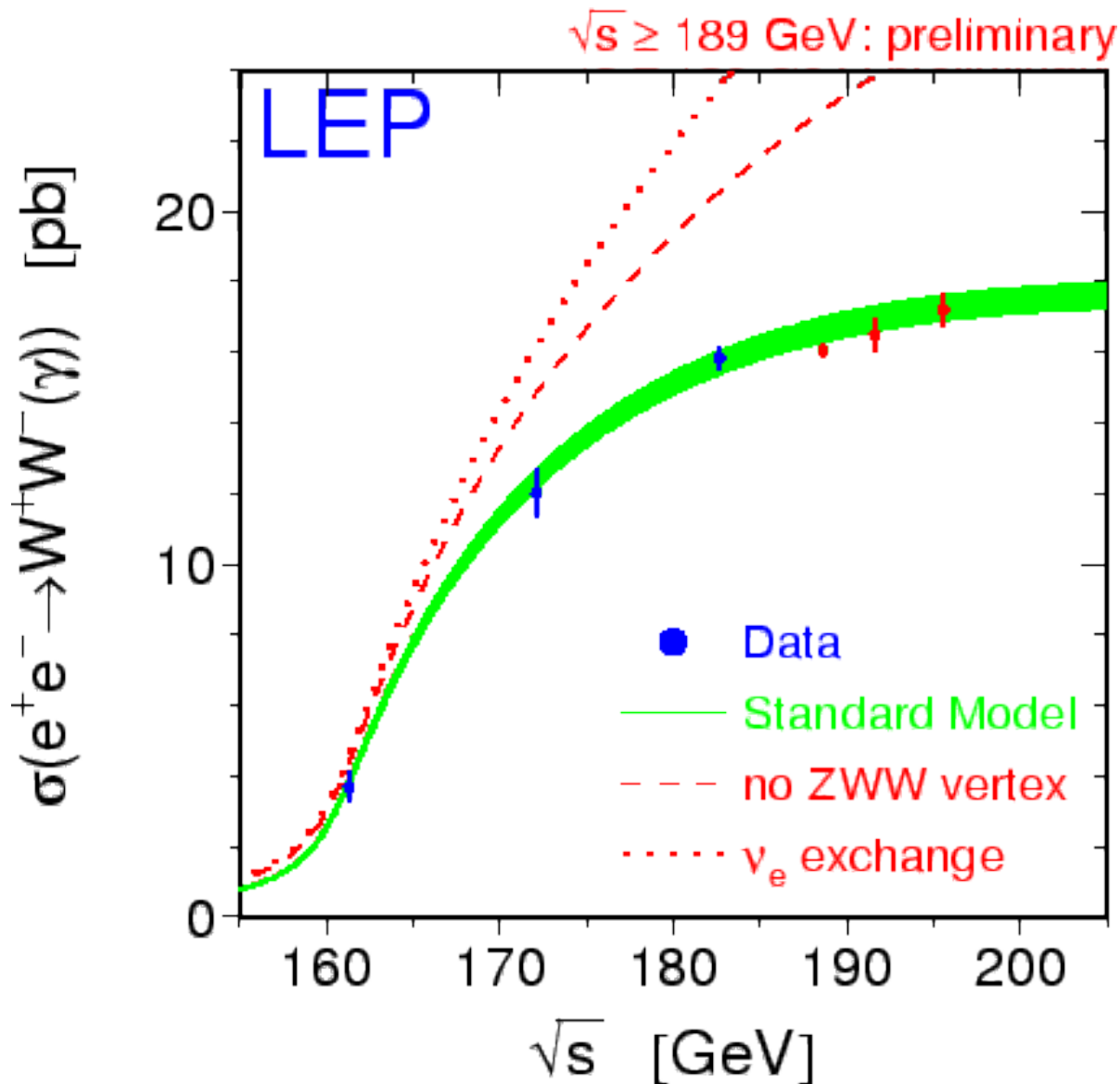


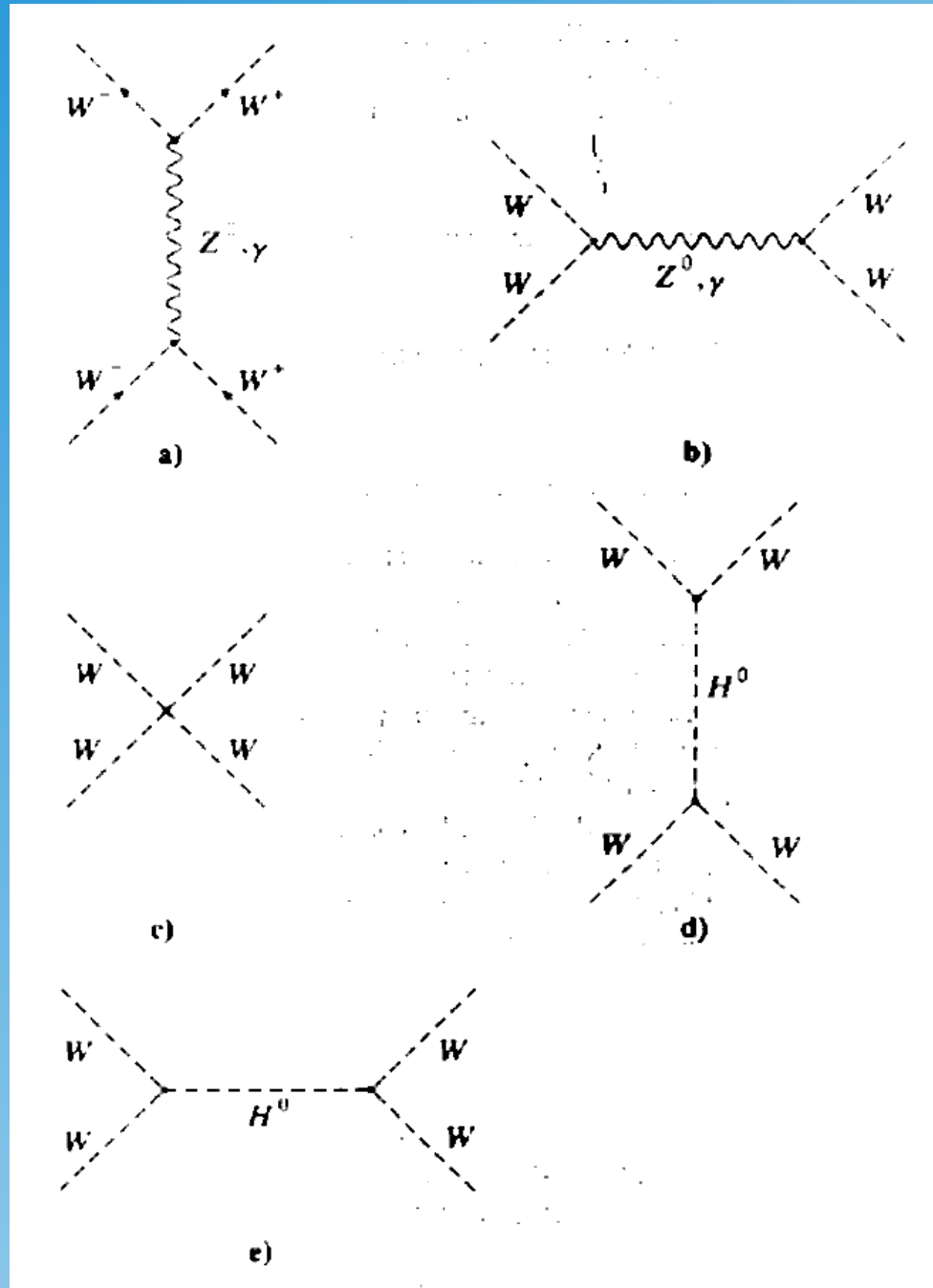
Standard Model and the Higgs Boson

- Motivation
- The Higgs Field and the Standard Model
- Discovery of the Higgs Boson

