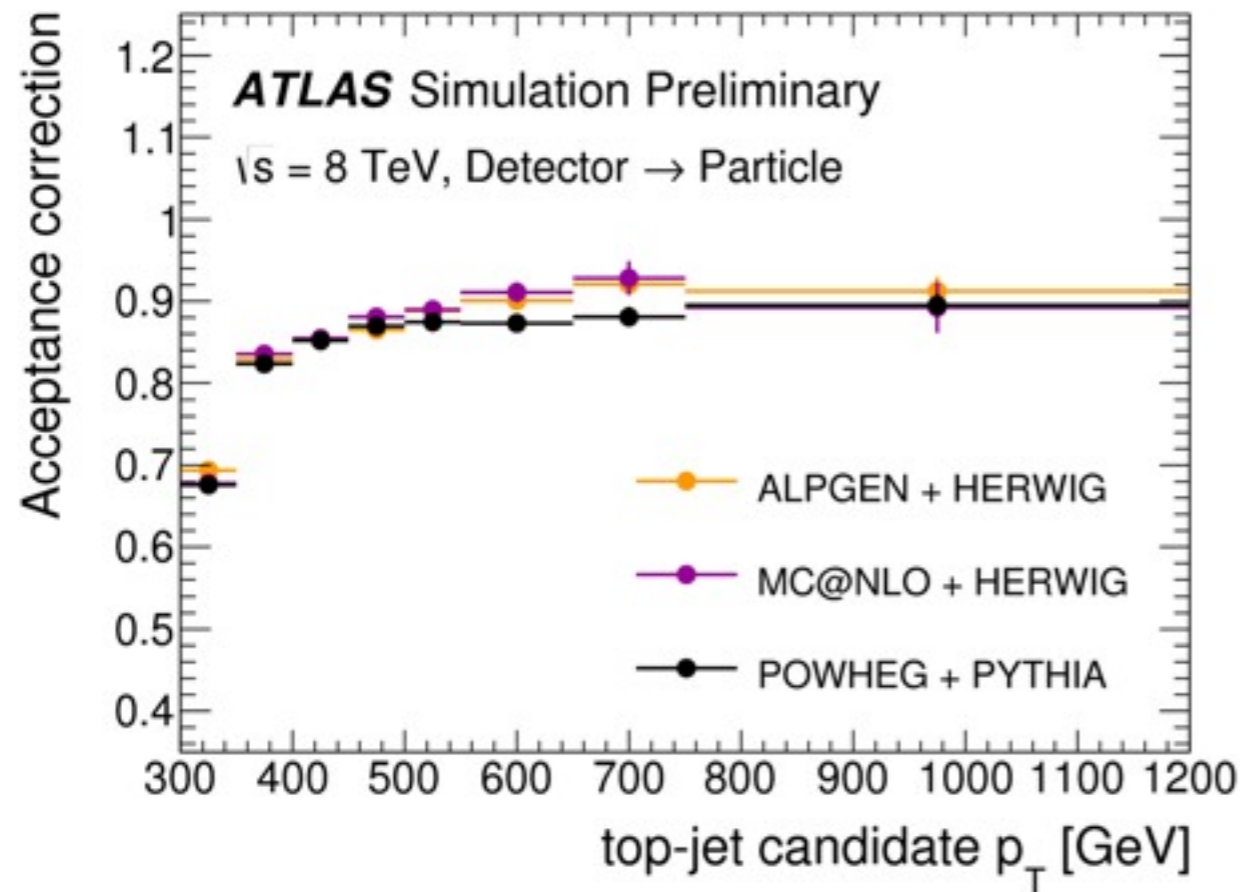
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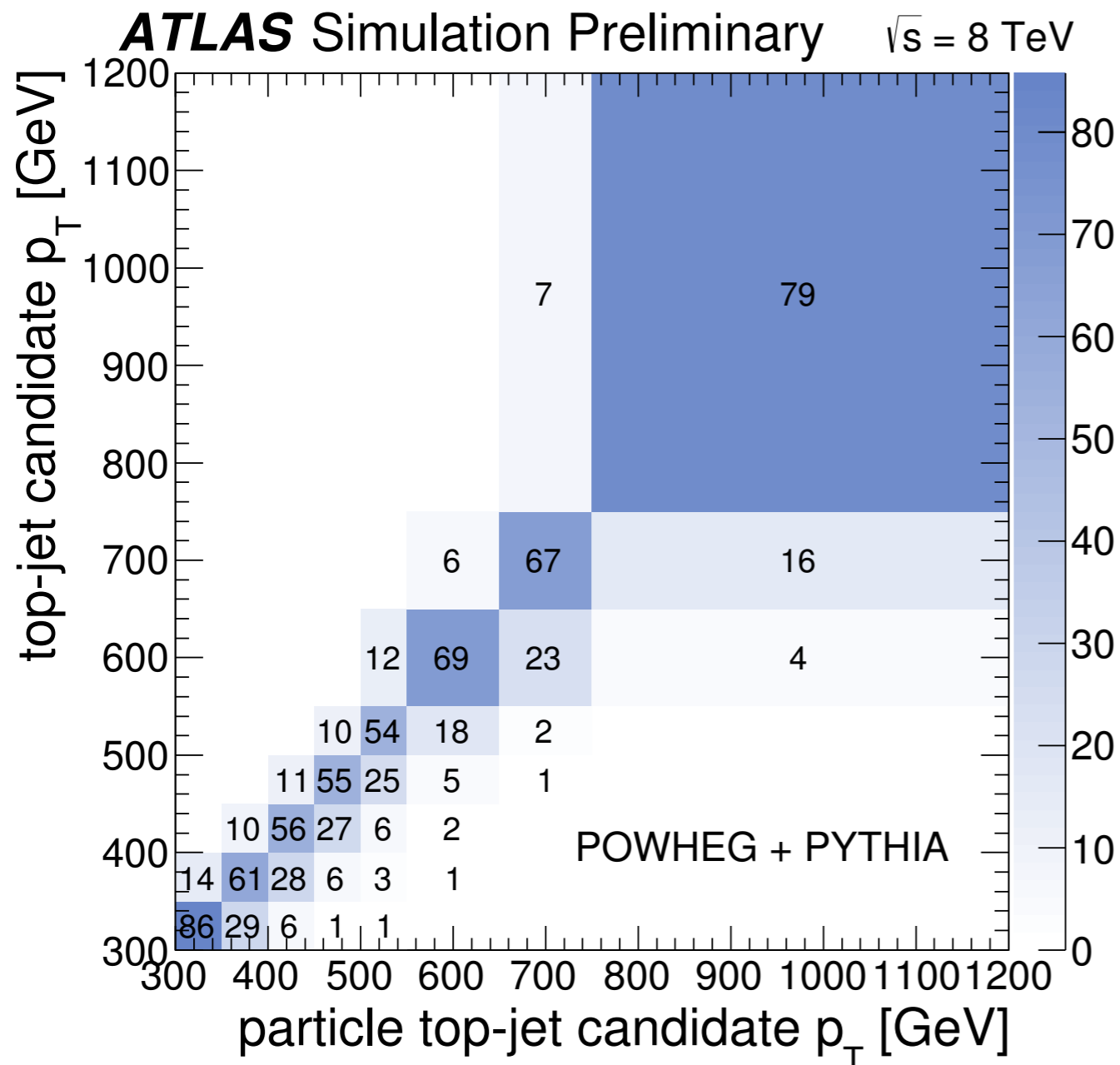


