

PARTICLE PHYSICS SEMINAR SERIES

Combined analysis of double Higgs production in the Effective Field Theory (EFT) approach

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We perform a detailed study of double Higgs production in the Effective Field Theory (EFT) approach where new physics effects are encoded in the coefficients of local operators. The precision measurements of these coefficients as well as the triple Higgs self-coupling will constrain the possible structure of the underlying new physics. In this work, we provide a combined analysis of three decay channels, $b\bar{b}\gamma\gamma$, $b\bar{b}\tau\tau$ and $b\bar{b}W W^*$, making full use of recently developed kinematics variables and a boosted decision tree, to maximize the sensitivity on different effective operators and the triple Higgs coupling.



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