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## Identification of b-quark jets in the CMS experiment

*Saturday 7 July 2012 18:00 (1 hour)*

The identification of jets associated with the production of b quarks is an essential tool both for the measurement of standard-model processes and in the search for physics beyond this model at the Large Hadron Collider. The CMS experiment has developed a variety of algorithms that use the impact parameters of charged-particle tracks, the properties of reconstructed decay vertices, the presence of a lepton or combinations of these quantities to select samples of jets with different b purities. Proton-proton collisions recorded in 2011 and corresponding to an integrated luminosity of 5.0 fb<sup>-1</sup> have been used to compare the quality of the reconstruction with expectations from simulation. The performance of the algorithms in terms of efficiency and misidentification probability has been measured from multi jet events and from top-quark pair events.

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