Data vs Prediction



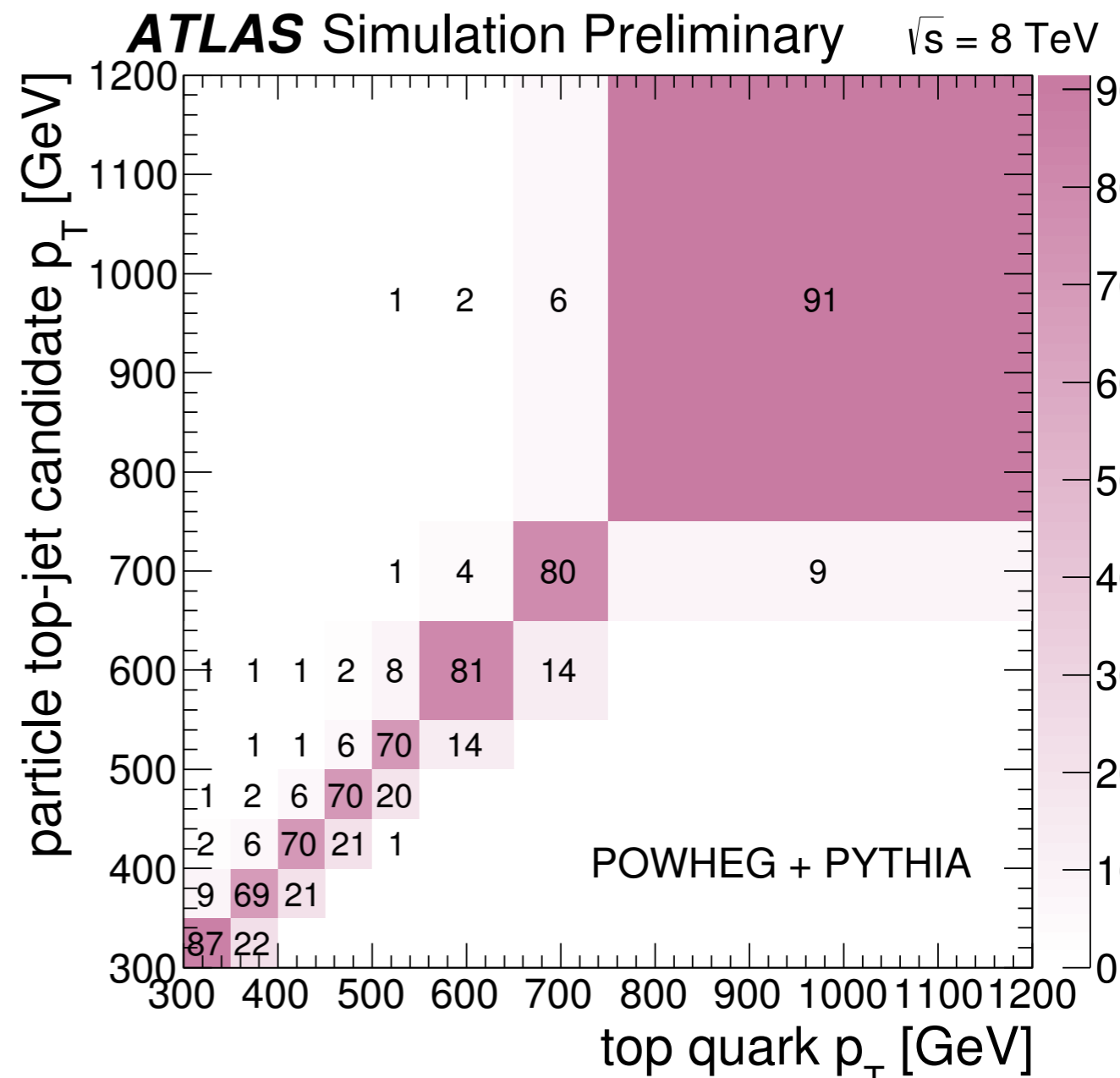
Acceptance & efficiency corrections

