PROCEEDINGS OF SCIENCE

Single top quark production in CMS

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The electroweak production of single top quarks are excellent probes to test the predictions of electroweak interactions at the scale of the top quark mass and beyond. In this note, latest measurements of single top production in the three main production modes, *s*-channel, *t*-channel, and W-associated, at centre-of-mass energies of 8 and 13 TeV by the CMS collaboration are presented.

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*Speaker.

1. Introduction

2. s-channel

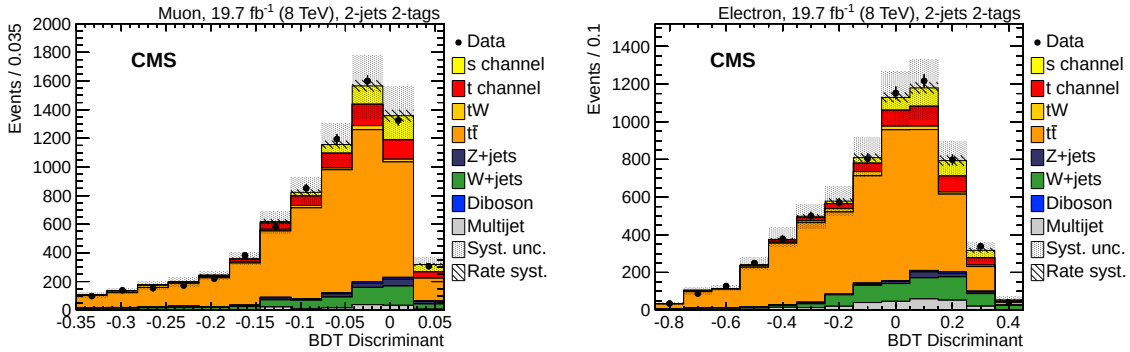

Figure 1: Ref. [1].

3. W-associated production

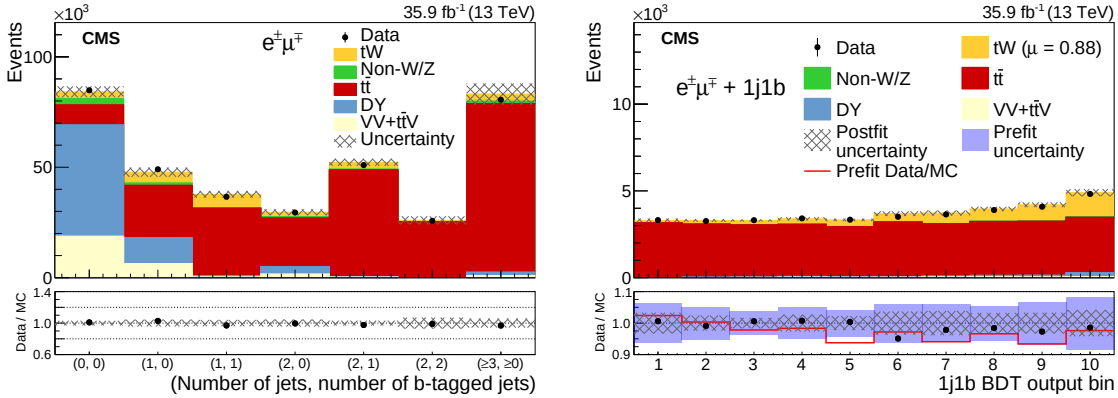

Figure 2: Ref. .

4. t-channel

5. Conclusion

References

[1] CMS Collaboration, *Measurement of the production cross section for single top quarks in association with W bosons in proton-proton collisions at* $\sqrt{s}$ *=13 TeV*, submitted to JHEP, arXiv:1805.07399, 2018.

