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Search for the vector boson fusion produced Standard Model Higgs boson decaying to bottom-quarks with the ATLAS detector

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Since the discovery of the Higgs boson in 2012 several measurements have investigated the properties of this new particle, providing detailed information concerning its coupling to Vector bosons. Conversely, little is known about the Higgs boson's coupling to fermions. In this context, more accurate studies must be conducted in order to further test the validity of the Standard Model: fermionic decay modes need Run-2 statistics to reach a high significance. In particular, the VBF H->bb channel is extremely promising due to its particular topology. In this contribution a search for a VBF-produced Higgs boson in the bottom-pair decay channel conducted with the ATLAS experiment will be presented. Focus will be put on the results obtained from Run-1 and the improvements in Run-2.

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