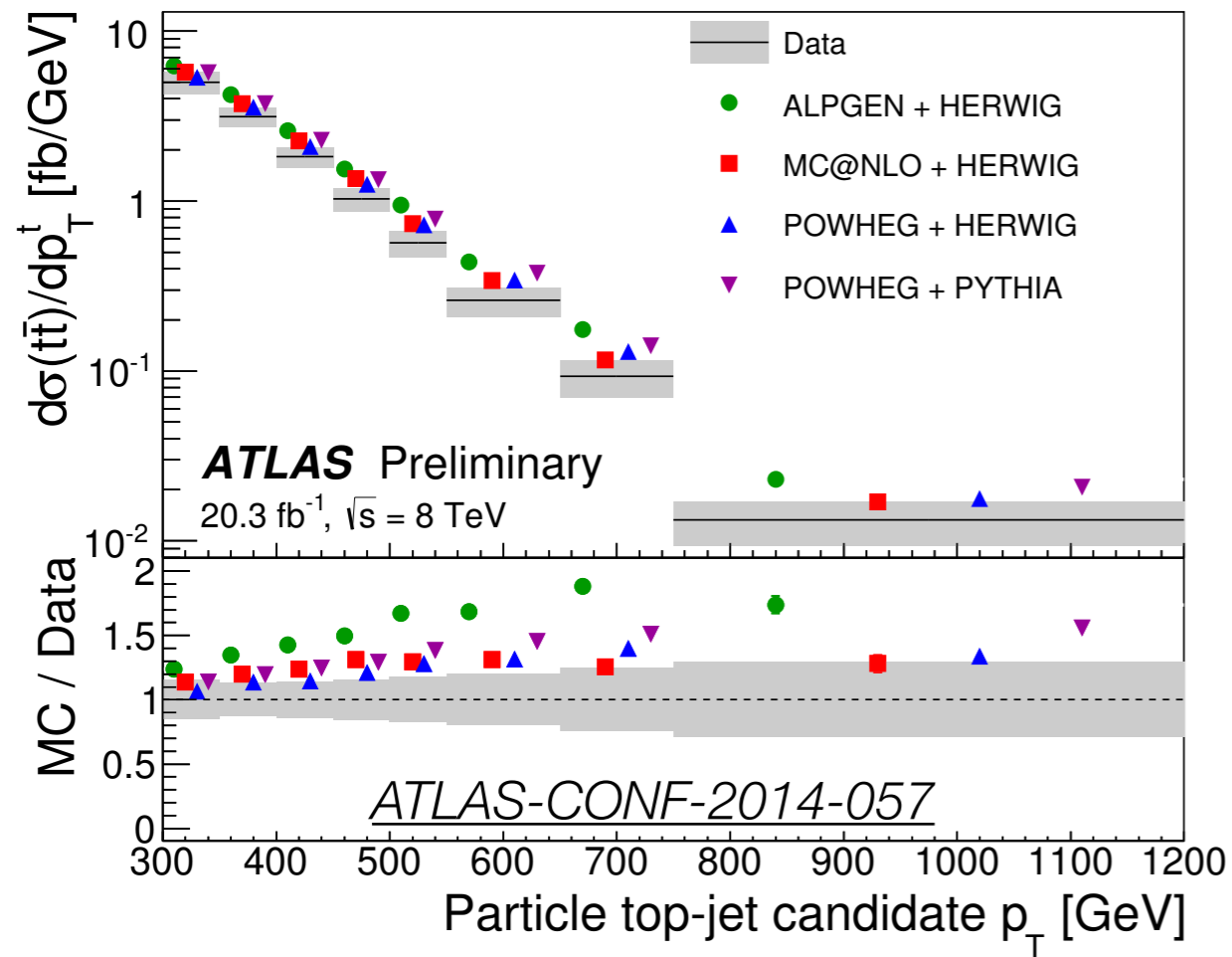




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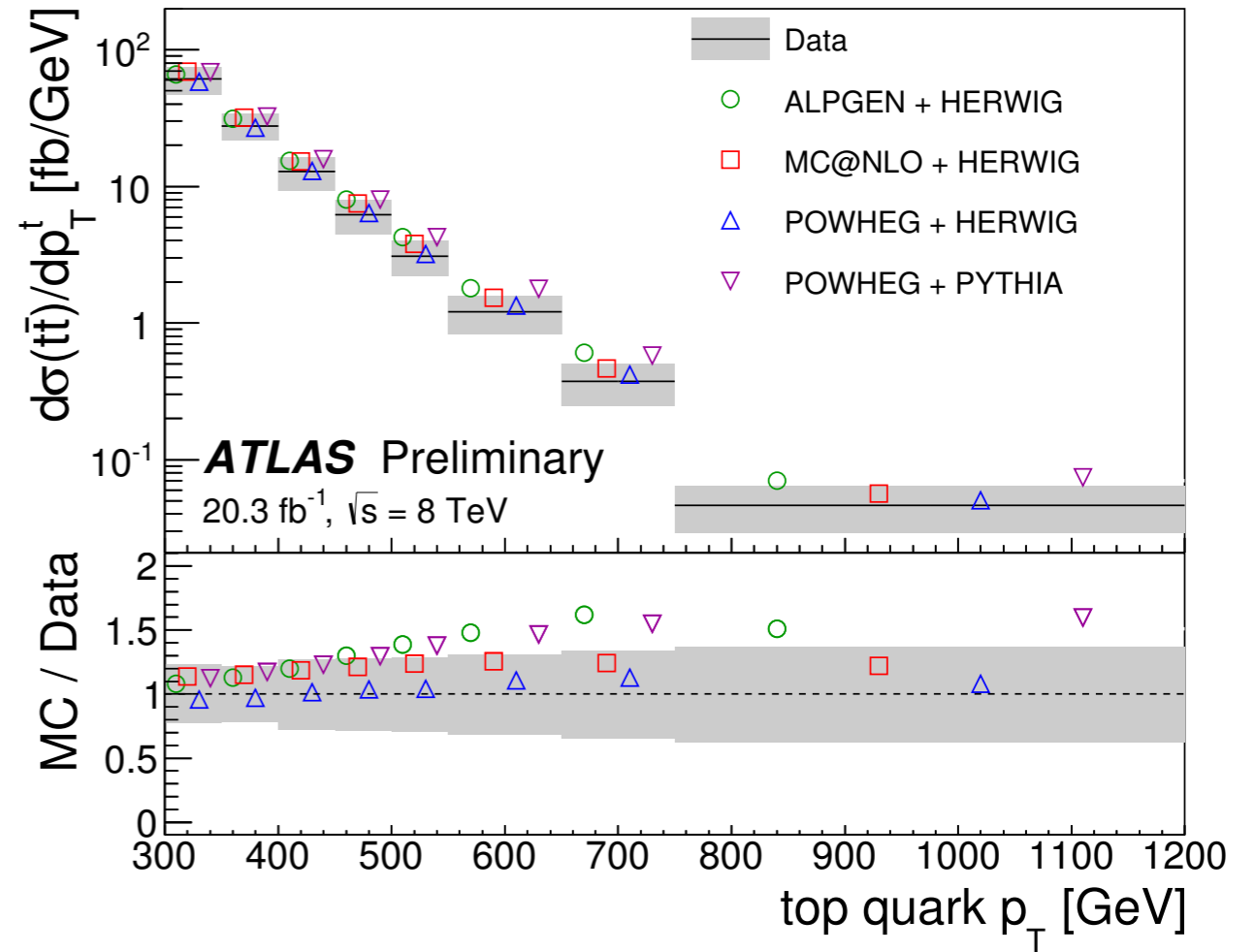
