

# Azimuthal decorrelation of jets widely separated in rapidity in pp collisions at $\sqrt{s} = 13$ TeV

## Letter of Interest

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# Azimuthal decorrelation of jets widely separated in rapidity

- We'd like to define and perform new measurements of azimuthal decorrelations and mini-jets production for the Mueller-Navelet jet events with low  $p_T > 20$  GeV by using the data collected by the CMS detector in pp collisions at 13 TeV.
- Main focus on observables where provide opportunity to test the final state particles correlations in  $\Delta\phi$ ,  $\Delta y$ , and  $\langle \cos(\Delta\phi) \rangle$ .
- The degree of decorrelation of the two tagging jets is strongly related to the amount of additional radiation which may manifest itself as additional jet activity (i.e, jet multiplicity). As the rapidity interval increases there is more phase space for extra radiation and it is natural for the average jet multiplicity to increase.
- In order to look for evidence of additional radiation as a function of the rapidity interval, the number of jets (jet multiplicity) will be studied as an indirect signature of the azimuthal decorrelation.
- A deep collaboration between experimentalists and theorists is fundamental in order to define and measure the best robust variables sensitive to BFKL dynamics.

