



# IOP Half Day Meeting Vector Boson Fusion

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23rd February 2011

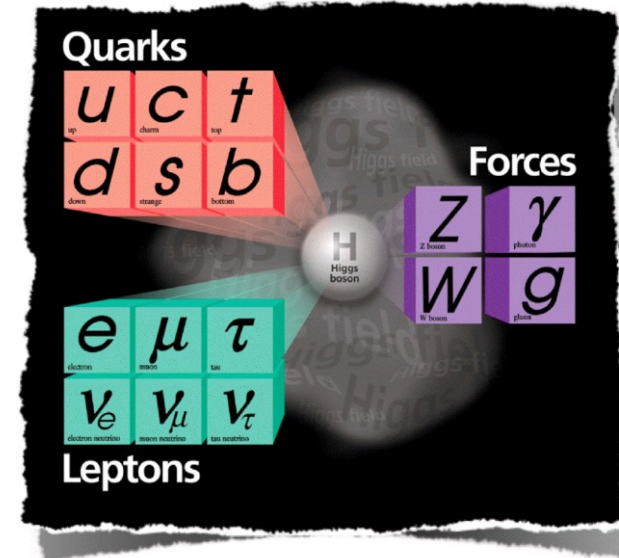


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<http://www.iop.org/activity/groups/subject/hepp>

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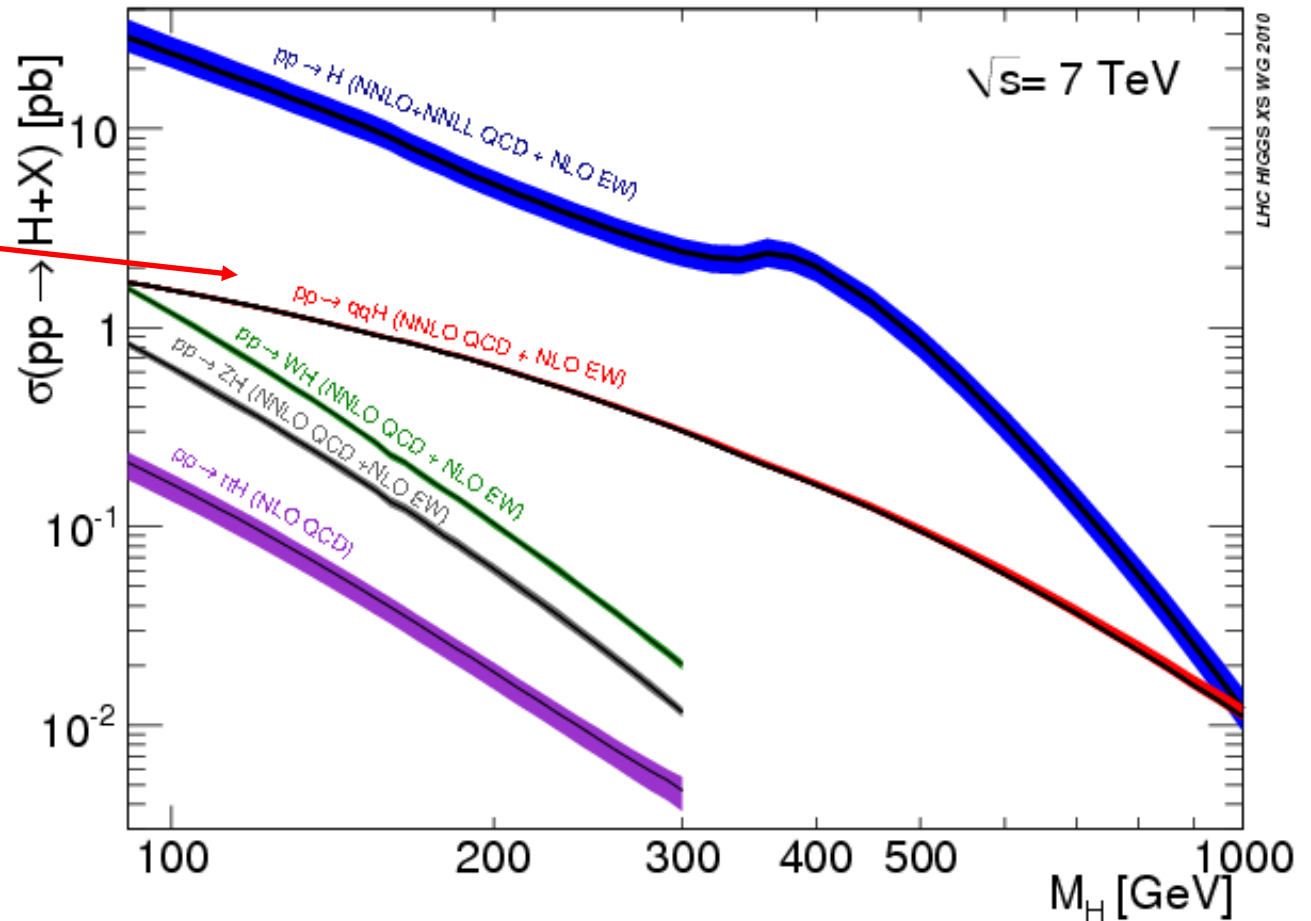
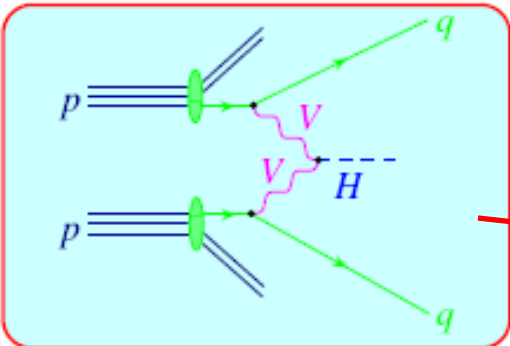
**\*\*Half-day meetings are funded by IOP HEPP up to £500 per meeting.**

