Contribution ID: **82** Type: **Oral Presentation**

Recent CMS results regarding forward physics and diffraction

Monday, 5 October 2015 14:35 (20 minutes)

Recent CMS results regarding forward physics and diffraction are reviewed. The differential diffractive cross section is measured as a function of xi= M_X^2/s in the region dominated by single dissociation (SD) and double dissociation (DD), where M_X is the mass of one of the two final-state hadronic systems separated by the largest rapidity gap in the event. The cross section is also measured as a function of the width of the central rapidity gap in the region dominated by DD, as well as for events with a forward gap over 8.4 units of pseudorapidity. The total SD and DD cross sections are extracted.
The observation of a hard color-singlet exchange process in events with a large rapidity gap between two leading jets (jet-gap-jet) is reported. The fraction of jet-gap-jet to all dijet events is measured as a function of the second leading jet transverse momentum and the size of the pseudorapidity gap. The measured fractions are compared with predictions as well as Tevatron data. Furthermore, also the observation of exclusive Y production in pPb collisions at 5.02TeV per nucleon is reported.

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Session Classification: Diffraction and Pomeron

Track Classification: Diffraction and Pomeron