

Soft gluon resummation for the associated top-pair quark production at the LHC

Tuesday 10 September 2019 14:30 (25 minutes)

The studies of the associated production processes of a top-quark pair with a colour-singlet boson, e.g. Higgs, W or Z, are among the highest priorities of the LHC programme. Correspondingly, improvements in precision of theoretical predictions for these processes are of central importance. In this talk, we review the latest results on resummation of soft gluon corrections. The resummation is carried out using the direct QCD Mellin space technique in three-particle invariant mass kinematics. We discuss the impact of the soft gluon corrections on the predictions for the total cross sections and the differential distributions as well as compare the results with the recent measurements by ATLAS and CMS.

Authors: MOTYKA, Leszek; THEEUWES, Vincent; STEBEL, Tomasz; SCHWARTLÄNDER, Daniel; KULESZA, Anna

Presenter: KULESZA, Anna

Session Classification: Tuesday Afternoon B