35.8 fb<sup>-1</sup> (13 TeV) 2016 Events JES\_PileupPtHF<sub>16</sub> (central) CMS 12000  $(sys + 1\sigma)$ Simulation (sys  $-1\sigma$ ) single top V+jets 10000 8000 6000  $|\Delta_y| < 1.0$ 4000 2000 rel unc tī 0.0040.002 0 -0.002-0.004310-340 440-3000 320-360 210-230 100-210 230-250 460-560 250-270 340-380 380-440 270-290 290-310 100-280 280-320 360-400 400-460 560-3000

 $M_{bl}$  [GeV/c<sup>2</sup>]