

Fastjet: Vectorizing Jet Finding

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Jet finding is an essential step in the process of Jet analysis. The currently available interfaces cannot take multiple events in one function call, which introduces a significant overhead. To remedy this problem, we present an interface for FastJet using Awkward Arrays to represent multiple events in one array.

The package depends on other SCIKIT-HEP packages like Vector and by leveraging its functionality the user can also perform coordinate transformations for Lorentz vectors. The vectorized and multi event data handling also makes it modern and compatible with (future) parallelized implementation of Fastjet. It is intended to be the replacement for all the Python interfaces for Fastjet available right now.

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