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## Mass aware jet clustering with Variable-R and a soft drop veto

We present results using an optimized jet clustering with variable  $R$ , where the jet distance parameter  $R$  depends on the mass and transverse momentum  $p_T$  of the jet. The jet size decreases with increasing  $p_T$ , and increases with increasing mass. This choice is motivated by the kinematics of hadronic decays of highly Lorentz boosted top quarks, W, Z, and H bosons. The jet clustering features an inherent grooming with soft drop and a reconstruction of subjets in one sequence. These features have been implemented in the Heavy Object Tagger with Variable R (HOTVR) algorithm, which we use to study the performance of jet substructure tagging with different choices of grooming parameters and functional forms of  $R$ .

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