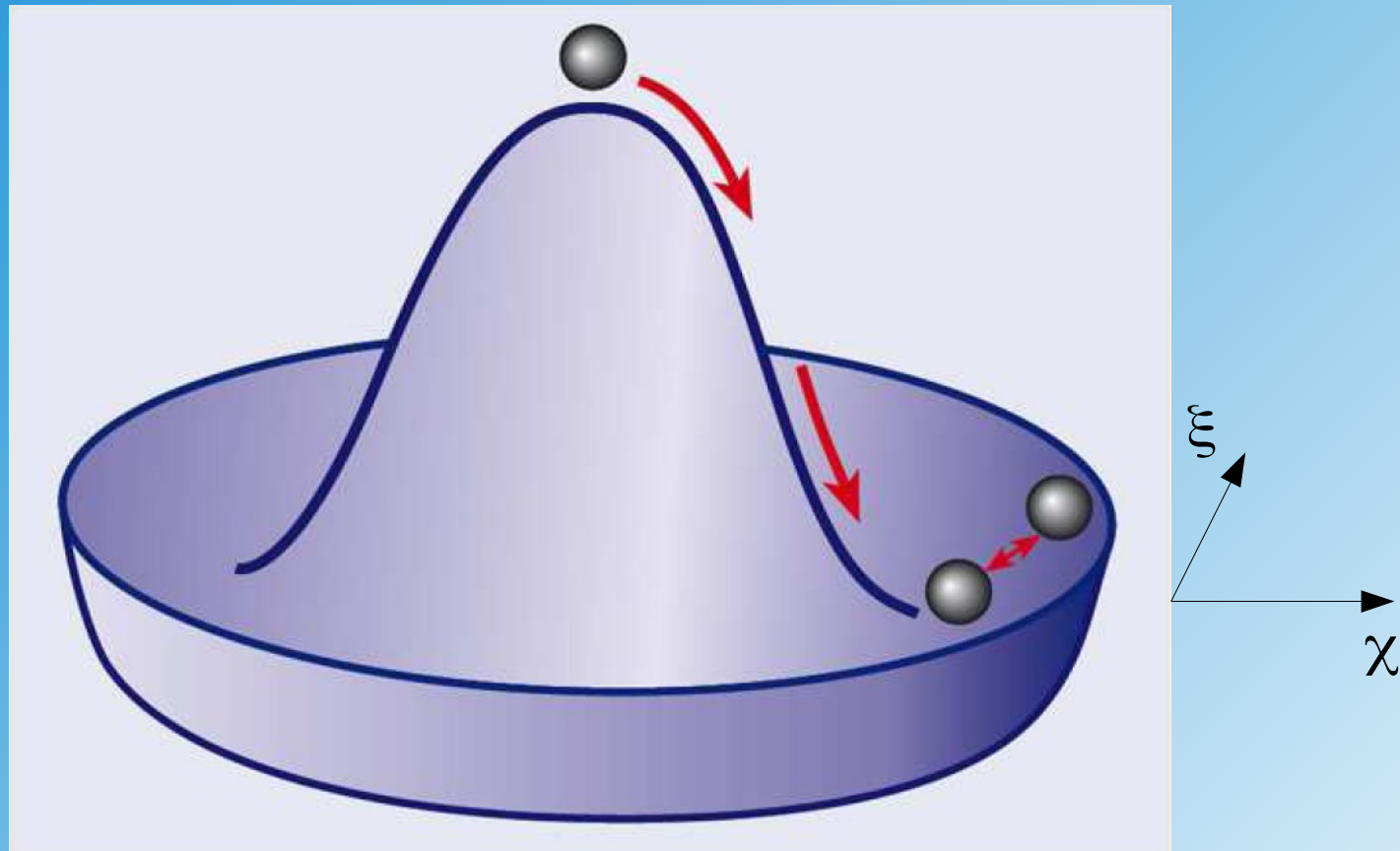
W-Pair Production at LEP2



WW Scattering Diagrams



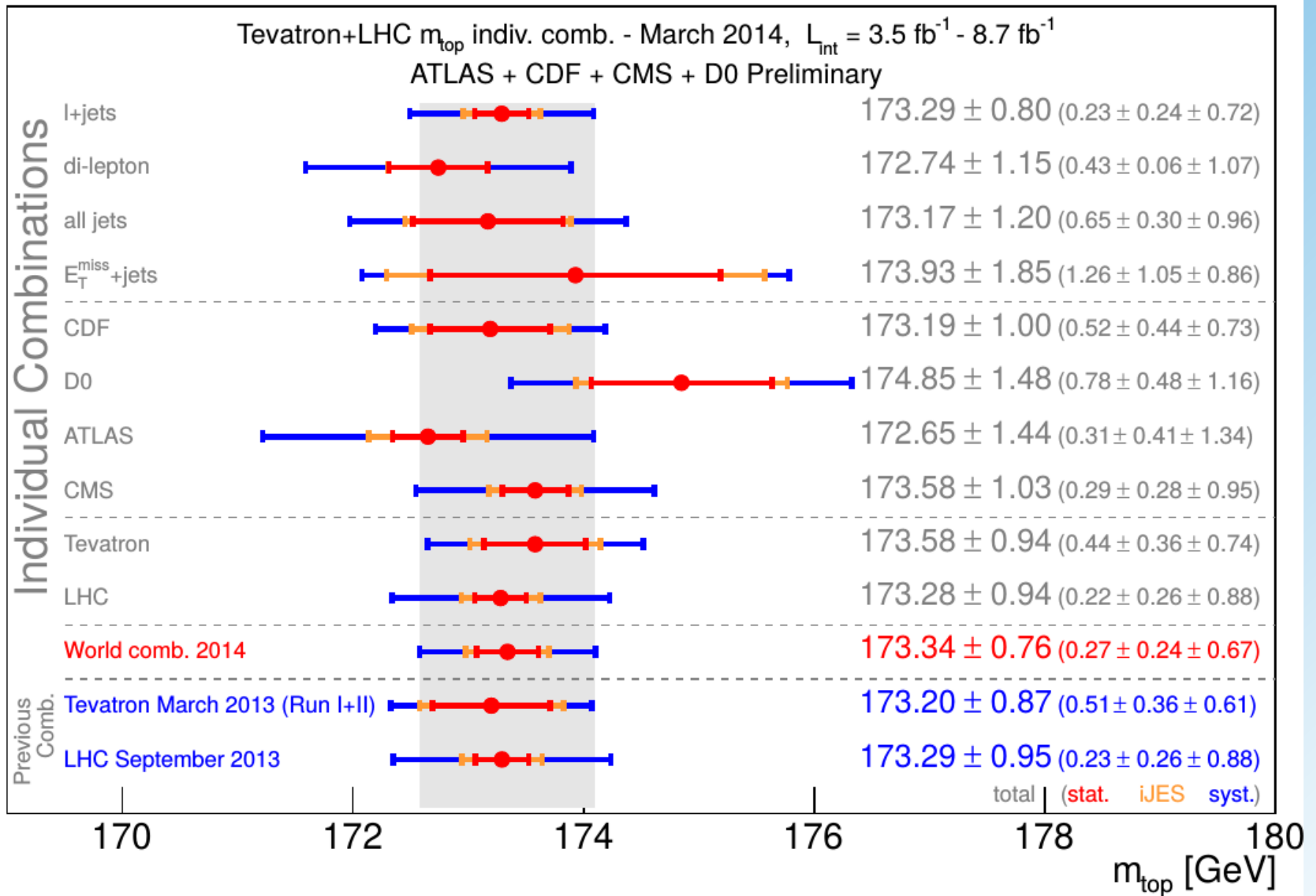