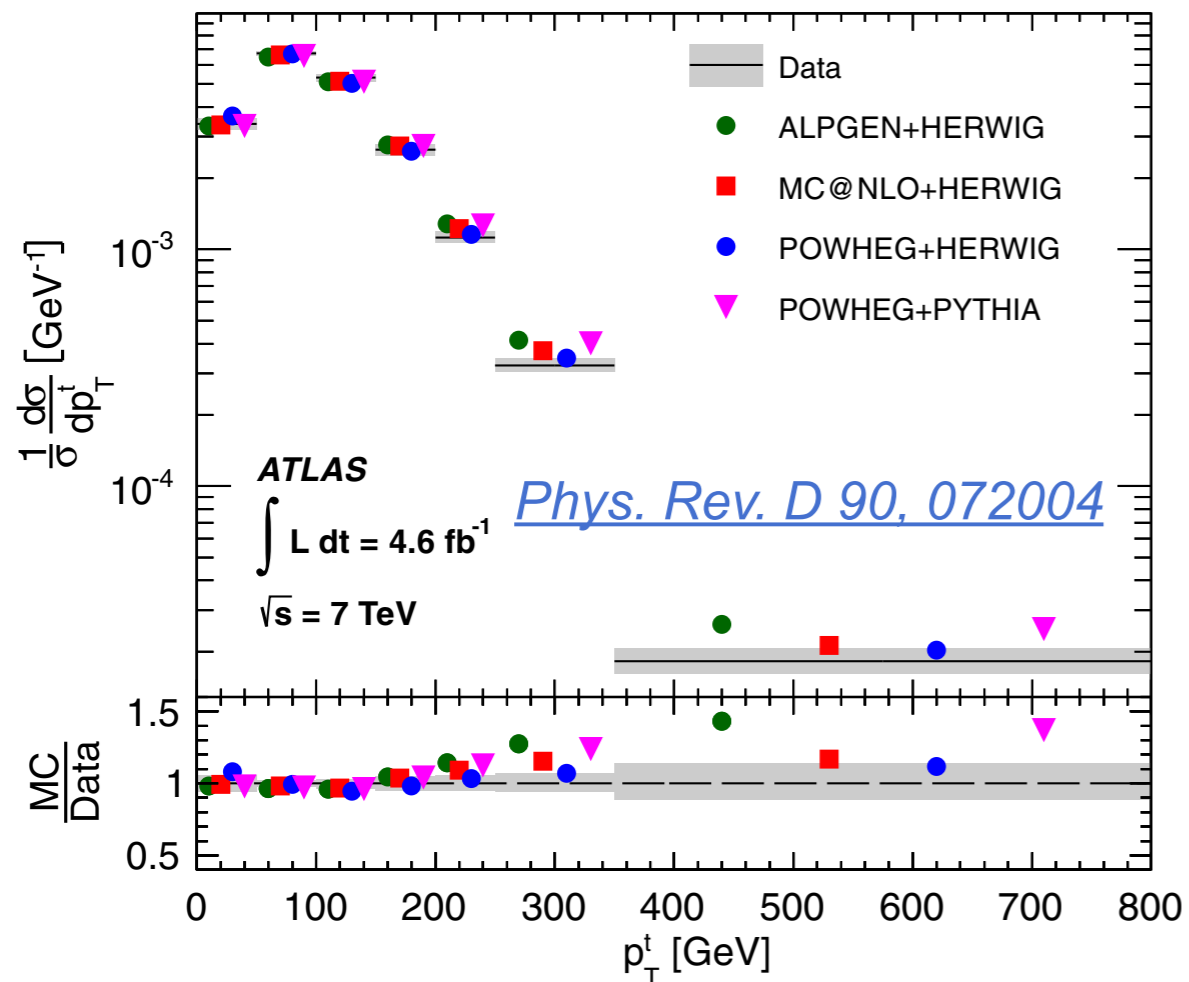
Migration matrices

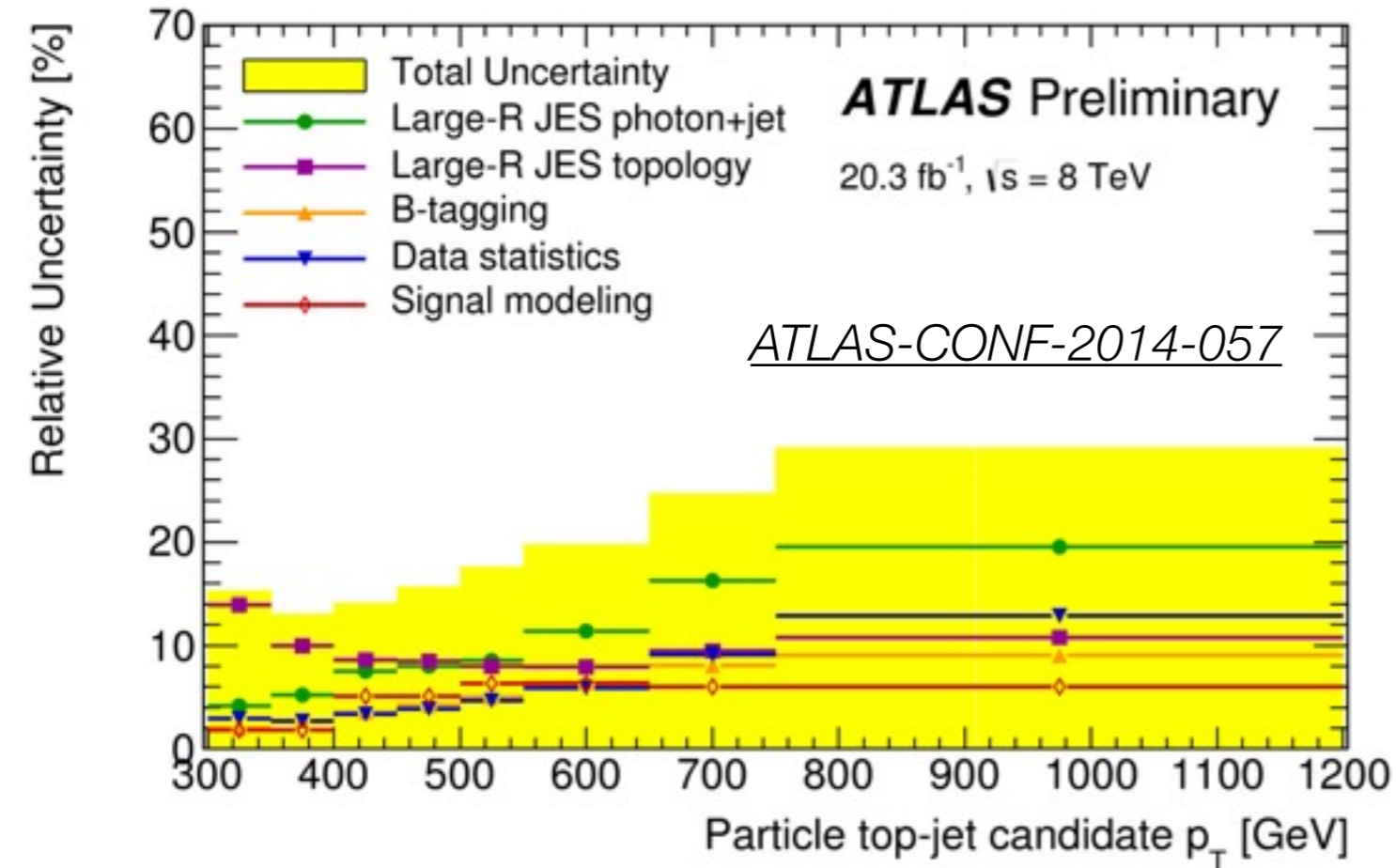




