



Contribution ID: 119

Type: **not specified**

Resummation for Top Quark Pair Production

Tuesday 4 April 2017 08:50 (20 minutes)

With top quark physics now entering the precision era, the need for ever more accurate theory calculations is greater than ever. In this talk we present a formalism, derived from SCET, for the simultaneous resummation of soft and small mass logarithms present in top quark pair production at the LHC. By matching with standard soft gluon resummation and recent exact NNLO results, we present differential cross sections of the pair invariant mass and top quark transverse momentum which are applicable to the entire phase space with an accuracy of NNLO+NNLL'. Finally, we will also comment on the choice of factorisation scale and on comparison with experimental data.

Primary authors: CZAKON, Michal Wiktor (Rheinisch-Westfaelische Tech. Hoch. (DE)); FERROGLIA, Andrea (New York City College of Technology CUNY); HEYMES, David (University of Cambridge); MITOV, Alexander (University of Cambridge (GB)); PECJAK, Ben (IPPP Durham); SCOTT, Darren (Durham University); Dr YANG, Li Lin (School of Physics and State Key Laboratory of Nuclear Physics and Technology Peking University, Beijing 100871, China); Mr WANG, Xing (School of Physics and State Key Laboratory of Nuclear Physics and Technology Peking University, Beijing 100871, China)

Presenter: SCOTT, Darren (Durham University)

Session Classification: WG5 Physics with Heavy Flavours

Track Classification: WG5) Physics with Heavy Flavours