

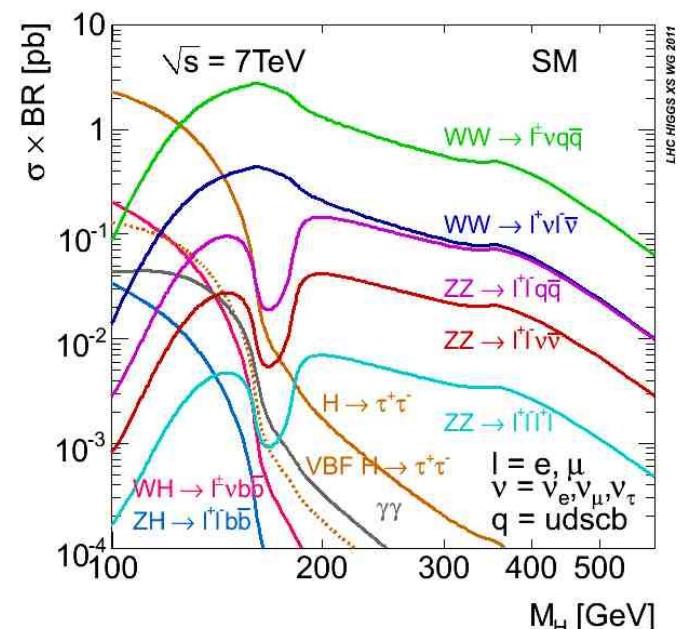
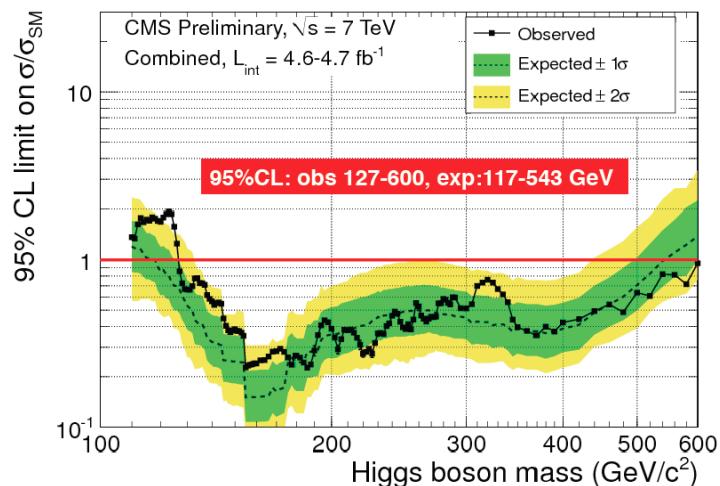


The road to the ElectroWeak Symmetry Breaking Mechanism.

Sara Bolognesi (Johns Hopkins Univ.)

Tuesday, 14 February 2012, 16:00 h

DESY Auditorium



The LHC experiments are today focused on the search of an “Higgs-like” resonance. The Standard Model Higgs boson has been excluded by CMS with mass between 127-600 GeV and the focus is now on the low mass region.

In this hectic moment we should not forget that the main role of the Higgs mechanism in the Standard Model (SM) is related to the ElectroWeak Symmetry Breaking Mechanism (EWSB).

Whatever resonance we may see (or not see) at low mass ($m_H < 2 \cdot m_W$), in order to be the SM Higgs, it must play the role of restoring the unitarity in VV scattering.

I will summarize the main challenges which we will face next year in the search for a generic $X \rightarrow VV \rightarrow 4f$ resonance at high mass and on the road to a precise measurement of the VV scattering spectrum, which will be achievable with larger luminosity ($> 50-100 \text{ fb}^{-1}$).

- Coffee, tea and cookies will be served at 15:45h
- After the seminar there is a chance for private discussions with the speaker over soft drinks and pretzels