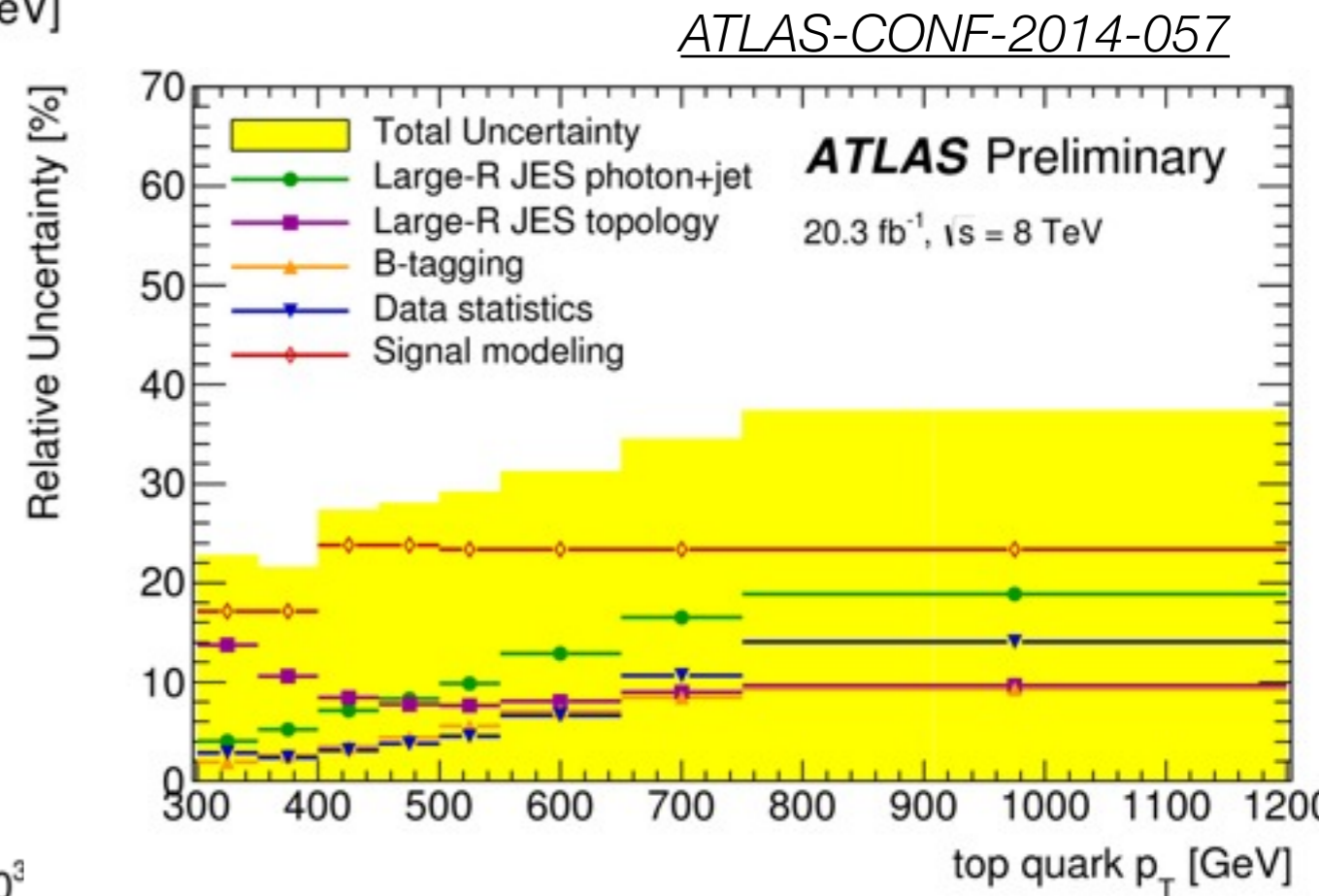
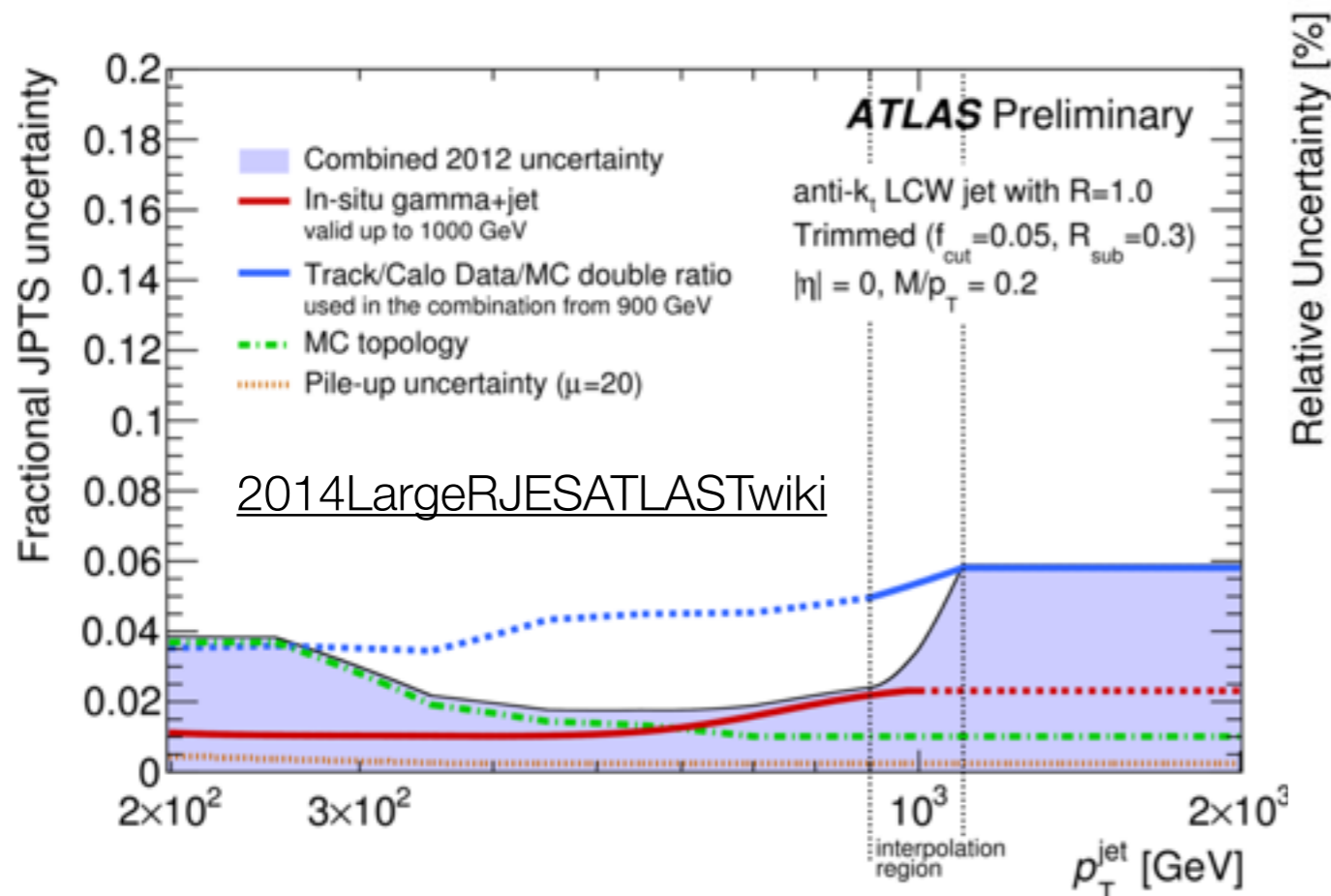
Results

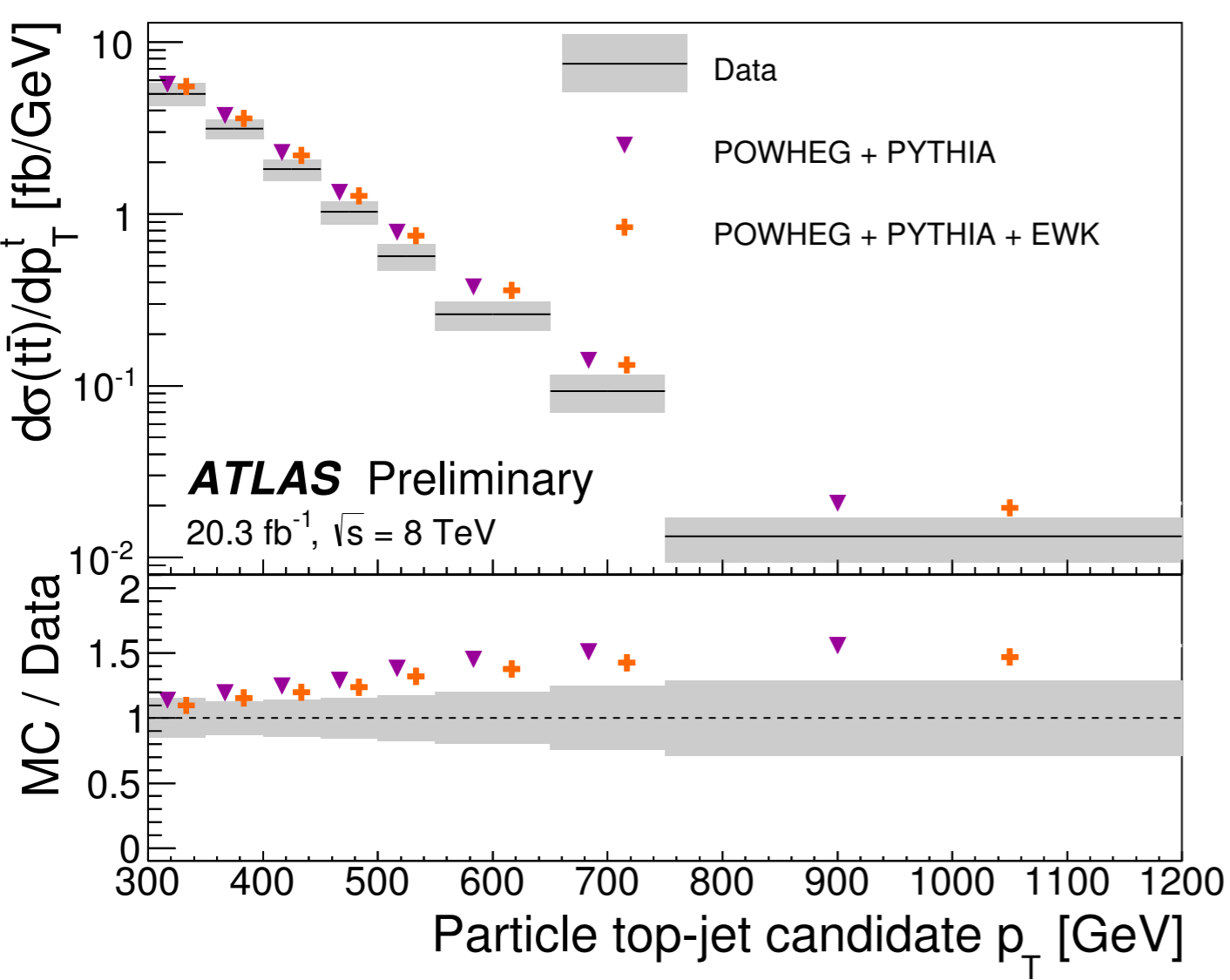
