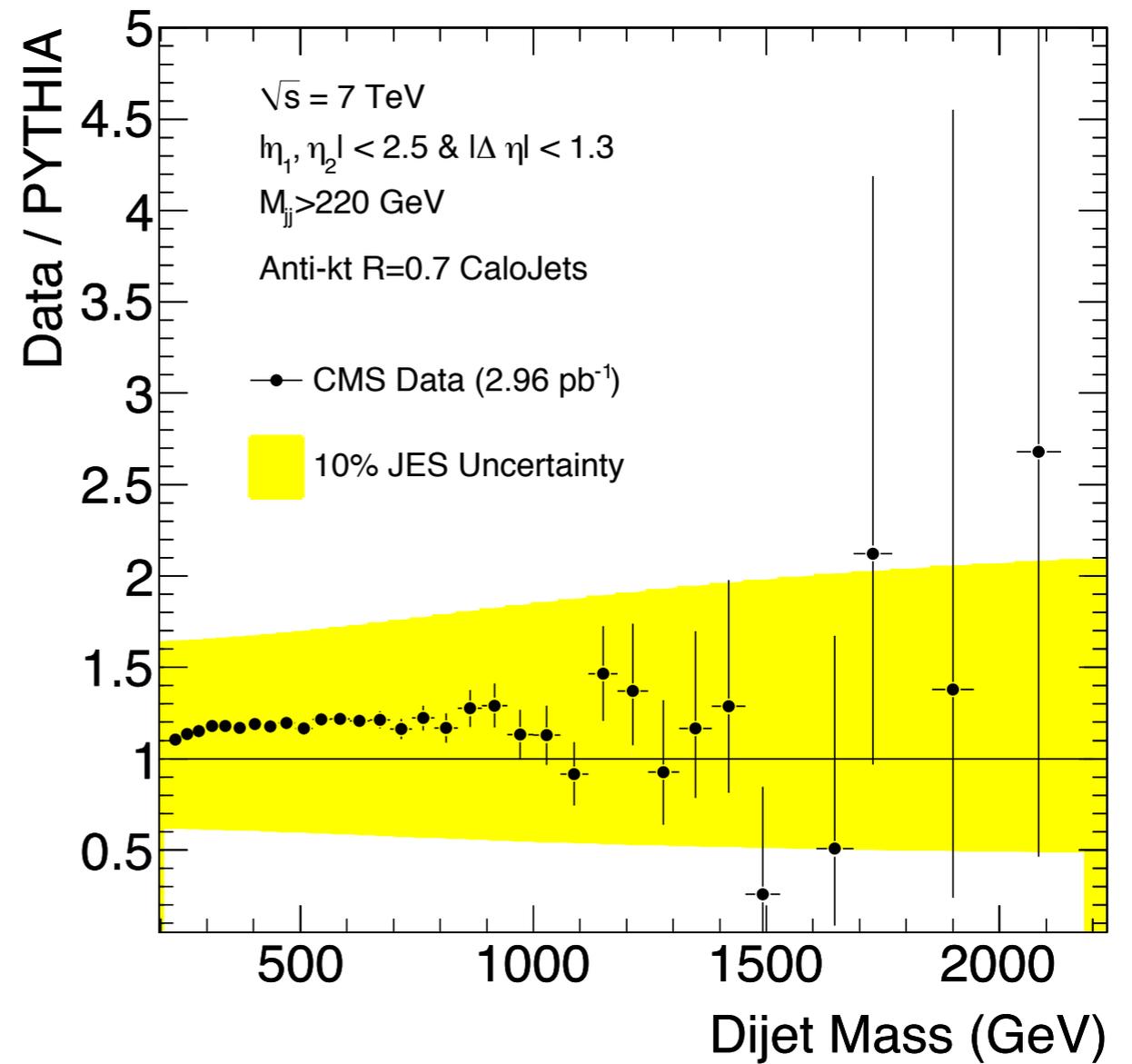