Higgs Field Parametrisation



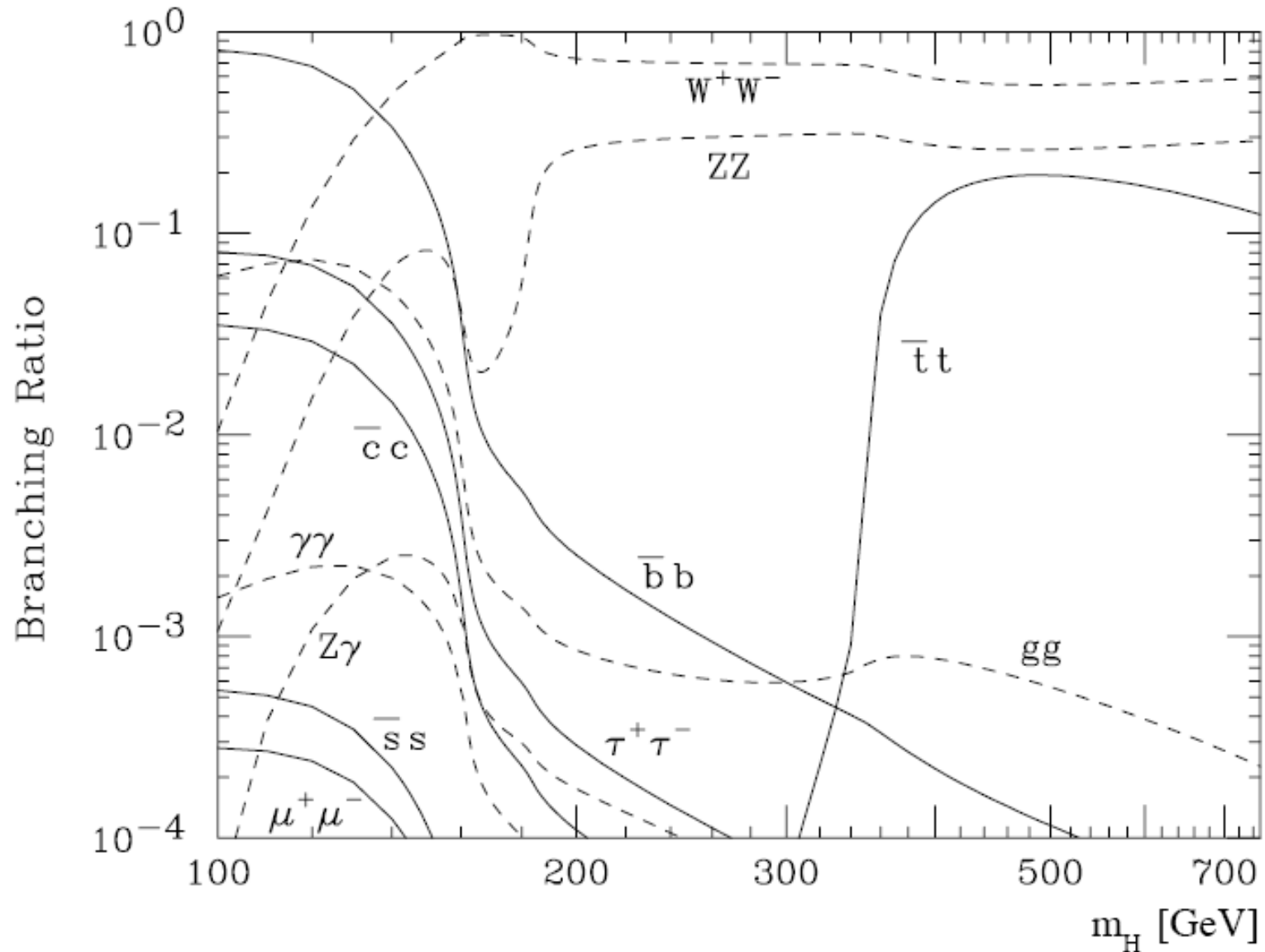
choose minimum to be on the real axis (breaks symmetry):

