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Effective Field Theory interpretation of the VBF HWW differential analysis with the ATLAS detector JIAYI CHEN, Brandeis Univ, ATLAS COLLABORATION — An Effective Field Theory (EFT) re-interpretation of the differential measurement of Vector Boson Fusion Higgs production and decay to two W bosons will be reported. The analysis used the full Run-2 data in 2015–2018 of pp collisions at $\sqrt{s}$ =13 TeV with the ATLAS detector at the LHC, which correspond to an integrated luminosity of 139 fb^{-1}. Events with an electron and a muon from the decay of the W bosons and two energetic jets in the final state are considered as signals. At particle level, Standard Model predictions can be modified by expressing the differential cross section of various observables as a function of parameters that represent new phenomena predicted by EFT. The background subtracted and unfolded data are used to set limits on these new physics parameters.

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