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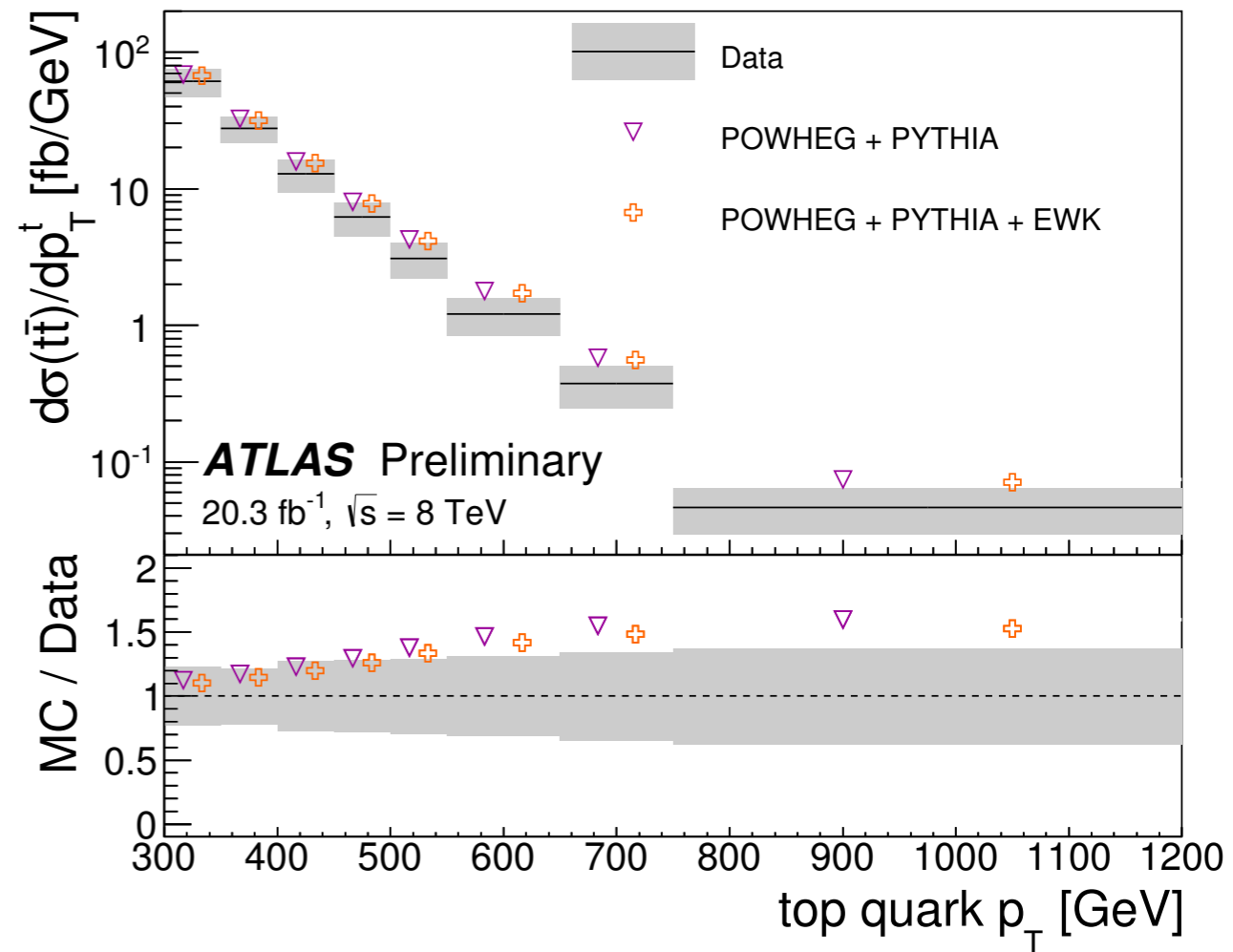
