

# XXVIII International Workshop on Deep Inelastic Scattering and Related Subjects



Contribution ID: 266

Type: **Contributed Talk**

## Impact of top-quark pair production measurements on PDFs in the CT18 global QCD analysis

*Wednesday, 25 March 2020 16:48 (18 minutes)*

We discuss the impact of top-quark pair production data on the CT18 PDFs family.

In particular, we discuss the individual impacts of differential  $t\bar{t}$  cross section measurements at 8 TeV collision energy from CMS and ATLAS which have been analyzed using different statistical frameworks (ePump and PDFSense) to assess their impact on PDFs before the global fit. We discuss tensions between  $t\bar{t}$  observables and the different pulls they lead on the gluon in the global fit to determine the CT18 PDFs. The interplay of  $t\bar{t}$  measurements with jet production data is also analyzed.

**Primary authors:** Dr GUZZI, Marco (Kennesaw State University); CTEQ-TEA COLLABORATION

**Presenter:** Dr GUZZI, Marco (Kennesaw State University)

**Session Classification:** Structure function and parton densities

**Track Classification:** Structure Functions and Parton Densities