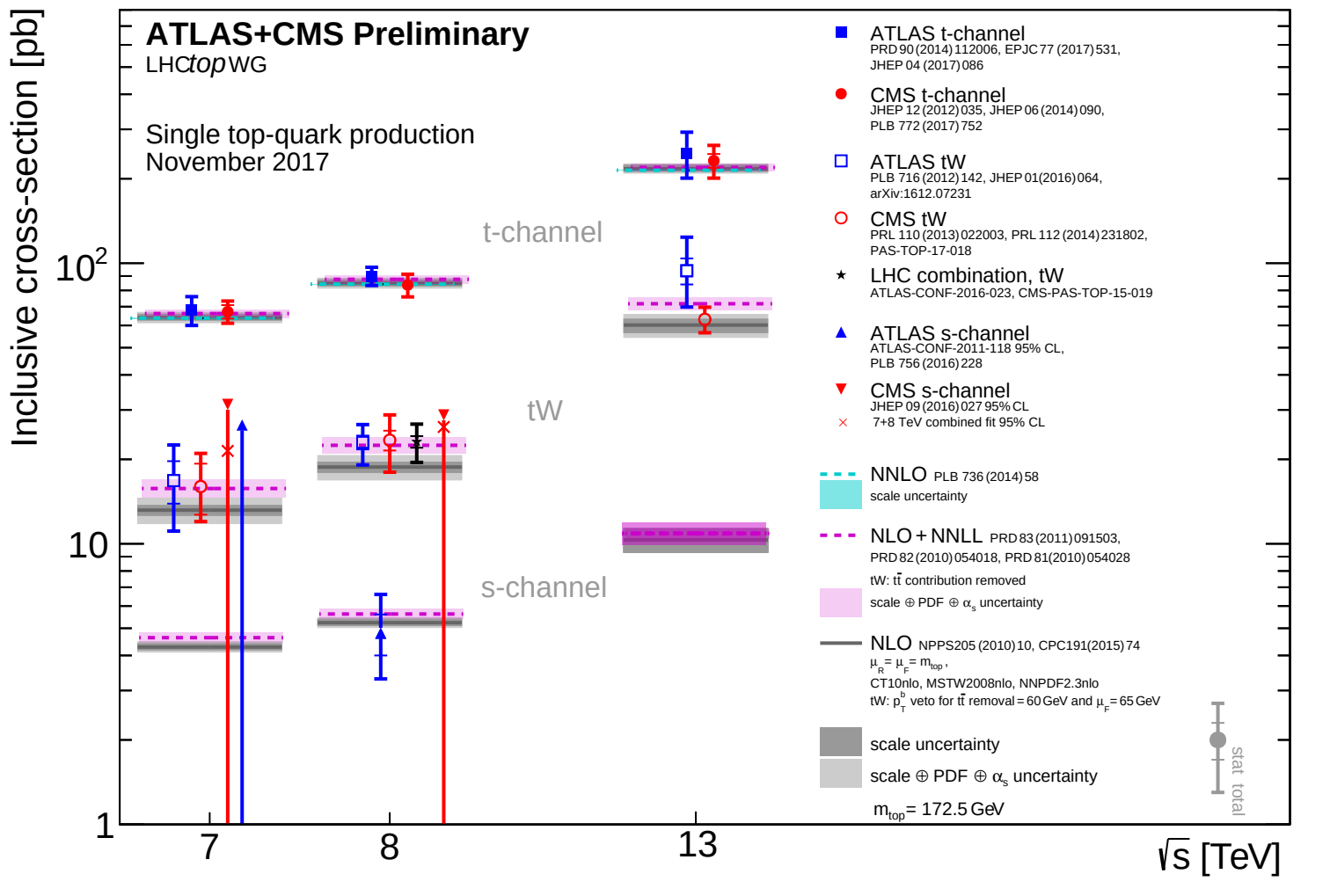
ATLAS+CMS Preliminary
LHCtopWG
Single top-quark production
November 2017
t-channel
tW
s-channel
Inclusive cross-section [pb]
10^2
10
1
7
8
13
$\sqrt{s}$ [TeV]
ATLAS t-channel
PRD 90 (2014) 112006, EPJC 77 (2017) 531, JHEP 04 (2017) 086
CMS t-channel
JHEP 12 (2012) 035, JHEP 06 (2014) 090, PLB 772 (2017) 752
ATLAS tW
PLB 716 (2012) 142, JHEP 01(2016) 064, arXiv:1612.07231
CMS tW
PRL 110 (2013) 022003, PRL 112 (2014) 231802, PAS-TOP-17-018
LHC combination, tW
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
tW: $t\bar{t}$ contribution removed
scale ⊕ PDF ⊕ α_s uncertainty
NLO NPPS205 (2010) 10, CPC191(2015) 74
$\mu_R = \mu_F = m_{top}$,
CT10nlo, MSTW2008nlo, NNPDF2.3nlo
tW: p_T^b veto for $t\bar{t}$ removal = 60 GeV and μ_F = 65 GeV
scale uncertainty
scale ⊕ PDF ⊕ α_s uncertainty
m_{top} = 172.5 GeV
stat
total