

Measurements of inclusive four-lepton production at ATLAS

Wednesday, 29 July 2020 13:30 (3 minutes)

Measurements of the four-lepton invariant mass spectrum are made with the ATLAS detector, using proton-proton collisions at $\sqrt{s}=13$ TeV delivered by the Large Hadron Collider. The measurement is done selecting events that contain two same-flavour opposite-sign lepton pairs. The four-lepton mass exhibits a rich structure, with different mass regions dominated by single Z production, Higgs production and on-shell ZZ production, with a complex mix of interference terms and possible contributions from beyond-the-Standard model (BSM) physics. The measurement is corrected for detector effects and compared to state-of-the-art Standard Model calculations, which are found to be consistent with the data. Constraints on example BSM scenarios are evaluated, and further re-interpretations can be made with the provided information.

I read the instructions

Secondary track (number)

Primary author: LIU, Xiaotian (University of Science and Technology of China (CN))

Presenter: LIU, Xiaotian (University of Science and Technology of China (CN))

Session Classification: Top Quark and Electroweak Physics - Posters

Track Classification: 04. Top Quark and Electroweak Physics