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Power jets: a new framework for QCD radiation

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The LHC's high-luminosity upgrade will create intense pileup, which motivates a more global, correlation-based approach to collider event reconstruction. The QCD power spectrum encodes the total event shape at large and small angles. Jets and their substructure can then be extracted from this power spectrum. A useful feature of this approach is the absence of a jet radius parameter, so that narrow and fat jets can be fit simultaneously. And instead of a local pileup subtraction, the global fit allows pileup to be treated as a cohesive entity. This produces a reconstruction which is robust to extremely high pileup.

Summary

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