

Azimuthal decorrelation of jets widely separated in rapidity in pp collisions at $\sqrt{s} = 7$ TeV

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The decorrelation in the azimuthal angle between the most forward and the most backward jets (Mueller-Navelet jets) is measured in data collected in pp collisions with the CMS detector at the LHC at $\sqrt{s} = 7\text{TeV}$. The measurement is presented in the form of distributions of azimuthal-angle differences, $\Delta\phi$, between the Mueller-Navelet jets, the average cosines of $(\pi - \Delta\phi)$, $2(\pi - \Delta\phi)$, and $3(\pi - \Delta\phi)$, and ratios of these cosines. The jets are required to have transverse momenta, p_T , in excess of 35GeV and rapidities, $|y|$, of less than 4.7. The results are presented as a function of the rapidity separation, Δy , between the Mueller-Navelet jets, reaching Δy up to 9.4 for the first time. The results are compared to predictions of various Monte Carlo event generators and to analytical predictions based on the DGLAP and BFKL parton evolution schemes.

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