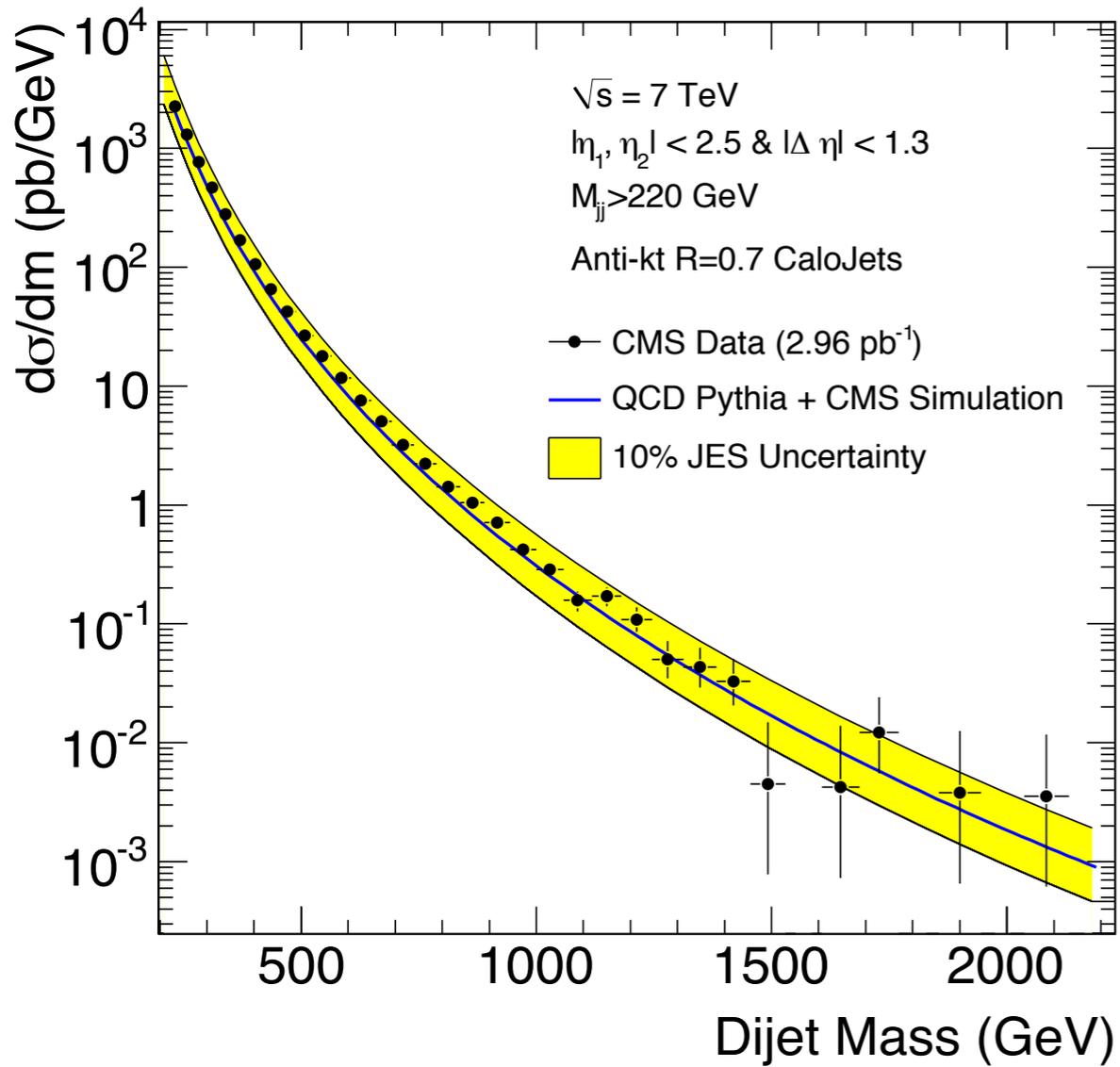




