Contribution submission to the conference SMuK 2023

First results from inclusive jet measurement with Run2 data at CMS — •Valentina Guglielmi[1], Katerina Lipka[1], Simone Amoroso[1], Patrick Connor[2], and Roman Kogler[1] — [1]Deutsches Elektronen-Synchrotron DESY, Notkestraße 85, D-22607 Hamburg — [2]University Hamburg, Hamburg, Germany

We present preliminary results of the measurement and QCD analysis of double-differential inclusive jet cross sections in proton-proton collisions by using the full Run2 data collected by CMS experiment at LHC at $\sqrt{s} = 13$ TeV. The higher accumulated luminosity of full Run2 allows for an improved precision and opens up new corners of the phase space. This permits further testing of the Standard Model (SM) and facilitates indirect searches for physics beyond the SM. Our study addresses the high transverse momentum region, where possible contributions of new physics, e.g. different models of 4-quark contact interactions, are most significant. Furthermore, the precision of the parton distribution functions can be significantly improved and the strong coupling constant can be extracted. In this talk, I will give an overview of the current status of the measurement.

Part:	**T**
Type:	**Vortrag;Talk**
Topic:	**2.01 QCD (Exp.); 2.01 QCD (Exp.)**
Email:	**valentina.guglielmi@desy.de**