

Abstract Submitted
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Calculating Pull for Non-singlet QCD Jets¹ YUNJIA BAO, ANDREW LARKOSKI, Reed College — The pull vector is a jet observable sensitive to the distribution of soft radiation controlled by the color flow in a collider event. We present calculations to leading order in the soft and collinear limits for the pull vector measured between pairs of jets that do not form a color-singlet dipole. Our calculations are presented within the context of $e^+e^- \rightarrow$ three jets events, on which pull is measured between the two subleading jets. A subset of these calculations can be re-interpreted as a bottom–anti-bottom quark jet pair in a color octet configuration, which can be a background to Higgs production at large boost. We also present a universal expression for the pull distribution in the high-boost and small jet radius limit. This distribution is controlled by color SU(3) quadratic Casimirs that arise from product representations of pairs of QCD jets.

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