

Boosted VBF 4b Analysis Work

CERN Summer 2022

Project

- ATLAS – Thomas Schwarz
- Boosted VBF $4b$
 - 2 Higgs produced via Vector Boson Fusion (VBF)
 - Focusing on when each Higgs decays into a bottom quark-antiquark pair
 - Boosted – affects location and content of the jets
- Analysis
 - Signal & Background sample generation & work
 - Optimization
 - Fitting, uncertainties, upper limit plot (constraining variables)

Objectives

- Become more familiar with necessary concepts (root, kinematic variables, etc)
- Work on tasks as they are generated (many tbd)
- Continue work into the fall, use as basis for undergrad honors thesis

images from excursions



- this is joe
- 5 points for anyone who can find joe
- no cheating

Annecy



- Hiking
- Biking
- Food
- etc

