

# Stress-Testing the VBF Approximation in Higgs Boson Production

*Saturday 30 September 2017 12:05 (25 minutes)*

We consider electroweak Higgs Boson production in association of three jets at NLO QCD beyond strict VBF acceptance cuts. We investigate how accurate the VBF approximation is by a detailed comparison of the full and approximate calculations. We find that the rapidity gap between the tagging jets is guaranteeing a good approximation, while an invariant mass cut alone is not sufficient.

**Authors:** FIGY, Terrance Maynard (Wichita State University); PLATZER, Simon (University of Durham (GB)); SCHICHEL, Peter Paul Ronald (University of Durham (GB))

**Presenter:** FIGY, Terrance Maynard (Wichita State University)

**Session Classification:** Dark Matter and Flavor