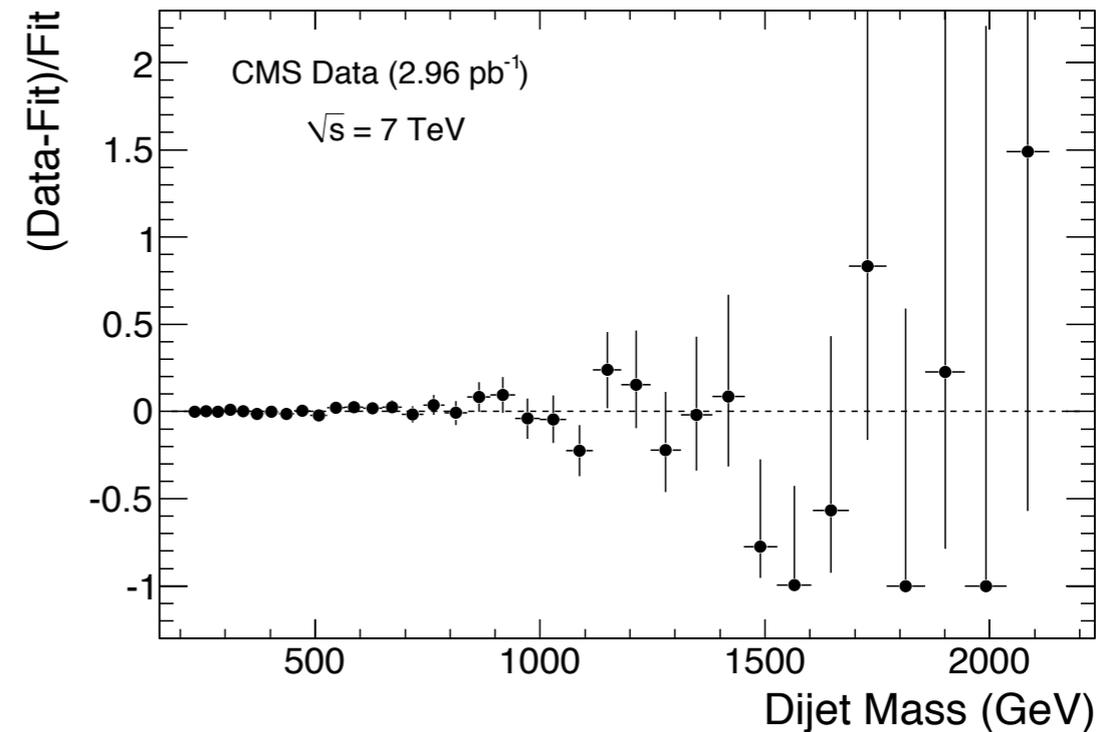
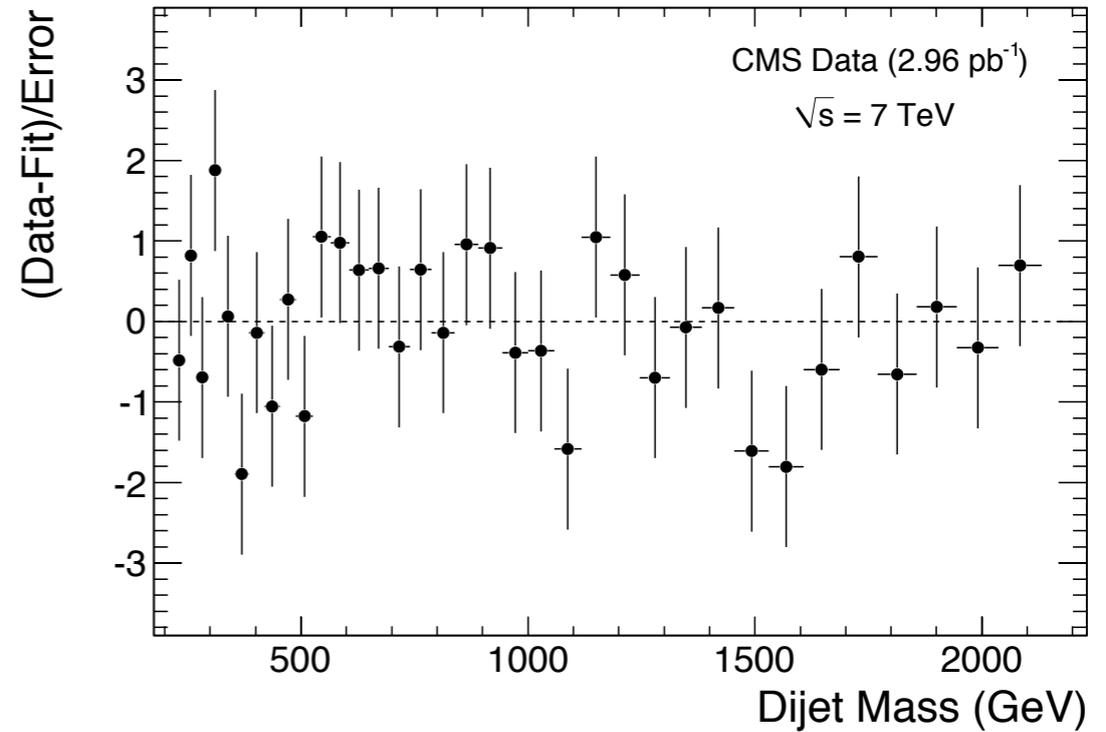
