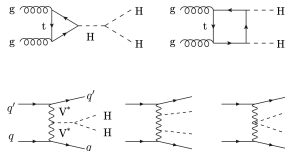


Higgs boson pair production in the $bb\tau\tau$ channel @ LHC

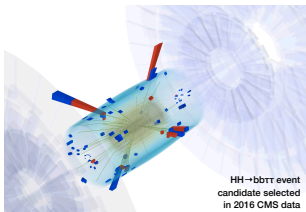
Motivation:

- Higgs boson observation was announced in 2012 by the ATLAS and CMS collaborations
- Higgs pair production only probe of the Higgs potential in the Standard Model, allowing measurement of the Higgs self-coupling λ_{HHH}
- The $bb\tau\tau$ decay channel provides good sensitivity



Your work:

- Study of the kinematic variables of the Higgs decay products
- Comparison of different double Higgs production modes
- Study of the background processes
- Optional: extraction of cross section upper limits



Refs: [CMS detector](#), [2016 results](#), [Advanced HH](#)

Pre-requisite: Python basics