

# XXIV International Workshop on Deep-Inelastic Scattering and Related Subjects (DIS16)



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## Factorization and resummation for massive quark effects in exclusive Drell-Yan

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Exclusive 0-jet processes at hadron colliders are nowadays studied at an unprecedented precision in theory and experiment. Within the framework of Soft-Collinear Effective Theory we discuss how to incorporate massive bottom quark effects in the resummed cross section for Drell-Yan, where as specific examples for a measured exclusive observable we consider the transverse momentum of the electroweak boson and beam thrust. At NNLL' order, i.e. including matrix elements at  $O(\alpha_s^2)$  and NNLL resummation, one has to account for both heavy quark initiated (primary) corrections to the hard scattering process as well as secondary radiation effects. The theoretical description depends on the hierarchy between the involved scales, ranging from the decoupling limit for large masses to the massless limit for small masses, and involves quark mass dependent beam functions/TMDs and soft functions in between.

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