

## Understanding top tagging with N-subjettiness and prong finding

*Thursday, 5 August 2021 15:00 (15 minutes)*

N-subjettiness has proven to be a powerful tool for discriminating between boosted signal jets (typically boosted electroweak bosons or top quarks) and light QCD background jets. In this talk I will examine how it can be most effectively used in conjunction with prong finding and grooming algorithms to tag boosted top quarks. I will first examine the performance and effect of hadronisation and underlying event on this tagging procedure using a Monte Carlo study before discussing the results of our resummed calculations of the tagged cross section for this procedure, considering both signal and background jets. Finally I will show that the understanding gained from carrying out this calculation can be used to optimize the discriminating power available from this tagging procedure.

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