

Phenomenology of Energy Correlators Measured on Boosted Top Quarks

Energy Energy Correlators (EECs) are a class of collider observables that characterize the hadronic energy flux by measuring energy weighted angular correlations. They have recently gained a significant interest as tools for precision measurements. In particular, EECs, when measured on boosted top quark jets, can yield an elegant probe for the top quark mass. The project will involve exploring the phenomenology of EECs and their application for top mass measurements using the tools of Monte Carlo simulations. Prerequisites include knowledge of quantum field theory, QCD, as well as good software skills.

Group

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Project Category

B4. Theory of elementary particles

Special Qualifications

Knowledge of C++/Python, Basics of quantum field theory, QCD

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