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Jet Dipolarity: Top Tagging with Color Flow

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A new jet observable, dipolarity, is introduced that can distinguish whether a pair of subjects arises from a color singlet source. This observable is incorporated into the HEPTopTagger and is shown to improve discrimination between top jets and QCD jets for moderate to high p_T .

Summary

I will discuss how color flow observables can be used to improve background rejection in top tagging algorithms. I will also touch on how color flow observables could be used for event discrimination in other contexts, for example a heavy higgs decaying to WW .

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