

Measurement of double differential Drell-Yan and associated jet cross sections at low and high invariant masses in CMS

The first measurement of the Drell-Yan and associated jet cross section as a function of the Drell-Yan mass is presented using an integrated luminosity of 4.9 fb^{-1} in the dimuon channel of proton-proton collisions recorded with the CMS detector. Cross Sections as a function of the Drell-Yan transverse momentum are measured differentially in the Drell-Yan mass. The p_T spectrum of the Drell-Yan allows to study multiple-gluon emissions and resummation effects. The cross section for the Drell-Yan production in association with jets as a function of the rapidity separation between the Drell-Yan and the leading jet is presented. Multi-jet emissions in a rapidity interval between the Drell-Yan and the leading jet is a sensitive probe for multi-gluon emissions. Furthermore the jet multiplicity as a function of the rapidity separation of the leading jet and the Drell-Yan is presented.

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