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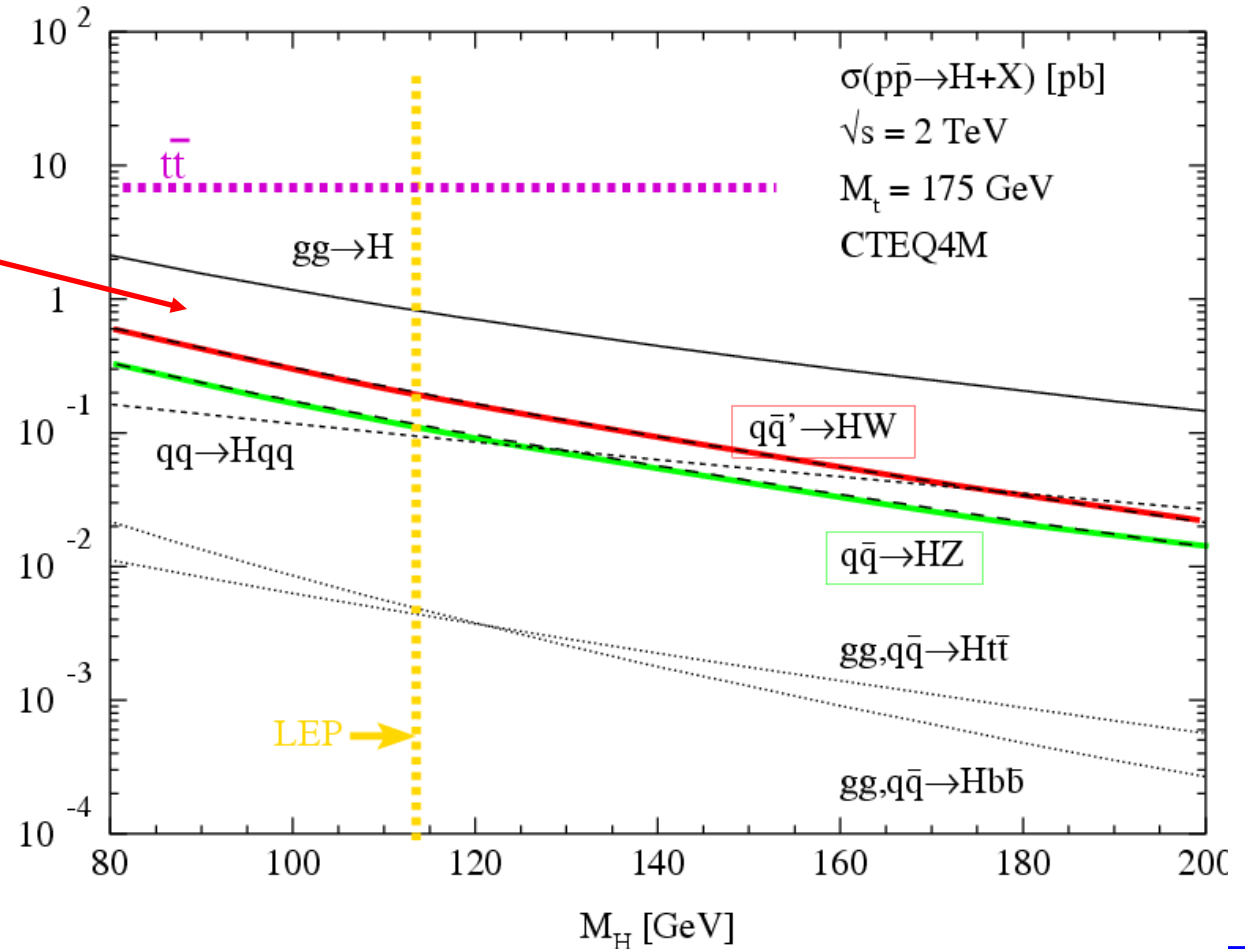
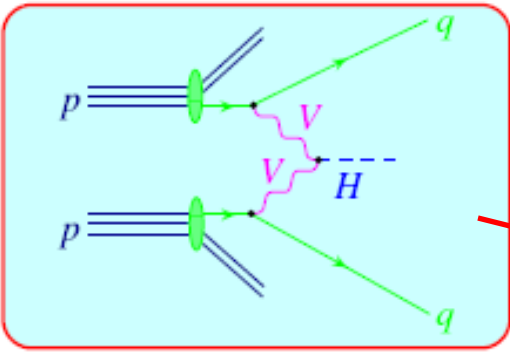
# Vector Boson Fusion

