

Crash Course on Soft-Collinear Effective Theory

(Matthias Neubert, 16-31 May 2022)

Outline:

- Motivation
- Review of Effective Field Theory
- Brief Encounter with Heavy-Quark Effective Theory
- Construction of Soft-Collinear Effective Theory
- Collinear Anomaly and Rapidity Logarithms
- Applications

Suggested literature:

Review: T. Becher, A. Broggio, A. Ferroglia, 1410.1892 (book!)

Lectures: M. Neubert, hep-ph/0512222 (TASI 2004)
T. Becher, 1803.04310 (Les Houches 2017)

Papers: C. Bauer et al., hep-ph/0011336, 0109045, 0202088
M. Beneke et al., hep-ph/0206152

Hands-on exercises: each Thursday