$$\Phi = \varphi_0 + \chi + i\xi$$

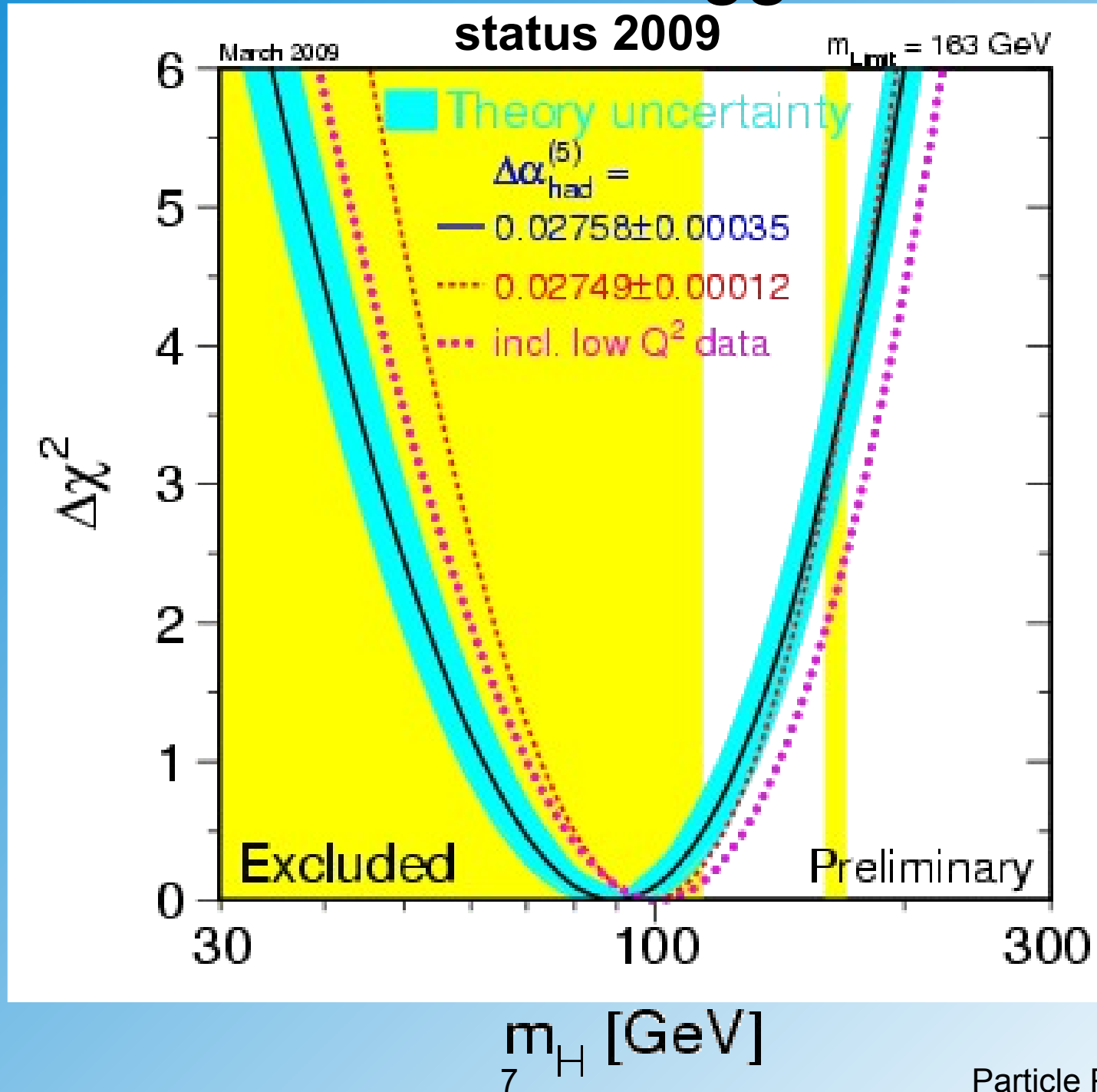
Top Mass Combination



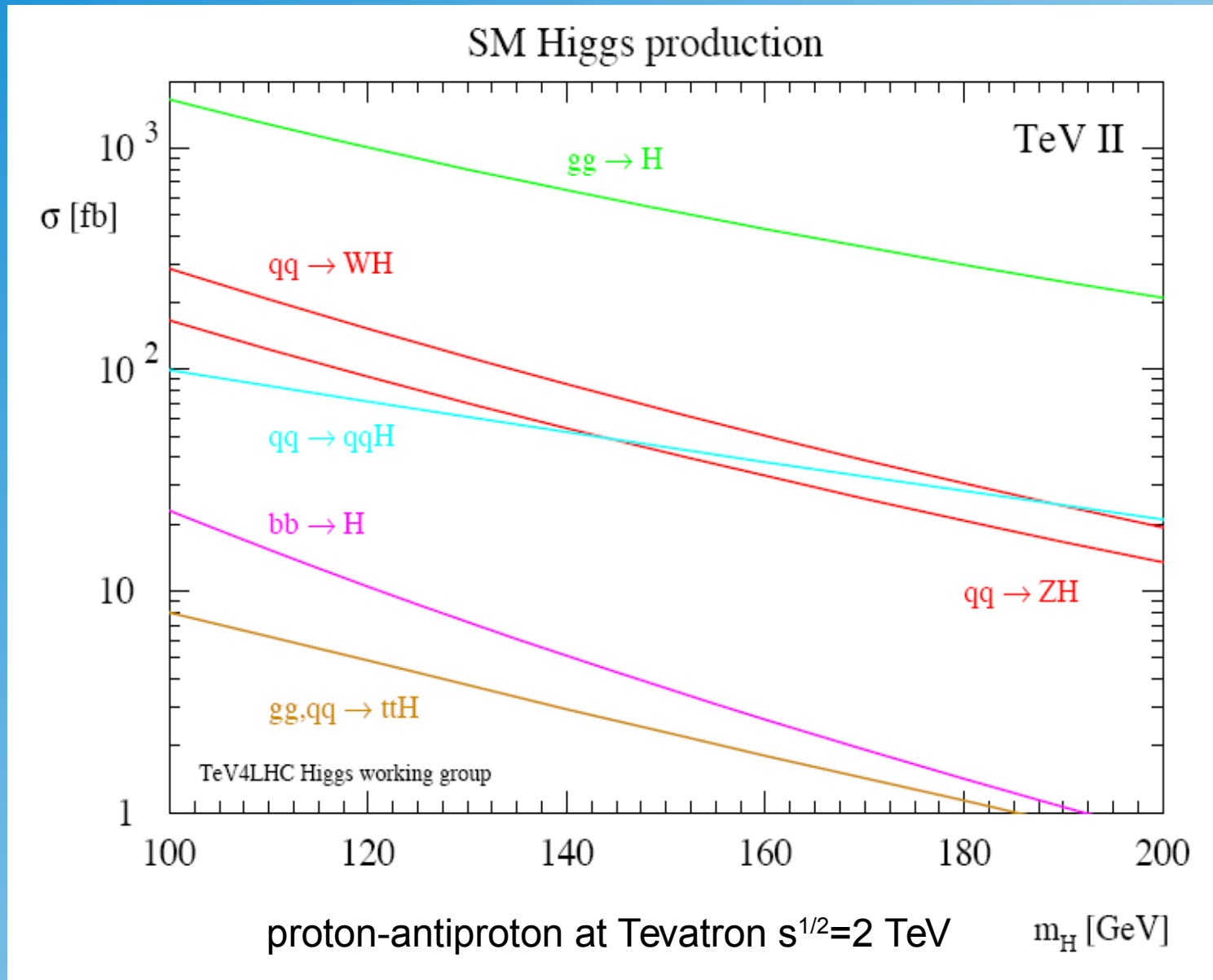
