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A general mass variable flavor number scheme for Z boson associated with a heavy quark production at hadron colliders

Tuesday, 18 June 2024 10:30 (20 minutes)

The general mass variable flavor number (GMVFN) scheme S-ACOT-MPS will be discussed for proton-proton collisions. The impact of heavy-flavor contributions within this factorization scheme will be shown for the production of a Z boson in association with a charm/bottom quark in pQCD.
An amended version of the QCD factorization formula for proton-proton collisions will be discussed as well as the role of $Z + c/b$ production at the LHC in constraining heavy-flavor PDFs. Phenomenological applications will be presented.

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