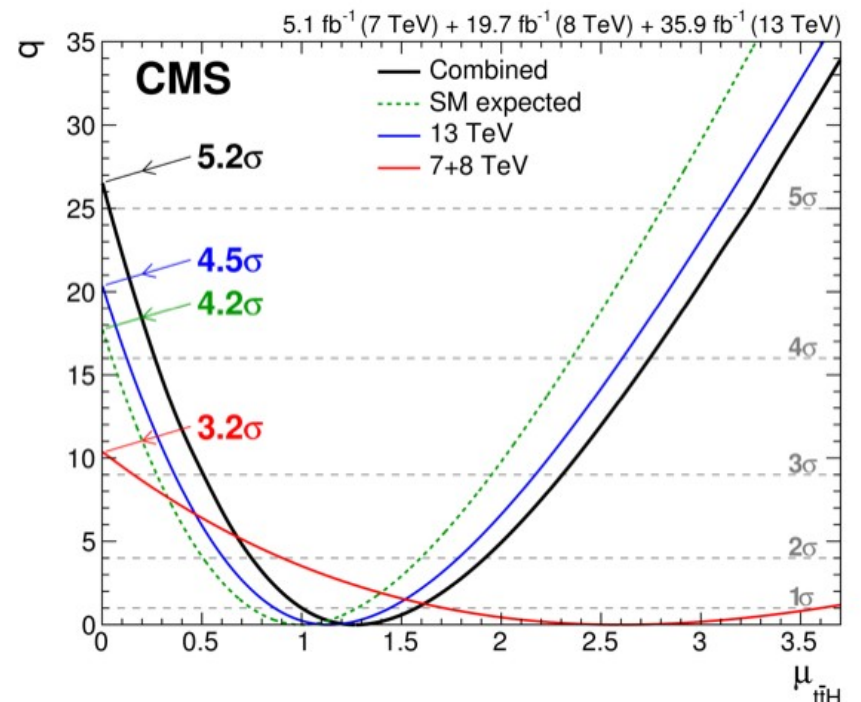




Observation of Top Quark Pair Production in Association with a Higgs Boson.

Tuesday, 5 June 2018
DESY Auditorium
16:45 h

Carmen Diez Pardos (DESY)



A direct measurement of the top quark Yukawa coupling is possible through the Higgs boson production in association with a top quark pair (ttH), a missing vital measurement to verify the standard model (SM) nature of the Higgs boson. A deviation of the expected coupling could reveal the first signs of new physics beyond the SM. Recent ttH results by the CMS and ATLAS Collaborations are presented in the seminar, which are performed using 36 fb⁻¹ of LHC pp collision data at $\sqrt{s}=13$ TeV. The analyses exploit several Higgs boson decay channels, together with different top quark decay modes. The results by CMS combined with previous searches yield the first observation of the ttH production process.

- **Coffee, tea and cookies will be served at 16:30h**
- **After the colloquium there is a chance for private discussions with the speaker over wine and pretzels**

