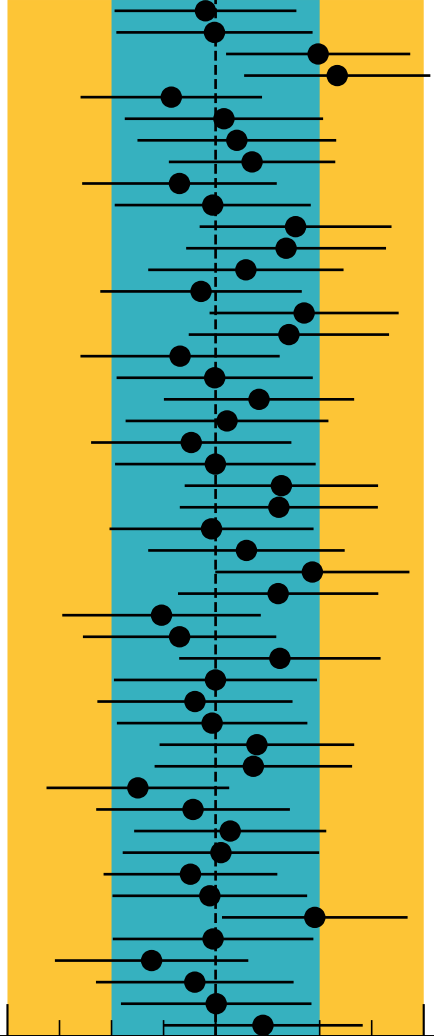


# Thesis

$\sqrt{s} = 13 \text{ TeV}, 126 \text{ fb}^{-1}$

SM HH, 3b1l

2018 3b1l, Q4: High  $\Delta\eta_{HH}$ , High  $X_{HH}$   
2018 3b1l, Q4: High  $\Delta\eta_{HH}$ , Low  $X_{HH}$   
2018 3b1l, Q4: Low  $\Delta\eta_{HH}$ , High  $X_{HH}$   
2018 3b1l, Q4: Low  $\Delta\eta_{HH}$ , Low  $X_{HH}$   
2017 3b1l, Q4: High  $\Delta\eta_{HH}$ , High  $X_{HH}$   
2017 3b1l, Q4: High  $\Delta\eta_{HH}$ , Low  $X_{HH}$   
2017 3b1l, Q4: Low  $\Delta\eta_{HH}$ , High  $X_{HH}$   
2017 3b1l, Q4: Low  $\Delta\eta_{HH}$ , Low  $X_{HH}$   
2016 3b1l, Q4: High  $\Delta\eta_{HH}$ , High  $X_{HH}$   
2016 3b1l, Q4: High  $\Delta\eta_{HH}$ , Low  $X_{HH}$   
2016 3b1l, Q4: Low  $\Delta\eta_{HH}$ , High  $X_{HH}$   
2016 3b1l, Q4: Low  $\Delta\eta_{HH}$ , Low  $X_{HH}$   
2018 3b1l, Q3: High  $\Delta\eta_{HH}$ , High  $X_{HH}$   
2018 3b1l, Q3: High  $\Delta\eta_{HH}$ , Low  $X_{HH}$   
2018 3b1l, Q3: Low  $\Delta\eta_{HH}$ , High  $X_{HH}$   
2018 3b1l, Q3: Low  $\Delta\eta_{HH}$ , Low  $X_{HH}$   
2017 3b1l, Q3: High  $\Delta\eta_{HH}$ , High  $X_{HH}$   
2017 3b1l, Q3: High  $\Delta\eta_{HH}$ , Low  $X_{HH}$   
2017 3b1l, Q3: Low  $\Delta\eta_{HH}$ , High  $X_{HH}$   
2017 3b1l, Q3: Low  $\Delta\eta_{HH}$ , Low  $X_{HH}$   
2016 3b1l, Q3: High  $\Delta\eta_{HH}$ , High  $X_{HH}$   
2016 3b1l, Q3: High  $\Delta\eta_{HH}$ , Low  $X_{HH}$   
2016 3b1l, Q3: Low  $\Delta\eta_{HH}$ , High  $X_{HH}$   
2016 3b1l, Q3: Low  $\Delta\eta_{HH}$ , Low  $X_{HH}$   
2018 3b1l, Q2: High  $\Delta\eta_{HH}$ , High  $X_{HH}$   
2018 3b1l, Q2: High  $\Delta\eta_{HH}$ , Low  $X_{HH}$   
2018 3b1l, Q2: Low  $\Delta\eta_{HH}$ , High  $X_{HH}$   
2018 3b1l, Q2: Low  $\Delta\eta_{HH}$ , Low  $X_{HH}$   
2017 3b1l, Q2: High  $\Delta\eta_{HH}$ , High  $X_{HH}$   
2017 3b1l, Q2: High  $\Delta\eta_{HH}$ , Low  $X_{HH}$   
2017 3b1l, Q2: Low  $\Delta\eta_{HH}$ , High  $X_{HH}$   
2017 3b1l, Q2: Low  $\Delta\eta_{HH}$ , Low  $X_{HH}$   
2016 3b1l, Q2: High  $\Delta\eta_{HH}$ , High  $X_{HH}$   
2016 3b1l, Q2: High  $\Delta\eta_{HH}$ , Low  $X_{HH}$   
2016 3b1l, Q2: Low  $\Delta\eta_{HH}$ , High  $X_{HH}$   
2016 3b1l, Q2: Low  $\Delta\eta_{HH}$ , Low  $X_{HH}$   
2018 3b1l, Q1: High  $\Delta\eta_{HH}$ , High  $X_{HH}$   
2018 3b1l, Q1: High  $\Delta\eta_{HH}$ , Low  $X_{HH}$   
2018 3b1l, Q1: Low  $\Delta\eta_{HH}$ , High  $X_{HH}$   
2018 3b1l, Q1: Low  $\Delta\eta_{HH}$ , Low  $X_{HH}$   
2017 3b1l, Q1: High  $\Delta\eta_{HH}$ , High  $X_{HH}$   
2017 3b1l, Q1: High  $\Delta\eta_{HH}$ , Low  $X_{HH}$   
2017 3b1l, Q1: Low  $\Delta\eta_{HH}$ , High  $X_{HH}$   
2017 3b1l, Q1: Low  $\Delta\eta_{HH}$ , Low  $X_{HH}$   
2016 3b1l, Q1: High  $\Delta\eta_{HH}$ , High  $X_{HH}$   
2016 3b1l, Q1: High  $\Delta\eta_{HH}$ , Low  $X_{HH}$   
2016 3b1l, Q1: Low  $\Delta\eta_{HH}$ , High  $X_{HH}$   
2016 3b1l, Q1: Low  $\Delta\eta_{HH}$ , Low  $X_{HH}$



$$(\hat{\theta} - \theta_0) / \Delta\theta$$