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Performance of heavy flavour jet identification in boosted topologies in CMS 13 TeV data

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Physics measurements in the highly Lorentz-boosted regime, including the search for the Higgs boson or beyond standard model particles, are a critical part of the LHC physics program. In the CMS Collaboration, various boosted-jet tagging algorithms, designed to identify hadronic jets originating from a massive particle decaying to $b\bar{b}$ or $c\bar{c}$, have been developed and deployed in a variety of analyses. This talk highlights their performance on simulated events, and summarises the novel calibration methods of these algorithms with 2016-2018 data collected in proton-proton collisions at $\sqrt{s} = 13$ TeV. Three distinct control regions are studied, selected via machine learning techniques or the presence of reconstructed muons from $g \to b\bar{b}$ ($c\bar{c}$) decays, as well as regions selected from Z boson decays. The calibration results, derived through a combination of measurements in these three regions, are presented.

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