Higgs Decays



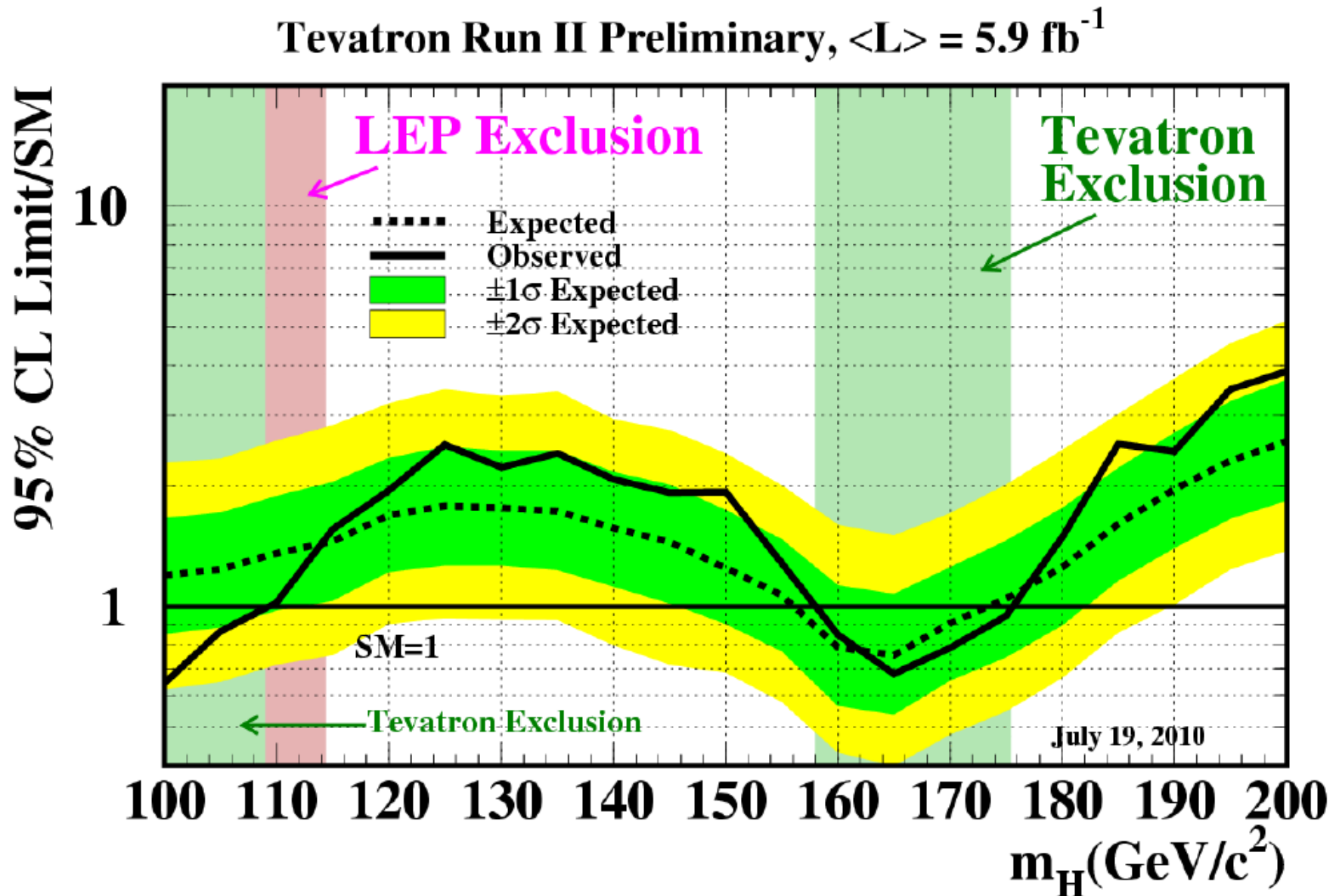
Direct and Indirect Higgs Searches



