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Measurement of the Standard Model Higgs boson produced in association with a vector boson and decaying to a pair of b-quarks in p-p collisions at 13 TeV using the ATLAS detector

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The Higgs boson decays to pairs of b-quarks were studied in associated production with a W or Z boson by the ATLAS Collaboration. The decay to b-quarks is of particular importance since it allows a direct measurement of the coupling of the Higgs boson to b-quarks. The highest sensitivity in this channel is obtained when the vector boson produced alongside the Higgs boson decays to leptons. The analysed data were collected in proton-proton collisions at the Large Hadron Collider during Run 2 at a center-of-mass energy of 13 TeV. The final state requires having exactly 2 b-tagged jets and either 0, 1 or 2 charged leptons (electrons or muons, denoted as 'l') corresponding to the following channels: $Z \longrightarrow \nu\nu$, $W \longrightarrow l\nu$ and $Z \longrightarrow ll$. In this poster a review of the analysis and the results from the Higgs signal measurement will be shown.

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