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Machine Learning the Higgs-top CP Measurement

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We explore the direct Higgs-top CP structure via the $pp \to t\bar{t}h$ channel with machine learning techniques, considering the clean $h \to \gamma\gamma$ final state at the high luminosity LHC˜(HL-LHC). We show that a combination of a comprehensive set of observables, that include the $t\bar{t}$ spin-correlations, with mass minimization strategies to reconstruct the $t\bar{t}$ rest frame provide large CP-sensitivity.

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Primary authors: GONÇALVES, Dorival (Oklahoma State University); BARMAN, Rahool (Oklahoma State University); KLING, Felix (SLAC)

Presenter: BARMAN, Rahool (Oklahoma State University)

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