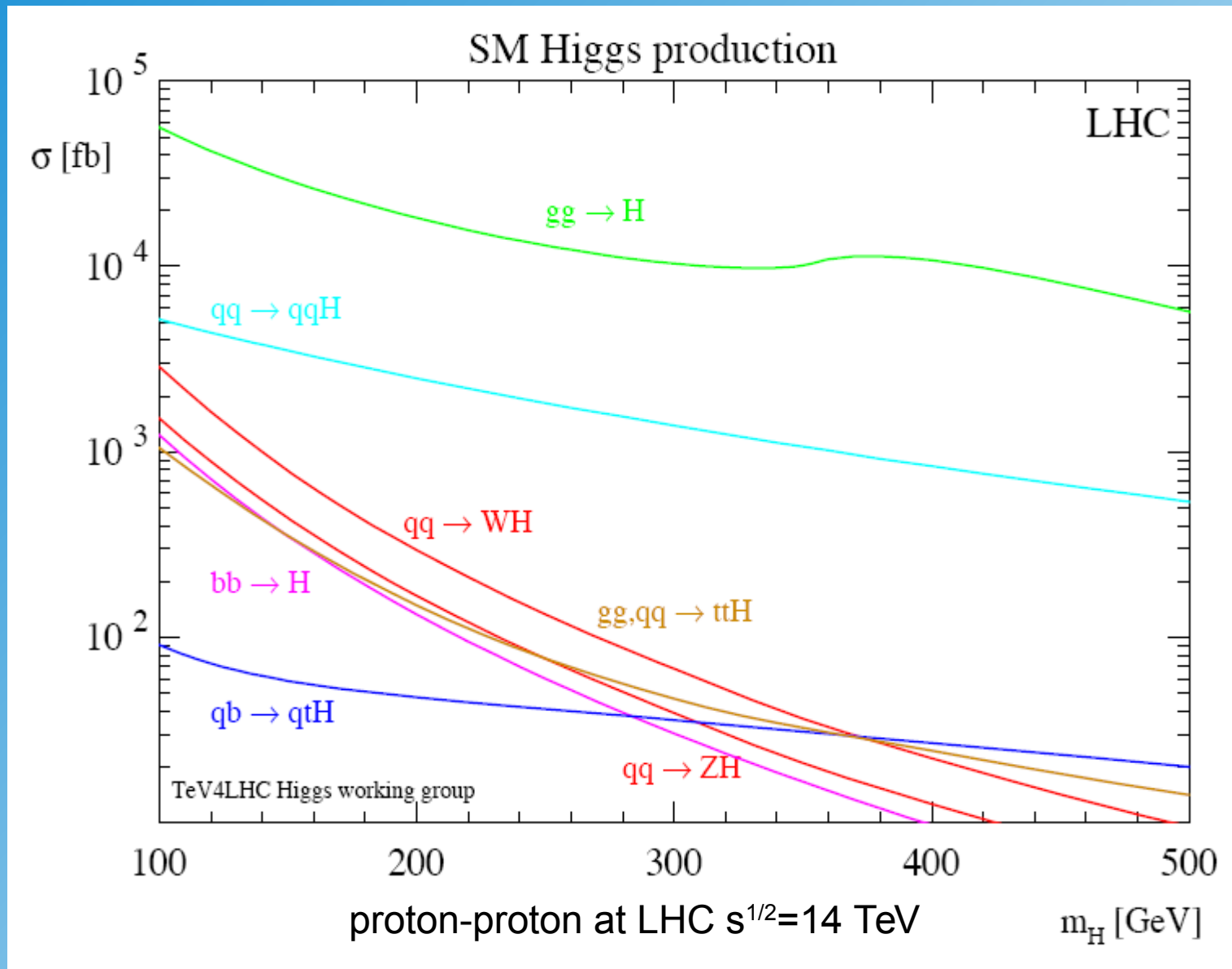
Higgs Production at TeVatron



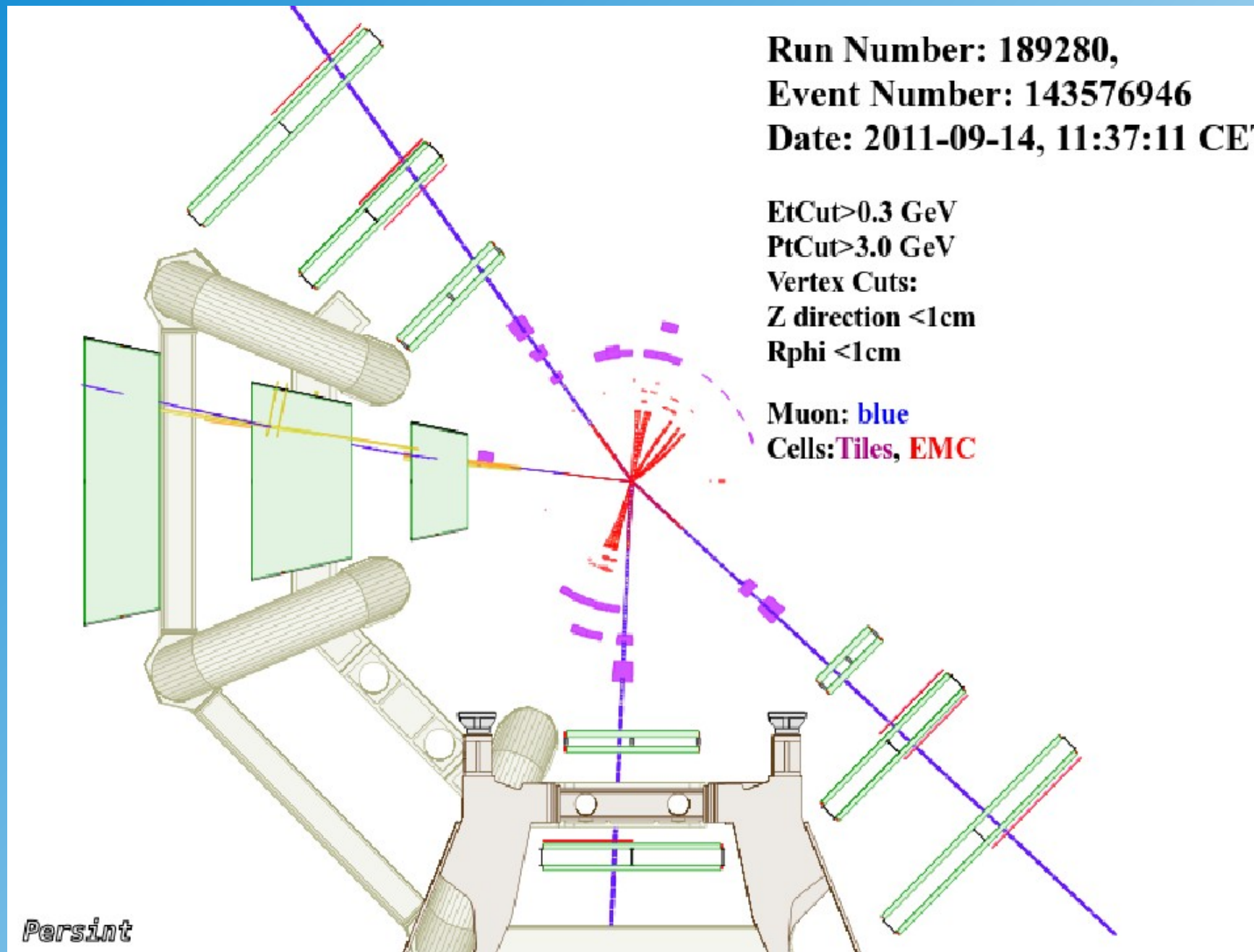
Higgs Exclusion at TeVatron



