

# New approach to identifying boosted hadronically-decaying particle using jet substructure in its center-of-mass frame

*Thursday, 15 August 2013 14:50 (20 minutes)*

We introduce a new approach to study jet substructure in the center-of-mass frame of the jet. We demonstrate that it can be used to discriminate the boosted heavy particles from the QCD jets and the method is complementary to the existing other jet substructure algorithms. Applications to searches for hadronically decaying  $W/Z$ +jets, top jet and heavy resonance that decays to final states with  $W/Z$  and top jets are also discussed. The talk is based on my papers published in Physical Review D (PRD85,034007 (2012) & PRD 87, 074007 (2013)) and some recent work afterwards (to be submitted to a paper).

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**Session Classification:** QCD Physics

**Track Classification:** QCD Physics