

ATLAS Preliminary

20 Dec 2012

Data 2011, $\sqrt{s} = 7$ TeV

Channel & Lumi.

Theory (approx. NNLO)
for $m_t = 172.5$ GeV

stat. uncertainty

total uncertainty

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

Single lepton	0.70 fb^{-1}		$179 \pm 4 \pm 9 \pm 7 \text{ pb}$
Dilepton	0.70 fb^{-1}		$173 \pm 6 \begin{matrix} +14 & +8 \\ -11 & -7 \end{matrix} \text{ pb}$
All hadronic	1.02 fb^{-1}		$167 \pm 18 \pm 78 \pm 6 \text{ pb}$

Combination

$$177 \pm 3 \begin{matrix} +8 \\ -7 \end{matrix} \pm 7 \text{ pb}$$

Single lepton, $b \rightarrow X\mu\nu$	4.66 fb^{-1}		$165 \pm 2 \pm 17 \pm 3 \text{ pb}$
$\tau_{\text{had}} + \text{jets}$	1.67 fb^{-1}		$194 \pm 18 \pm 46 \text{ pb}$
$\tau_{\text{had}} + \text{lepton}$	2.05 fb^{-1}		$186 \pm 13 \pm 20 \pm 7 \text{ pb}$
All hadronic	4.7 fb^{-1}		$168 \pm 12 \begin{matrix} +60 \\ -57 \end{matrix} \pm 6 \text{ pb}$

50

100

150

200

250

300

350

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