



Contribution ID: 217

Type: **Oral presentation**

## **Multi-boson Production in Weak Boson Fusion**

*Tuesday, April 29, 2014 10:50 AM (20 minutes)*

The production of electro-weak bosons via weak boson fusion is an important process at the LHC, as it allows testing the Standard Model (SM) in various ways. For example, if at least two bosons are produced, Feynman graphs with quartic gauge couplings appear. Therefore, this process class can be used to constrain or discover contributions from anomalous quartic gauge couplings. Also, at large invariant masses of the bosonic system, contributions from intermediate Higgs bosons are necessary to ensure the unitarization of the cross section. Deviations will occur if this unitarization is not complete, because the coupling of the Higgs to gauge bosons deviates from the SM value, or there are further Higgs bosons at higher masses. To facilitate this task, precise theoretical predictions are necessary.

In this talk, I will summarize the current theoretical status of higher-order corrections and matching fixed-order calculations with parton shower. Examples will be given how this process class can be used to perform the SM tests mentioned above.

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**Session Classification:** WG3: Electroweak Physics and Beyond the Standard Model

**Track Classification:** WG3: Electroweak Physics and Beyond the Standard Model