- Higgs Production at the LHC:



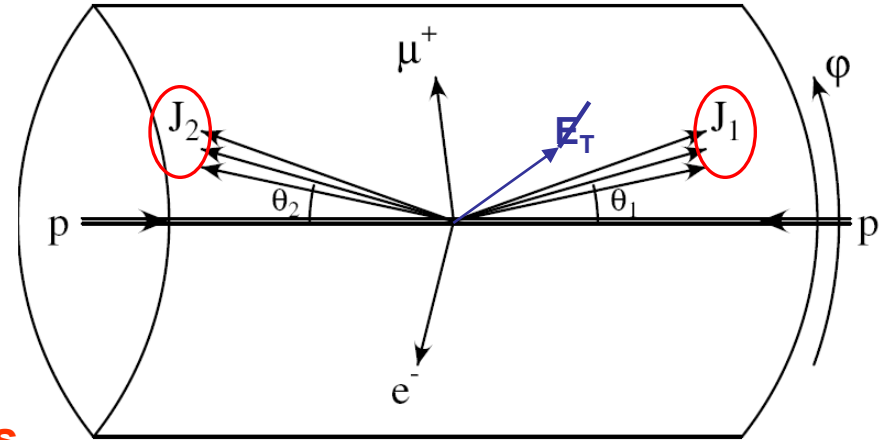
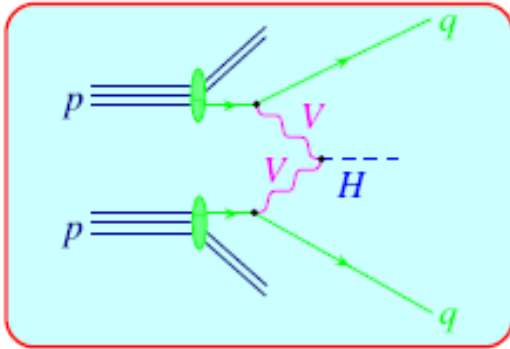
# Vector Boson Fusion

- Higgs Production at the Tevatron:



# Vector Boson Fusion

## • Signature



**Experimental signature:**

- Two tau leptons
- Forward jets
- Missing  $E_T$

**Necessitates understanding of:**

- Cross sections
- Electron/muon ID
- Tau ID and tau-tau mass resolution
- Trigger efficiencies
- Missing  $E_T$
- Jets (including jet energy scale, jet algorithms, forward calorimeter performance)
- Backgrounds

# Today's agenda

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- 13.15 VBF Theory (Dieter Zeppenfeld)
- 13.45 VBF Phenomenology (Andy Pilkington)
- 14.15 VBF Higgs analyses at the LHC (Markus Schumacher)
- 14.45-15.15 ===== tea break =====
- 15.15 VBF Higgs analyses at the Tevatron (Ankush Mitra)
- 15.45 W/Z + jets (Andy Mehta)
- 16.15 VBFNLO latest calculations (Sophy Palmer)
- 16.45 Discussion
- 19.00 Drinks Old Parlour, Brasenose College
- 19.30 Dinner Lecture Room VII, Brasenose College

