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Zero-jettiness beam functions at N3LO

Tuesday 26 April 2022 15:00 (30 minutes)

I report on the calculation of the beam functions for zero-jettiness at next-to-next-to-next-to-leading order in the strong coupling constant. In the limit of vanishing zero-jettiness scattering cross sections factorise into beam, soft and hard functions as well as the leading-order cross section. Here, the beam functions describe collinear emissions off the initial state partons. If these building blocks are available they can, for example, be used to derive a slicing scheme for colour singlet production. I will present details of the calculation as well as results for beam functions.

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