

Abstract Submitted
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Tagging q/g and $g \rightarrow b\bar{b}$ Jets at ATLAS MAXIMILIAN SWIAT-
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We present first results on jet tagging in ATLAS. First, we present the results of
an implementation of a quark/gluon tagger built with tracking variables, and show
that strong gluon rejection is possible even in high luminosity environments. We use
template methods to validate the quark/gluon tagger in data. Second, we present
results on a new technique developed to identify jets originating from a gluon that
has split to $b\bar{b}$. Jet substructure variables enable high levels of double $b\bar{b}$ -jet rejection.
The ability to separate quark from gluon jets and single b -jets from gluons splitting
to $b\bar{b}$ -jets can enhance the LHC discovery potential by rejecting gluon-dominated
backgrounds.

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