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Searching for new physics in boosted tops

Wednesday, 21 April 2021 12:00 (20 minutes)

We present a "realistic" and in-depth analysis of how boosted top quark reconstruction techniques, e.g. using the HEPTopTagger toolkit, could be used to constrain the Wilson Coefficients (WCs) of top-sector BSM physics. The goal is to include the effects of jet-substructure mis-reconstruction on expected WC constraints and the effect of the on/off-shell nature of underlying top quark on the tagger's performance. Furthermore, detector inefficiency can significantly affect the tagger efficiency, which will conclusively lead to a bias in WC constraints. We will present the preliminary results of our analysis and discuss the following steps of the project.

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