

## Dijet events with large rapidity separation in proton-proton collisions at $\sqrt{s} = 2.76$ TeV with CMS detector

Wednesday, 13 July 2022 17:50 (20 minutes)

The new search for Balitsky-Fadin-Kuraev-Lipatov (BFKL) evolution effects is performed at the Large Hadron Collider by the Compact Muon Solenoid experiment. The cross sections for inclusive and Mueller-Navelet dijet production are measured as a function of the rapidity separation between the jets in proton-proton collisions at  $\sqrt{s} = 2.76$  TeV for jets with transverse momentum  $p_T > 35$  GeV and rapidity  $|y| < 4.7$ . Various dijet production cross section ratios are also measured. A veto on additional jets with  $p_T > 20$  GeV is introduced to improve the sensitivity to the BFKL evolution. The measurement is compared with the predictions of various Monte Carlo models based on leading-order and next-to-leading-order calculations including the Dokshitzer-Gribov-Lipatov-Altarelli-Parisi leading-logarithm (LL) parton shower as well as the LL BFKL resummation.

### The speaker is a student or young scientist

No

### Section

1. Intermediate and high energies, heavy ion collisions

**Primary author:** Mr EGOROV, Anatolii (NRC KI – PNPI, Gatchina & St.Petersburg Polytechnic University, Russia)

**Presenter:** Mr EGOROV, Anatolii (NRC KI – PNPI, Gatchina & St.Petersburg Polytechnic University, Russia)

**Session Classification:** Intermediate and high energies, heavy ion collisions