



Contribution ID: 152

Type: **Poster or pre-recorded talk**

PB parton showers applied to Drell Yan + jets production

Monday 12 July 2021 20:08 (2 minutes)

Calculations of Drell-Yan production at next-to-leading (NLO) order have been combined with transverse Momentum Dependent (TMD) distributions obtained with the Parton Branching (PB). For the first time, the predictions show a remarkable agreement with DY measurements across a wide range of DY mass and center of mass energies, from experiments like NuSea, R209, Phenix, CMS and ATLAS. Uncertainties from the TMD fit and from missing higher orders in the calculation are also determined. We also show predictions for Z+jet and multijet measurements, where especially angular correlations, sensitive to TMDs, are well described. We show that the PB TMDs together with a PB TMD parton shower and higher order matrix elements allow a very good description of measurements over a wide kinematic range.

Preferred track

Jets & QCD at High Scales

Primary authors: BERMUDEZ MARTINEZ, Armando (CMS-DESY); HAUTMANN, Francesco (University of Oxford (GB)); JUNG, Hannes (Deutsches Elektronen-Synchrotron (DE)); YANG, Heng (Peking University (CN)); LIDRYCH, Jindrich (Deutsches Elektronen-Synchrotron (DESY)); ESTEVEZ BANOS, Luis Ignacio; MENDIZ-ABAL MORENTIN, Mikel (Deutsches Elektronen-Synchrotron (DE)); WANG, Qun (Peking University (CN)); TAHERI MONFARED, Sara (Deutsches Elektronen-Synchrotron (DE))

Presenter: BERMUDEZ MARTINEZ, Armando (CMS-DESY)

Session Classification: Poster Session