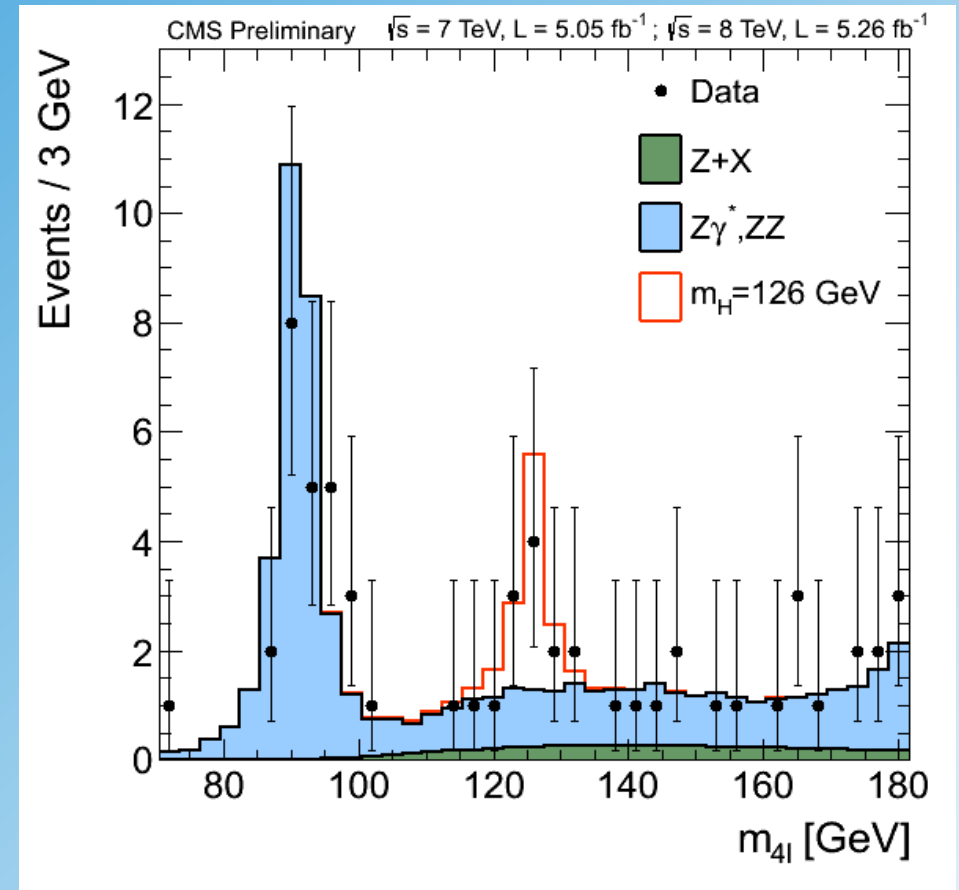
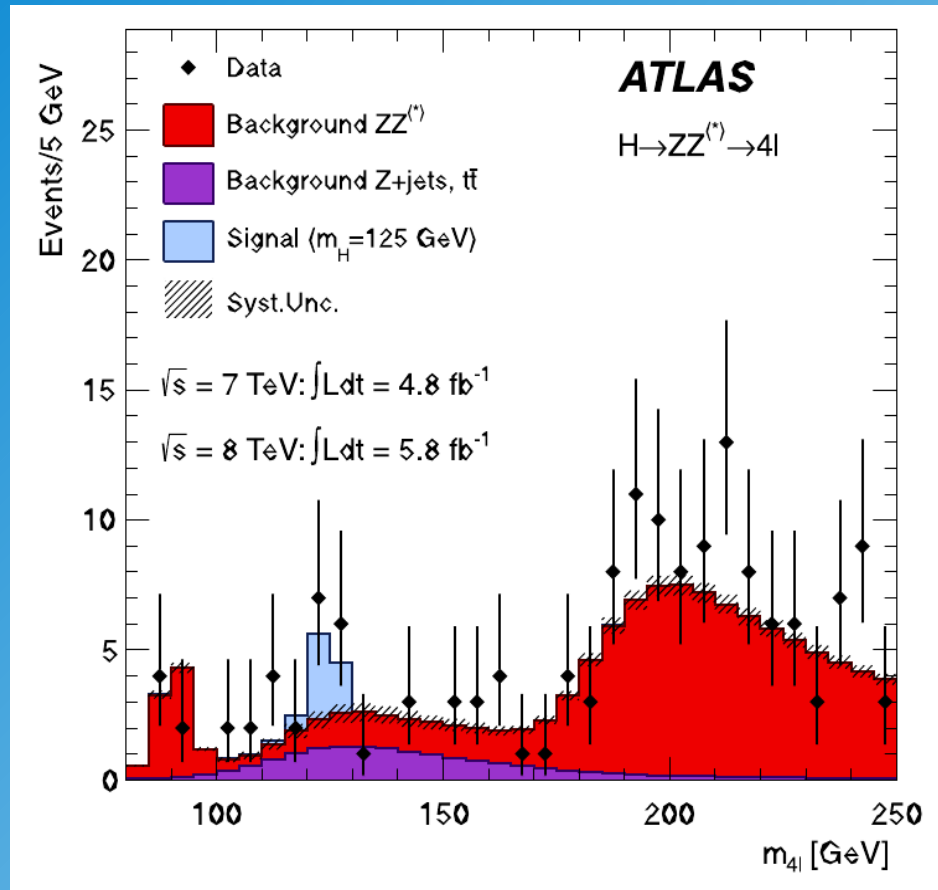
Higgs Production at LHC