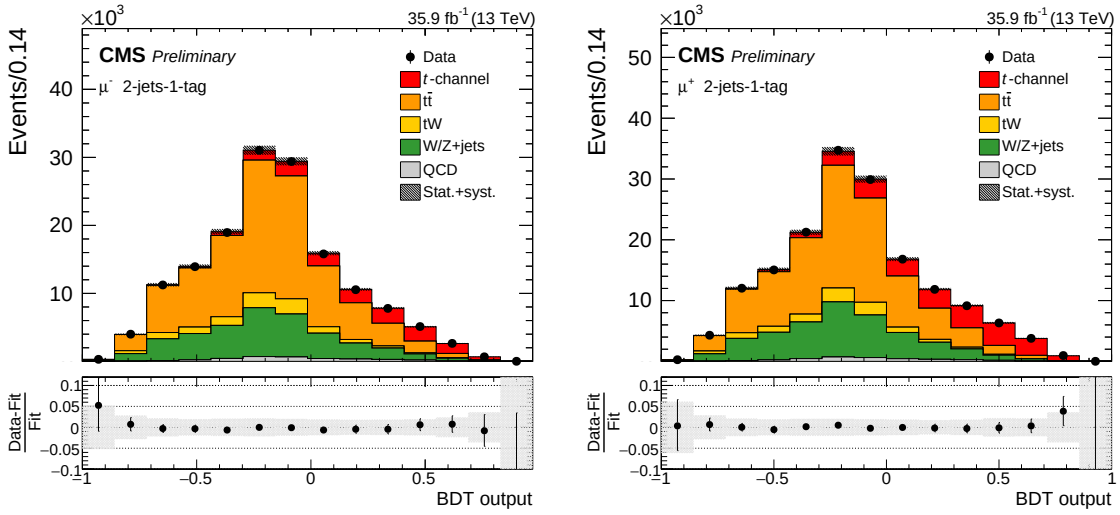

Figure 3: Ref. .

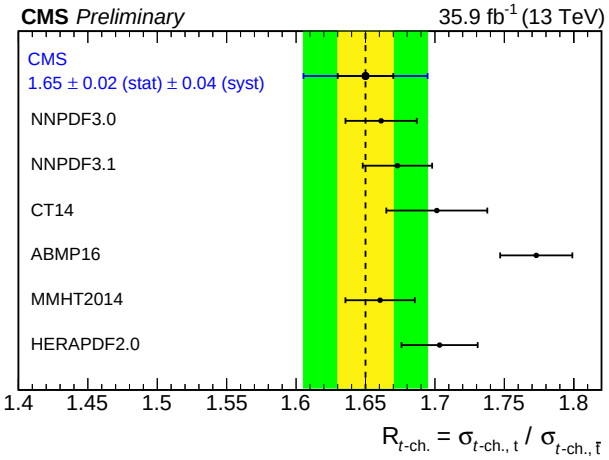

Figure 4: Ref. .

[2] ATLAS Collaboration, *Measurement of the Inclusive and Fiducial Cross-Section of Single Top-Quark t-Channel Events in pp Collisions at* $\sqrt{s}$ *= 8 TeV*, Tech. Rep. ATLAS-CONF-2014-007, 2014.

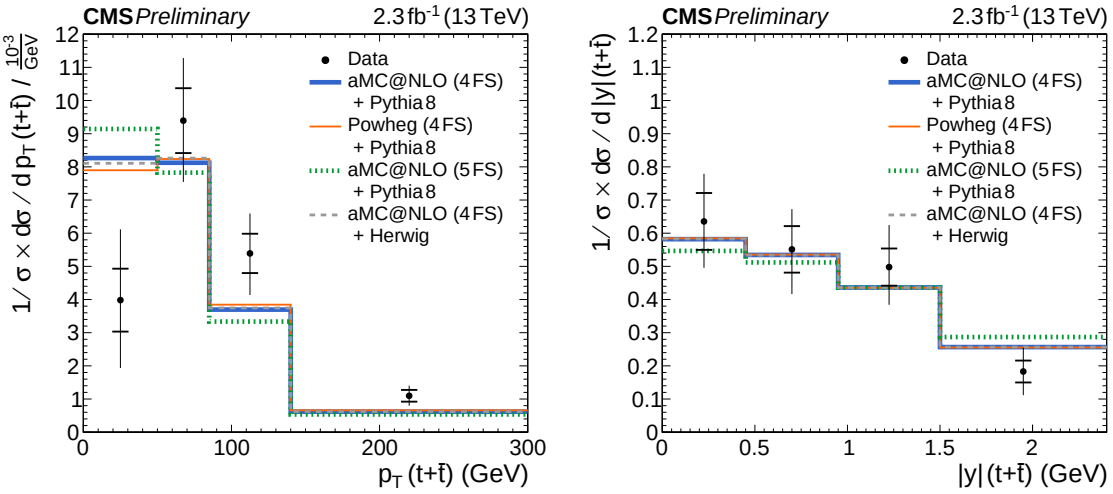
CMS Preliminary
2.3 fb-1 (13 TeV)
1/ σ × dσ / d pT (t+t̄) / 10-3 GeV
pT (t+t̄) (GeV)
Data
aMC@NLO (4FS) + Pythia8
Powheg (4FS) + Pythia8
aMC@NLO (5FS) + Pythia8
aMC@NLO (4FS) + Herwig
CMS Preliminary
2.3 fb-1 (13 TeV)
1/ σ × dσ / d |y| (t+t̄)
|y| (t+t̄) (GeV)
Data
aMC@NLO (4FS) + Pythia8
Powheg (4FS) + Pythia8
aMC@NLO (5FS) + Pythia8
aMC@NLO (4FS) + Herwig

Figure 5: Ref. .