## Phenomenology 2014 Symposium



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## Probing the Higgs-vector coupling with same-sign W bosons

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We explore the sensitivity of the  $pp \rightarrow W^{\pm}W^{\pm}jj$  process to deviations of the Higgs-vector coupling from its SM value. Since the Higgs-mediated contribution does not depend on other Higgs couplings and is independent of the total Higgs width to a good approximation, we can probe the Higgs-vector coupling directly. In the standard model, the Higgs channel does not give a sizeable contribution to the pure electroweak process at  $\sqrt{s} = 14$  TeV. However, we show that a set of optimized cuts and kinematic observables would allow us to set a stringent upper bound on enhanced Higgs-vector couplings by the end of the High Luminosity LHC run with  $\sim 3 \text{ ab}^{-1}$  of data.

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