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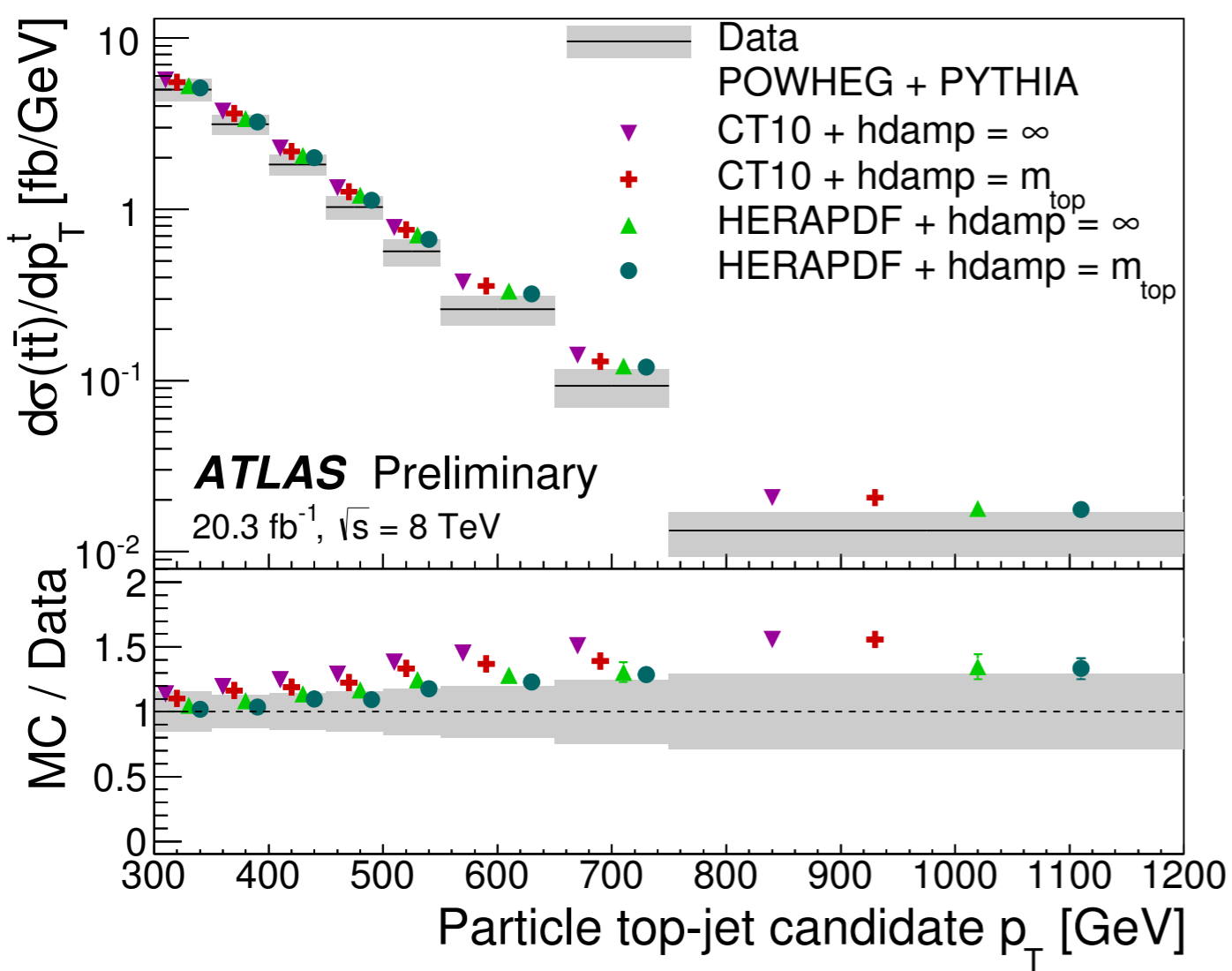


(a) Detector to Particle

Results

