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E I N L A D U N G

im Rahmen des Teilchenphysikseminars

zum Vortrag

von

Daniel Lechner
(University of Vienna)

über

„Electroweak and Finite-Lifetime Corrections for Boosted Top Quark Production“

Abstract:
Jet mass measurements for processes involving boosted top quark pair-production at the HL-LHC or future lepton colliders are a very promising tool for high-precision measurements of the top quark mass in a well-defined renormalization scheme. Apart from including QCD corrections and resummations, for which well-developed frameworks exist, eventually also electroweak and finite-lifetime effects need to be accounted for systematically.
For boosted top quark initiated inclusive jets we apply an electroweak Soft-Collinear-Effective-Theory (SCET) framework that allows for a coherent resummation of electroweak Sudakov and rapidity logarithms and finite-lifetime effects together with large logs from QCD.
Apart from double-top-resonant effects, the factorization approach can also account for single-resonant effects, which are related to the interference of final states originating from top quark decays and background processes leading to the top decay final state. Concretely we address electroweak effects in inclusive (hemisphere mass) top-dijet production at lepton colliders.

Zeit: Dienstag, **05.12.2023, 16:15 h**
Ort: Erwin-Schrödinger-Hörsaal, Boltzmanngasse 5, 5. Stock

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gez.: A. Hoang, M. Procura