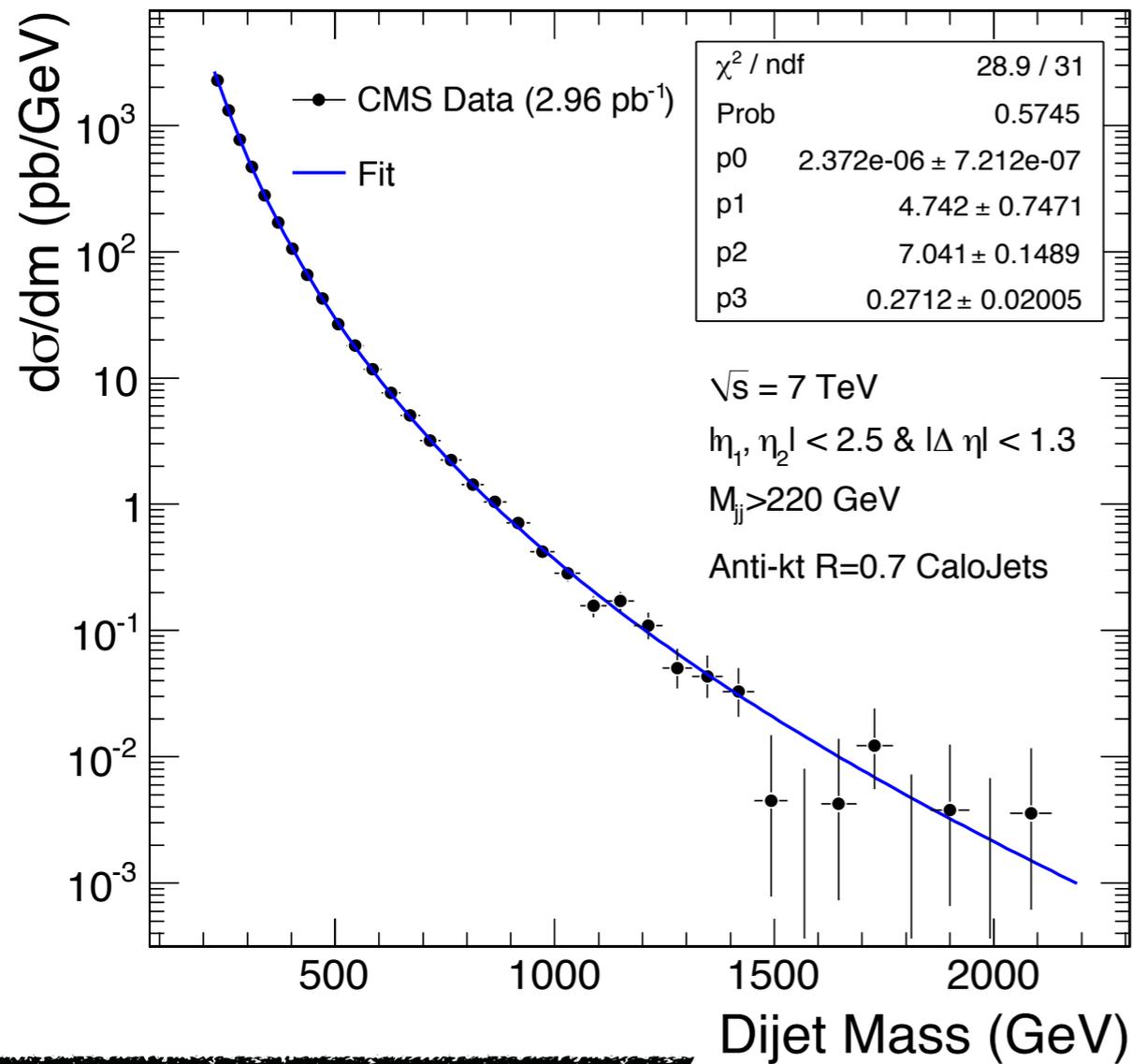
QCD and Data