Candidate $H \rightarrow ZZ \rightarrow \mu\mu\mu\mu$



Latest Results ATLAS+CMS

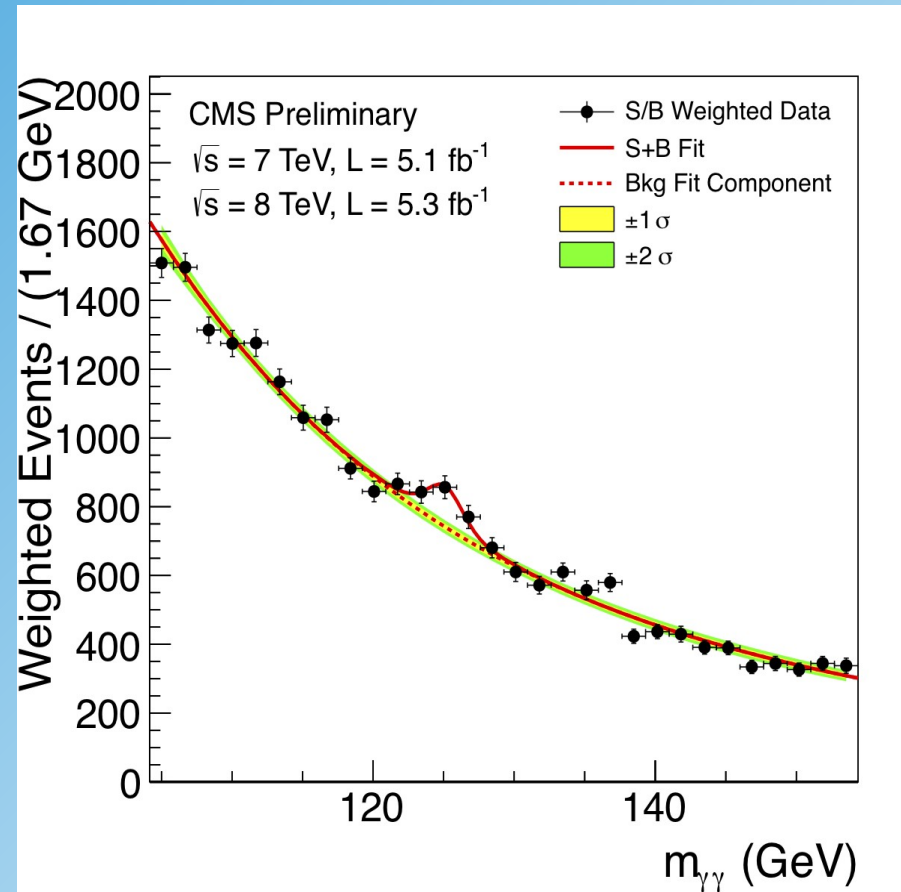
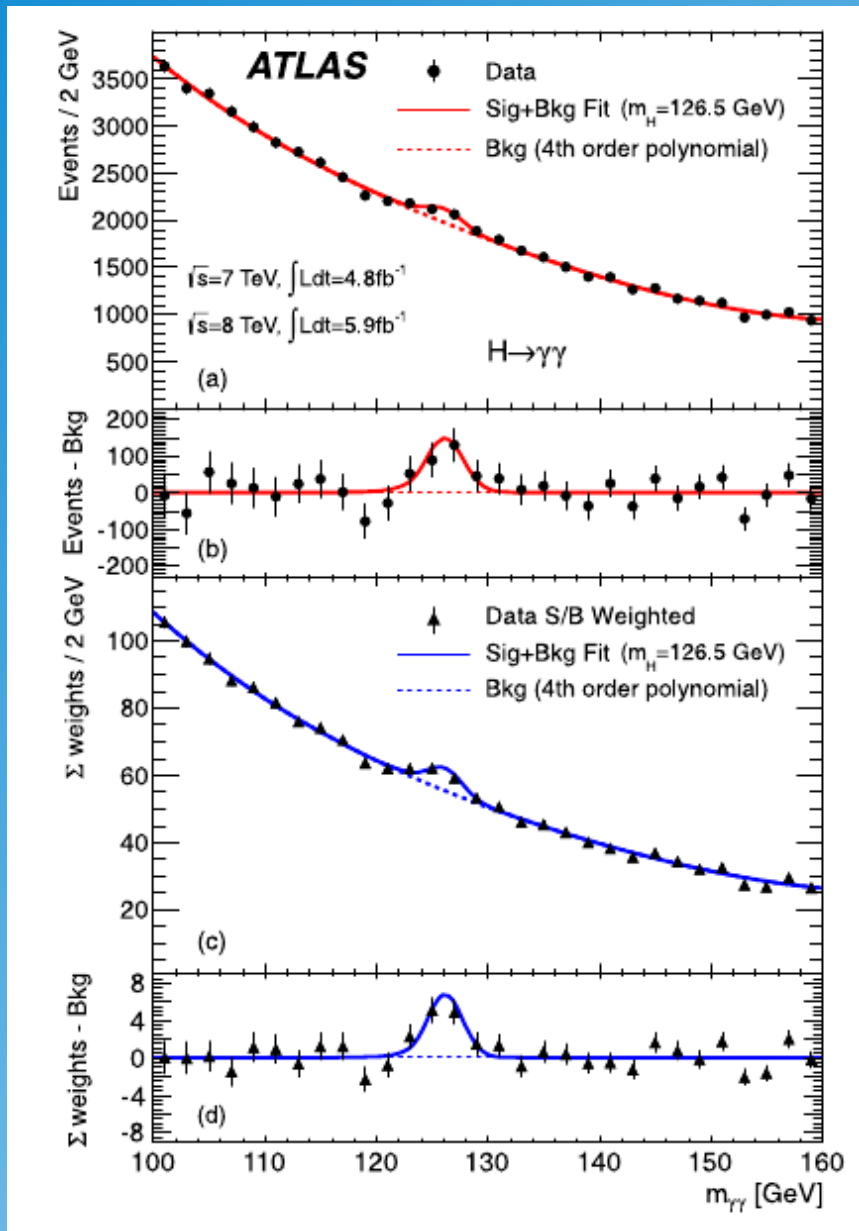


$H \rightarrow ZZ \rightarrow \text{leptons}$

Growing Signal of $H \rightarrow ZZ$ with time

Latest Results ATLAS+CMS

$H \rightarrow \text{gamma gamma}$



Higgs Couplings

