

W' boson near 2 TeV

$W' \rightarrow eN \rightarrow e^+e^-jj$ (CMS) 2.8σ “peak” @ 1.8–2.2 TeV

$W' \rightarrow jj$ (CMS) $\sim 2\sigma$ “peak” @ 1.8–1.9 TeV

$W' \rightarrow WZ \rightarrow JJ$ (ATLAS) 2.5σ (global) peak @ 1.8–2.1 TeV

$W' \rightarrow WZ \rightarrow J(\ell^+\ell^-)$ (CMS) $\sim 2\sigma$ “peak” @ 1.8–1.9 TeV

$W' \rightarrow Wh \rightarrow (\ell\nu)(b\bar{b})$ (CMS) 2.2σ “peak” @ 1.8–1.9 TeV

Rates consistent with an $SU(2)_R$ gauge theory (1506.06736).

Parameters: $M_{W'} \approx 1.9$ TeV, $g_R = 0.5$, $\tan\beta \approx 1$, $s_\theta \approx 1/2$.

Predictions

More final states: $W' \rightarrow e\tau jj$, $\tau\tau jj$, $eetb$, tb , ...

Correlations: $\frac{1}{\cos^4\theta_W}\Gamma(W' \rightarrow WZ) \simeq \Gamma(W' \rightarrow Wh^0) \leq \frac{1}{24}\Gamma(W' \rightarrow jj)$, ...