

Precise prediction for the top quark width

Friday, November 17, 2023 5:20 PM (20 minutes)

We present the first analytic results of N³LO QCD corrections to the top-quark decay width. We focus on the dominant leading color contribution, which includes light-quark loops. At NNLO, this dominant contribution accounts for 95% of the total correction. The most precise prediction for the top-quark width is now 1.321 GeV for $m_t = 172.69$ GeV.

Primary author: 王, 焯凡 (Shandong university)

Presenter: 王, 焯凡 (Shandong university)

Session Classification: Theory