

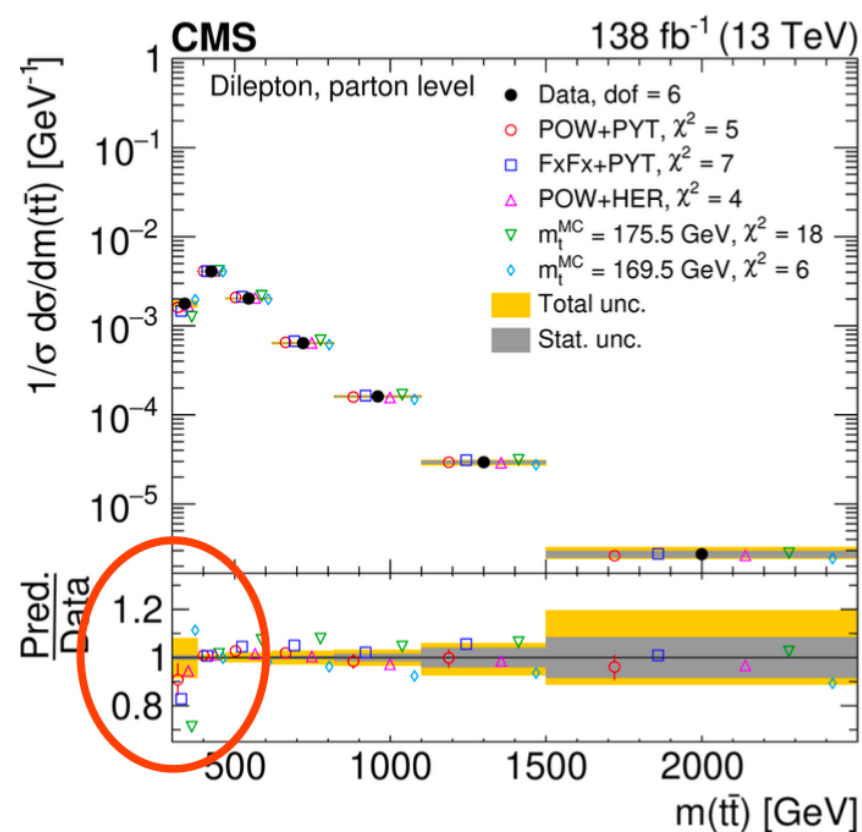
Toponium discussion

Toponium: mass spectrum from CMS

Recap: $t\bar{t}$ differential measurements

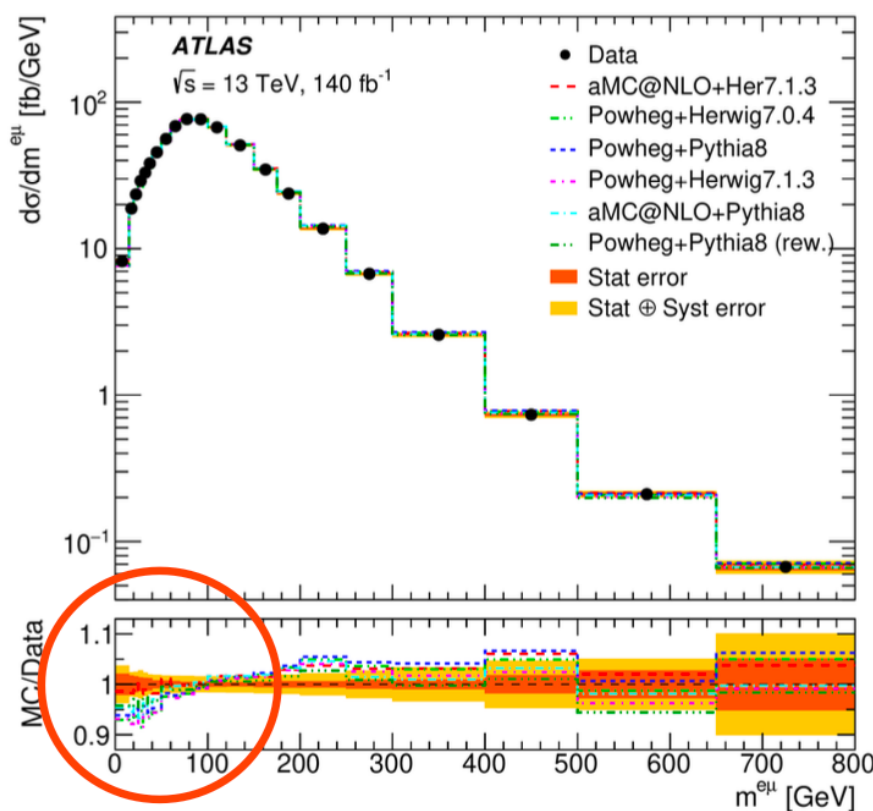
CMS $\ell\ell - m_{t\bar{t}}$

CMS-PAS-TOP-20-006



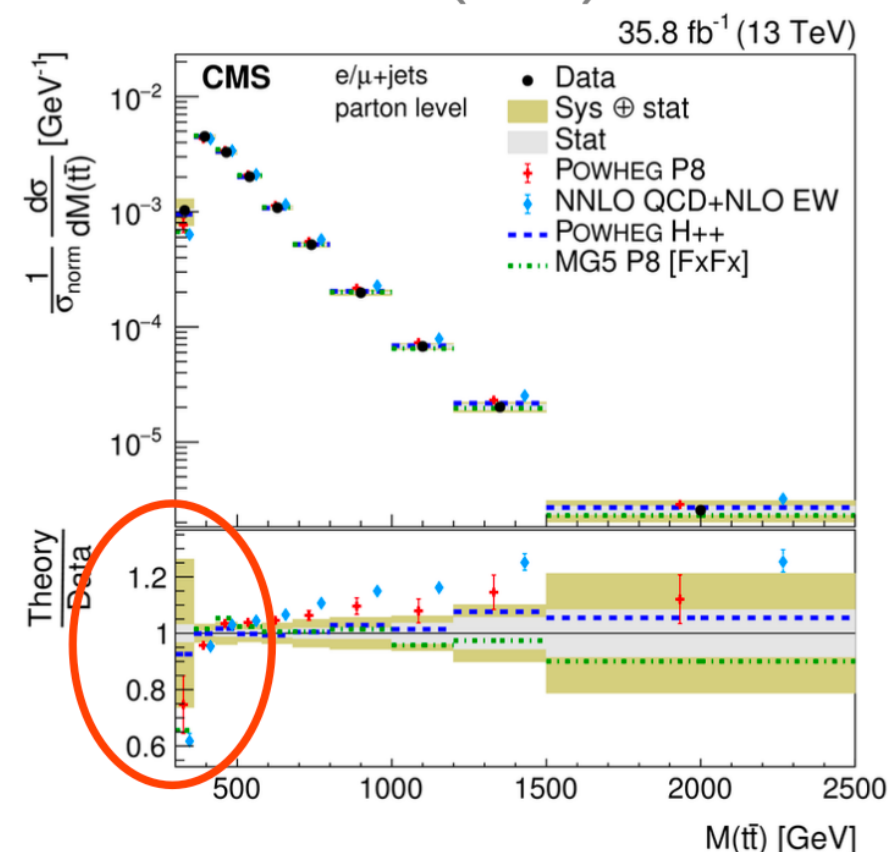
ATLAS $e\mu - m_{e\mu}$

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CMS ℓ +jets - $m_{t\bar{t}}$

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→ good description by theory except for **excess in data in threshold region**

CASCADE: tt production

- Serguei's formulation - suppression at small m_{tt}
 - $GSS = x/(1.-\exp(-x))$ with $x = 2*\pi*\alpha_s/v$
 - where α_s is the strong coupling constant and v is the relative velocity of the quarks $v = \sqrt{1 - 4*m_t^2/\hat{s}}$.
- $t\bar{t}$ via $g^*g^* \rightarrow t \bar{t}$

Results - $t\bar{t}$

