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## Exploring SMEFT operators in the tHq production at the LHC

We study the top-quark production along with a Higgs boson and a jet (tHq) at the LHC experiment within the framework of the Standard Model Effective Field Theory (SMEFT). A strategy is developed to constrain the Wilson Coefficients (WC) corresponding to the associated SMEFT operators

with this process using the latest LHC measurements in top quark physics. After performing a statistical analysis, the best-fit values of these WCs are presented. Finally, we demonstrate the feasibility of finding the effects of these operators on various kinematical observables of the tHq process at the LHC. We find that for a set of obtained best-fitted values of the considered WCs, the excess of signal over the backgrounds can be achieved with a reasonable significance at the center of mass energy 13 TeV and for integrated luminosity options 300/fb and 3000/fb

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