

CMS measurements  
vs. NLO (NNLO) theory

7 TeV CMS measurement (stat,stat+sys)

8 TeV CMS measurement (stat,stat+sys)

$\gamma\gamma$ , (NNLO th.)

$1.06 \pm 0.01 \pm 0.12$  5.0 fb<sup>-1</sup>

$W\gamma$

$1.16 \pm 0.03 \pm 0.13$  5.0 fb<sup>-1</sup>

$Z\gamma$

$0.98 \pm 0.01 \pm 0.05$  5.0 fb<sup>-1</sup>

$Z\gamma$

$0.98 \pm 0.01 \pm 0.05$  19.5 fb<sup>-1</sup>

$WW+WZ$

$1.05 \pm 0.13 \pm 0.15$  4.9 fb<sup>-1</sup>

$WW$

$1.11 \pm 0.04 \pm 0.10$  4.9 fb<sup>-1</sup>

$WW$ , (NNLO th.)

$1.01 \pm 0.02 \pm 0.08$  19.4 fb<sup>-1</sup>

$WZ$

$1.17 \pm 0.07 \pm 0.07$  4.9 fb<sup>-1</sup>

$WZ$

$1.12 \pm 0.03 \pm 0.07$  19.6 fb<sup>-1</sup>

$ZZ$

$0.99 \pm 0.14 \pm 0.07$  4.9 fb<sup>-1</sup>

$ZZ$

$1.00 \pm 0.06 \pm 0.08$  19.6 fb<sup>-1</sup>

0.5

1

1.5

2

All results at:

<http://cern.ch/go/pNj7>

Production Cross Section Ratio:  $\sigma_{\text{exp}} / \sigma_{\text{theo}}$