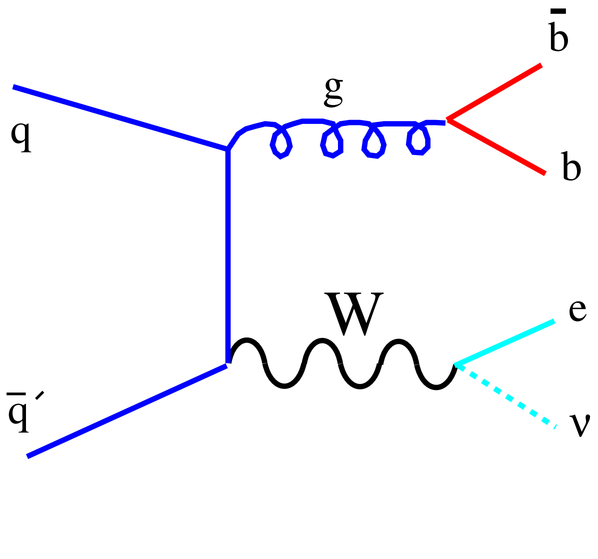
Production Properties

Measuring the production properties of the Top mass can test the Standard Model.

Cross section, $\sigma(p\bar{p} \rightarrow t\bar{t} + X)$:

- Statistical Precision: 3%
- Overall Precision: 9% (Sys. Dominated)
- Systematic Uncertainties:
  - Luminosity: Measure with $W \rightarrow \ell\nu$ Rate
  - Background: Need to know W$b\bar{b}$ and W$c\bar{c}$ rates more accurately. A more precise measure of these backgrounds may be possible from an analysis of the $c\tau$ distribution of W+ (1,2) Jet events.



  - B-tag Efficiency: Can be measured directly with top events by examining b-tagging rate in dilepton events and the ratio of single to double tags in the lepton+jet samples. (*Although this assumes* $BR(t \rightarrow Wb) = 1$).