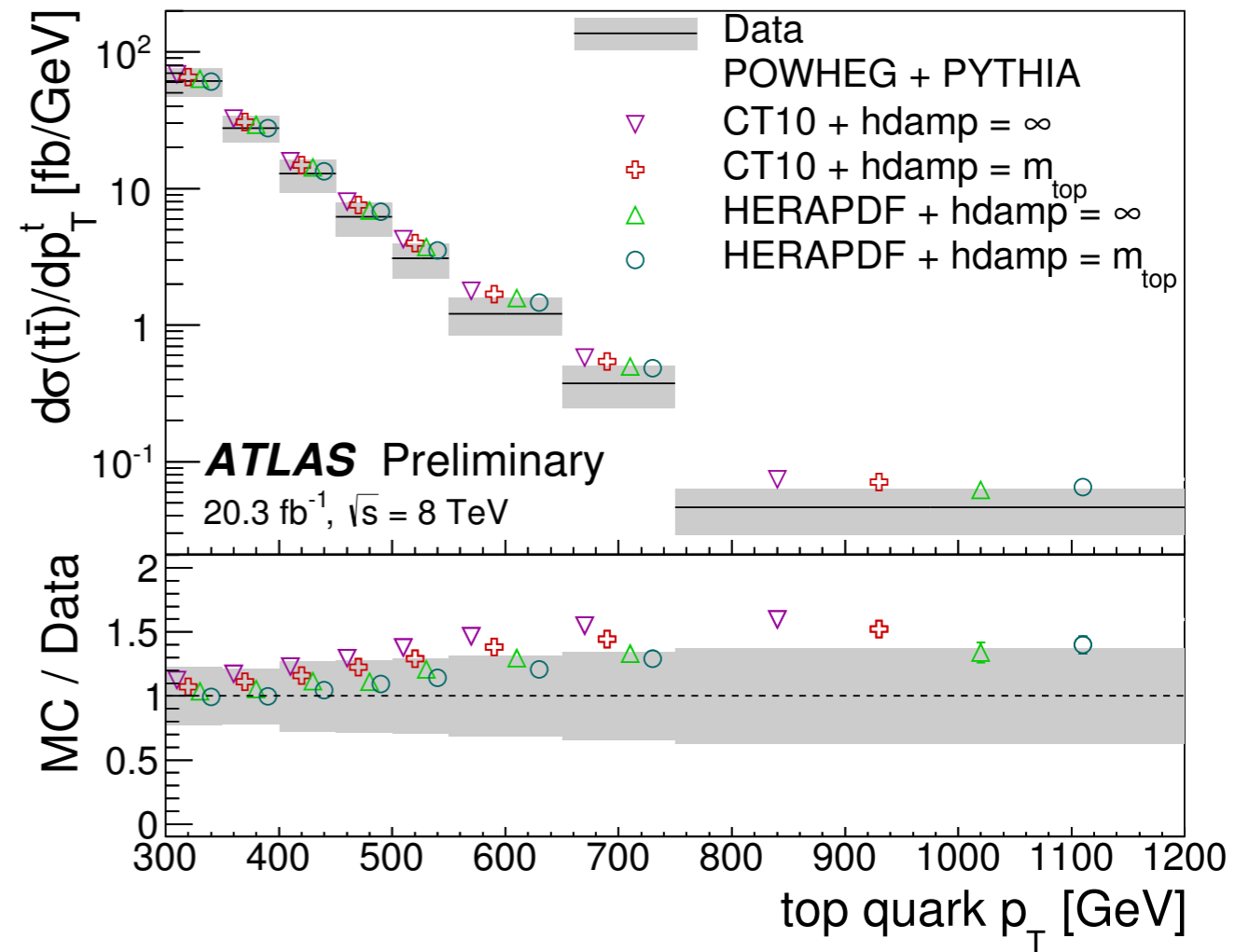


(b) Detector to Parton



(a) Detector to Particle

Results



(b) Detector to Parton