



Review

# Jets in hadron–hadron collisions

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## Abstract

In this article, we review some of the complexities of jet algorithms and of the resultant comparisons of data to theory. We review the extensive experience with jet measurements at the Tevatron, the extrapolation of this acquired wisdom to the LHC and the differences between the Tevatron and LHC environments. We also describe a framework (SpartyJet) for the convenient comparison of results using different jet algorithms.

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## 1. Introduction

Most of the interesting physics signatures at the Tevatron and LHC involve final states with jets of hadrons. A jet is reconstructed from energy depositions in calorimeter cells and/or from charged particle track momenta, and ideally is corrected for detector response and resolution effects so that the resultant 4-vector corresponds to that of the sum of the original hadrons comprising the jet. The jets can also be further corrected, for hadronization effects, back to the parton(s) from which the jet originated. The resultant measurements can be compared to

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