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Power Corrections for Soft Drop Jet Mass($20' + 10'$)

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In this talk I provide a field theory based description of hadronization power corrections for soft drop groomed measurements such as the jet mass. It is proven that the leading power corrections are described by 3 universal hadronic parameters, which are independent of the jet kinematics, jet radius, and soft drop grooming parameters z_{cut} and β . These corrections come with 2 non-trivial perturbatively calculable Wilson coefficients which modify the shape of the jet mass spectrum. Unlike other known examples, these hadronization corrections are not simply described by a standard shape function, nor by a shift and normalization correction. These predictions are compared to results from 3 MCs, Pythia, Herwig, and Vincia. The description of these power corrections is important for precision determinations of standard model parameters like the strong coupling and top-mass.

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