

Fernando Febres Cordero – HEP seminar talk – September 14, 2021 @
11:30 am
Florida State

Title: Two-loop Matrix Elements for Three-Jet Production at the LHC at NNLO QCD

Abstract: Precise fixed-order multi-jet predictions provide a robust tool to test our understanding of the phenomenology of hadron colliders at high energies. Routinely nowadays NLO QCD corrections are included in the event simulation pipeline of the large experimental LHC collaborations. In this talk we will review efforts to further improve predictions for observables related to three-jet production at the LHC with the inclusion of NNLO QCD corrections. In particular we will focus on the calculation of correspondent two-loop matrix elements, which was achieved by using the recently-developed multi-loop numerical unitarity method and functional reconstruction techniques.