CMS *Preliminary*

Legend:
- Fit constraint (obs.)
- Fit constraint (exp.)
- +1σ Impact (obs.)
- +1σ Impact (exp.)
- −1σ Impact (obs.)
- −1σ Impact (exp.)

$\hat{r}_1 = 0.88^{+0.05}_{-0.05}$ $\hat{r}_2 = 0.92^{+0.04}_{-0.03}$ $\hat{r}_3 = 0.9^{+0.04}_{-0.03}$ $\hat{r}_4 = 0.95^{+0.07}_{-0.06}$

Nuisance parameters (top to bottom):
- JES Pythia/Herwig gluon response
- $t\bar{t}+0$ jet normalization $r_{t\bar{t}+0jet}$ $0.954^{+0.029}_{-0.030}$
- electron identification
- luminosity
- m_t^{MC} − 172.5 GeV $-0.6^{+0.5}_{-0.6}$
- top quark p_T reweighting
- trigger efficiency eμ
- jet pileup identification mistag rate
- parton shower FSR scale $t\bar{t}$
- L1 trigger prefiring
- muon isolation systematic component
- DY+jets normalization $N_{b\,jet}>1$
- parton shower ISR scale $t\bar{t}$
- DY+jets normalization $N_{b\,jet}=1$
- JES Pythia/Herwig diff. in fragmentation and UE
- muon identification systematic component
- Barlow-Beeston $\mu\mu$ $\rho<0.3$ $N_{jet}>2$ $N_{b\,jet}=1$ bin 1
- muon identification statistical component
- JES jet p_T resolution $1.3<|\eta|<2.4$
- Barlow-Beeston ee $\rho>0.7$ $N_{jet}>2$ $N_{b\,jet}=1$ bin 1
- single top normalization
- JES difference between dijet and Z+jet
- JER $|\eta|<1.93$
- color reconnection QCD-inspired
- Barlow-Beeston ee $\rho>0.7$ $N_{jet}>2$ $N_{b\,jet}>1$ bin 2
- semi-leptonic B branching ratio
- JES SinglePionECAL
- ME renormalization scale single top
- trigger efficiency ee
- JES PileUpDataMC

Axis labels: $(\hat{\theta}-\theta_0)/\Delta\theta$, $\Delta\hat{r}_1$, $\Delta\hat{r}_2$, $\Delta\hat{r}_3$, $\Delta\hat{r}_4$