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Search for CP-odd $t\bar{t}H$ production in the $H \rightarrow b\bar{b}$ decay channel

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In the Standard Model (SM), the Higgs boson is predicted to be a scalar with no CP-violating interactions. After the observation of the Higgs boson production in association with a top quark pair ($t\bar{t}H$), the measurement of an odd charge-parity (CP) component in one of the Higgs boson couplings would constitute an important discovery of physics beyond the SM. This poster describes the search for a CP-odd contribution in the $t\bar{t}H$ production in the $H \rightarrow b\bar{b}$ decay channel, based on the 139 fb^{-1} of proton-proton collision data at center-of-mass energy of 13 TeV collected with the ATLAS detector.

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