

Phenomenology of matching exponentiated photonic radiation to a QED-corrected parton shower in KKMChh

Thursday 18 July 2024 20:45 (15 minutes)

KKMChh is a precision Monte Carlo program for photonic and electroweak radiative corrections to hadron scattering, implementing the amplitude level exponentiation originally developed for electron-positron scattering at the quark level, modeling initial and final state QED radiation as well as initial-final interference to all orders in a soft-photon approximation, adding hard photon corrections through second order next-to-leading logarithm. A previous ICHEP talk introduced a matching procedure NISR (negative initial state radiation) to match the exponentiated photon radiation from the quarks to a QED-corrected parton shower. Here, we describe further details of the NISR method, and describe its effect on forward-backward asymmetry calculations of interest for a precise determination of the electroweak mixing angle.

Alternate track

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Yes

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Session Classification: Poster Session 1

Track Classification: 04. Top Quark and Electroweak Physics