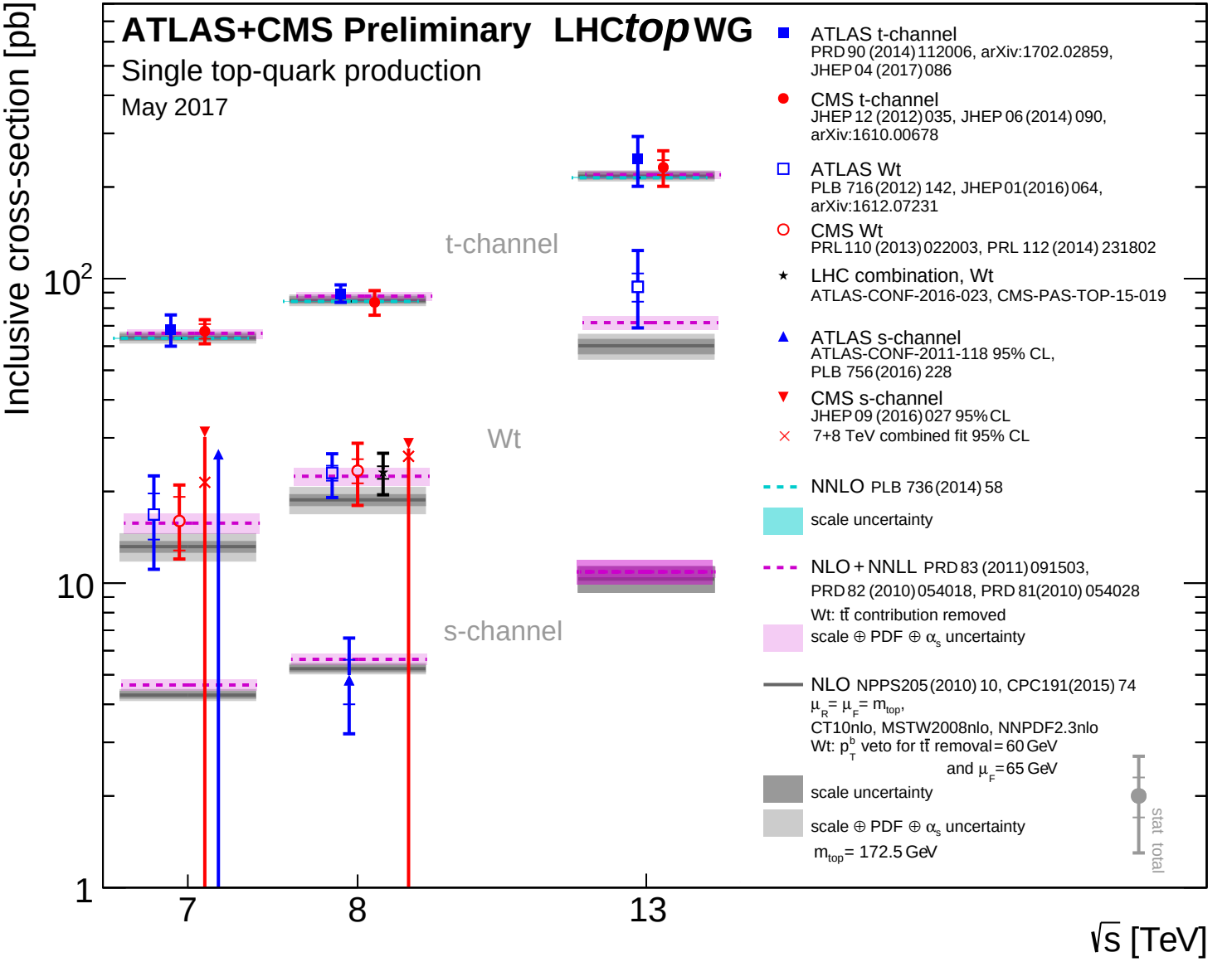
ATLAS+CMS Preliminary LHCtopWG
Single top-quark production
May 2017
Inclusive cross-section [pb]
t-channel
Wt
s-channel
ATLAS t-channel
PRD 90 (2014) 112006, arXiv:1702.02859, JHEP 04 (2017) 086
CMS t-channel
JHEP 12 (2012) 035, JHEP 06 (2014) 090, arXiv:1610.00678
ATLAS Wt
PLB 716 (2012) 142, JHEP 01 (2016) 064, arXiv:1612.07231
CMS Wt
PRL 110 (2013) 022003, PRL 112 (2014) 231802
LHC combination, Wt
ATLAS-CONF-2016-023, CMS-PAS-TOP-15-019
ATLAS s-channel
ATLAS-CONF-2011-118 95% CL, PLB 756 (2016) 228
CMS s-channel
JHEP 09 (2016) 027 95% CL
7+8 TeV combined fit 95% CL
NNLO PLB 736 (2014) 58
scale uncertainty
NLO + NNLL PRD 83 (2011) 091503, PRD 82 (2010) 054018, PRD 81 (2010) 054028
Wt: tt̄ contribution removed
scale ⊕ PDF ⊕ αs uncertainty
NLO NPPS205 (2010) 10, CPC191 (2015) 74
μR = μF = mtop,
CT10nlo, MSTW2008nlo, NNPDF2.3nlo
Wt: pTb veto for tt̄ removal = 60 GeV and μF = 65 GeV
scale uncertainty
scale ⊕ PDF ⊕ αs uncertainty
mtop = 172.5 GeV
stat
total
√s [TeV]