

# ATLAS+CMS Preliminary

LHC $_{top}WG$

$\sigma_{t\bar{t}}$  summary,  $\sqrt{s} = 13$  TeV November 2022

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

■ scale uncertainty

■ scale  $\oplus$  PDF  $\oplus$   $\alpha_s$  uncertainty



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

## ATLAS, dilepton $e\mu$

EPJC 80 (2020) 528,  $L_{int} = 36.1$  fb $^{-1}$

$826 \pm 4 \pm 12 \pm 16$  pb

## ATLAS, dilepton $e\mu^*$

ATLAS-CONF-2022-061,  $L_{int} = 139$  fb $^{-1}$

$836 \pm 1 \pm 12 \pm 16$  pb

## ATLAS, $l+jets$

PLB 810 (2020) 135797,  $L_{int} = 139$  fb $^{-1}$

$830 \pm 0.4 \pm 36 \pm 14$  pb

## ATLAS, all-jets

JHEP 01 (2021) 033,  $L_{int} = 36.1$  fb $^{-1}$

$864 \pm 4.3 \pm 126 \pm 18$  pb

## CMS, dilepton $e\mu$

PRL 116 (2016) 052002,  $L_{int} = 43$  pb $^{-1}$ , 50 ns

$746 \pm 58 \pm 53 \pm 36$  pb

## CMS, dilepton $e\mu$

EPJC 79 (2019) 368,  $L_{int} = 35.9$  fb $^{-1}$ , 25 ns

$803 \pm 2 \pm 25 \pm 20$  pb

## CMS, dilepton $\tau+e/\mu$

JHEP 02 (2020) 191,  $L_{int} = 35.9$  fb $^{-1}$ , 25 ns

$781 \pm 7 \pm 62 \pm 20$  pb

## CMS, $l+jets$

JHEP 09 (2017) 051,  $L_{int} = 2.2$  fb $^{-1}$ , 25 ns

$888 \pm 2 \pm 26 \pm 20$  pb

## CMS, all-jets \*

CMS-PAS TOP-16-013,  $L_{int} = 2.53$  fb $^{-1}$ , 25 ns

$834 \pm 25 \pm 118 \pm 23$  pb

## CMS, $l+jets$

PRD 104 (2021) 092013,  $L_{int} = 137$  fb $^{-1}$ , 25 ns

$791 \pm 1 \pm 21 \pm 14$  pb

NNPDF3.0 JHEP 04 (2015) 040

MMHT14 EPJC 75 (2015) 5

CT14 PRD 93 (2016) 033006

ABM12 PRD 89 (2015) 054028  
 $[\alpha_s(m_Z) = 0.113]$

\* Preliminary