Dijet Mass and Fit

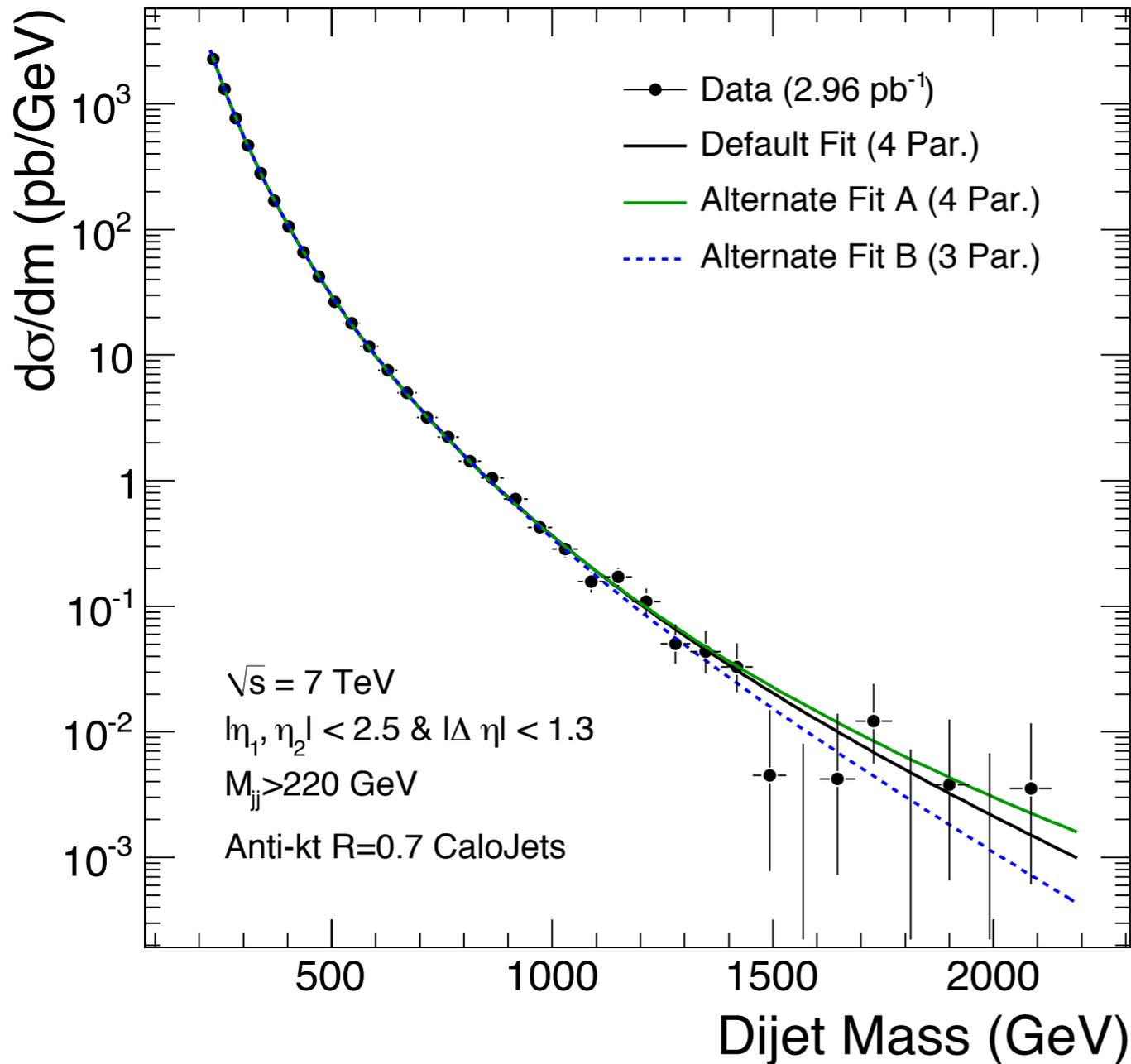
- We fit the data with the function with 4 parameters. (ATLAS and CDF II parametrization)
- We get a good fit.



$$\frac{P_0 \cdot (1 - m\sqrt{s})^{p_1}}{(m / \sqrt{s})^{p_2} + p_3 \ln(m\sqrt{s})}$$



Another Fit Parametrization



Default

$$\frac{P_0 \cdot (1 - m\sqrt{s})^{p_1}}{(m / \sqrt{s})^{p_2} + p_3 \ln(m\sqrt{s})}$$

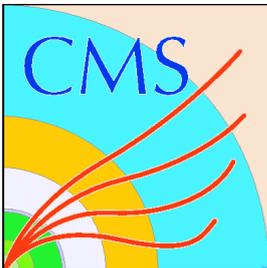
$$\frac{P_0 \cdot \left(1 - m / \sqrt{s} + P_3 \cdot (m / \sqrt{s})^2\right)^{P_1}}{m^{P_2}}$$

