

# Tracking and flavor-tagging performance at ATLAS

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The identification of jets originating from heavy-flavour quarks (b, c) is central to the LHC physics program. High-performance flavour tagging is necessary both in precise Standard Model measurements and in searches for new physics. To achieve this, distinct characteristics of heavy-flavour decays are exploited, such as the presence of secondary vertices and displaced particles. This requires an accurate picture of the charged-particle activity within jets, which is obtained performing efficient and precise track reconstruction in the ATLAS Inner Detector. After providing details on the role of track reconstruction in b-tagging, we present the latest heavy-flavour jet tagging algorithms developed by the ATLAS collaboration. In addition we report, for both track reconstruction and flavour tagging tasks, recent performance results as expected in simulation and as measured in collision data.

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