

# **EINLADUNG**

### im Rahmen des Teilchenphysikseminars

zum Vortrag

von

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über

# "Massive Quark Jet Function at Two Loops"

#### Abstract:

The jet function is a crucial ingredient of inclusive cross section factorization formulas for QCD processes involving a large scale hierachy between the jet invariant mass and the total center of mass energy. It describes the collinear particles in a jet and is universal in the sense that it is independent of the details of the hard process and that the same jet function is valid for any observable that effectively reduces to a measurement of the jet invariant mass in the collinear limit. In the limit of massless quarks all factorization formula ingredients are known at least up to two-loop order for many processes of interest, enabling N^3LL order resummation of large logarithms. For massive quarks however, the jet function is known only up to one-loop, making the two-loop correction the missing piece for N^3LL resummation with full mass dependence. In this talk I will present the massive quark jet function at two-loop order and some of the details of its calculculation.

#### Zeit: Dienstag, 27.11.2018, 16:15

**Ort:** Erwin Schrödinger-Hörsaal, Boltzmanngasse 5, 5. Stock

gez.: A. Hoang, S. Plätzer