

ATLAS+CMS Preliminary

LHC $_{top}WG$

$\sigma_{t\bar{t}}$ summary, $\sqrt{s} = 5.02$ TeV November 2022

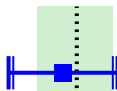
..... NNLO+NNLL PRL 110 (2013) 252004
 $m_{top} = 172.5$ GeV, $\alpha_s(M_Z) = 0.118 \pm 0.001$
 ■ scale \oplus PDF \oplus α_s uncertainty



$\sigma_{t\bar{t}} \pm (\text{stat}) \pm (\text{syst}) \pm (\text{lumi})$

ATLAS, dilepton*

arXiv:2207.01354, $L_{int} = 257$ pb $^{-1}$



$65.7 \pm 4.5 \pm 1.6 \pm 1.2$ pb

ATLAS, l+jets*

arXiv:2207.01354, $L_{int} = 257$ pb $^{-1}$



$68.2 \pm 0.9 \pm 2.9 \pm 1.1$ pb

ATLAS combined*

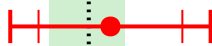
arXiv:2207.01354, $L_{int} = 257$ pb $^{-1}$



$67.5 \pm 0.9 \pm 2.3 \pm 1.1$ pb

CMS, l+jets

JHEP 03 (2018) 115 $L_{int} = 27.4$ pb $^{-1}$



$68.9 \pm 6.5 \pm 6.1 \pm 1.6$ pb

CMS, dilepton $e\mu$

JHEP 04 (2022) 144, $L_{int} = 302$ pb $^{-1}$



$60.7 \pm 5.0 \pm 2.8 \pm 1.1$ pb

CMS combined

JHEP 04 (2022) 144, $L_{int} = 27.4 - 302$ pb $^{-1}$



$63.0 \pm 4.1 \pm 3.0$ pb

NNPDF3.0 JHEP 04(2015)040

MMHT14 EPJC 75(2015)5

CT14 NNLO arXiv:1506.07443

ABMP16 NNLO PRD 96(2017)014011
 $[\alpha_s(m_Z) = 0.115]$

* Preliminary

20

40

60

80

100

120

$\sigma_{t\bar{t}}$ [pb]