A

$$\frac{P_0 \cdot (1 - m / \sqrt{s})^{P_1}}{m^{P_2}}$$

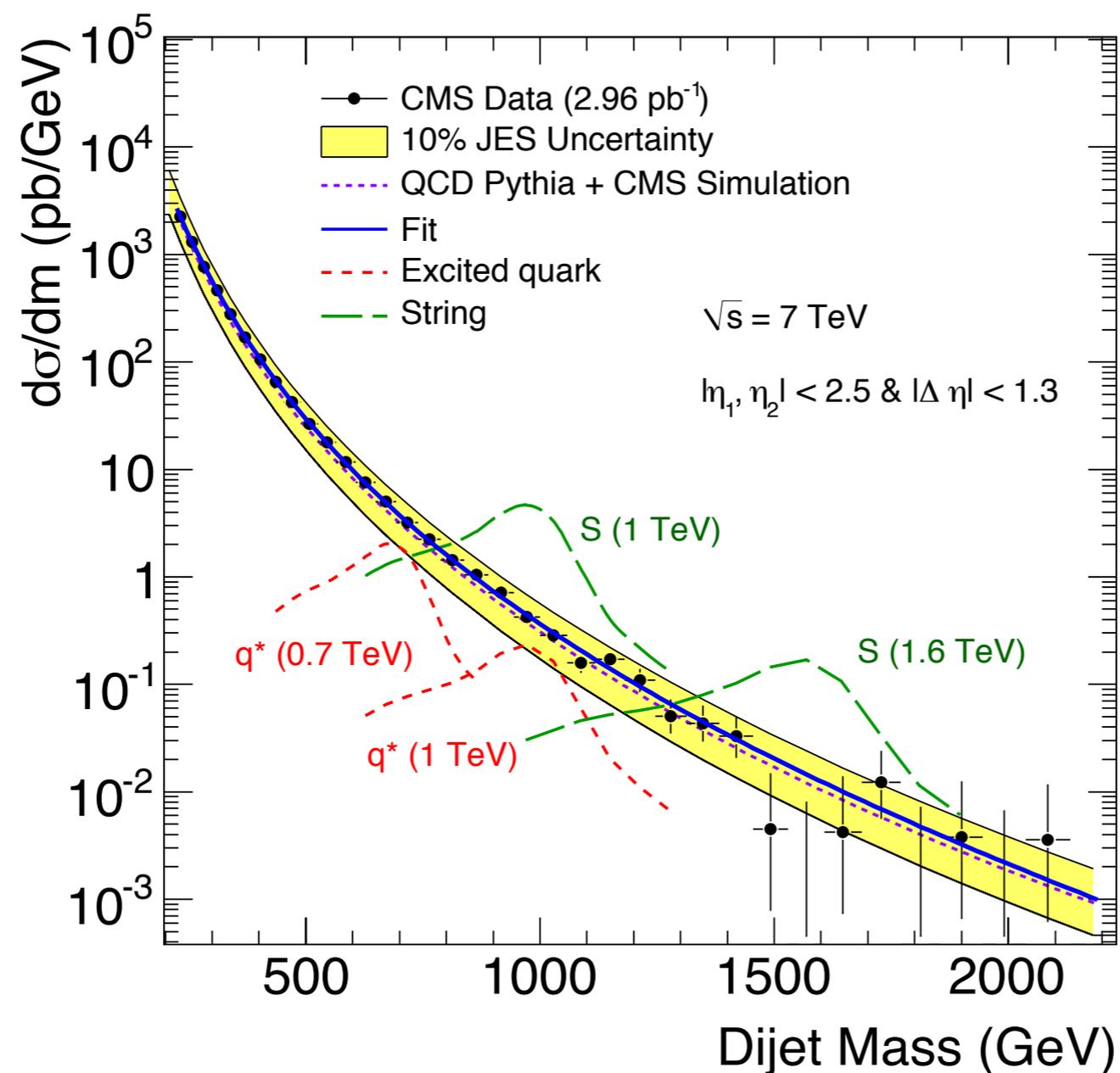
B

Chisquare/ndf for Default Fit: 28.8536/31 : 0.930761
 Chisquare/ndf for Fit A: 34.9985/31 : 1.12898
 Chisquare/ndf for Fit B: 35.3546/32 : 1.10483



Fit and Signal

- We search for dijet resonance signal in our data.
- Excited quark signals are shown at 0.7 TeV and 1 TeV.
- String resonance signal is shown at 1 TeV and 1.6 TeV.





Limits with Statistical Uncertainties Only

