

Top Panel: Differential event rate $\frac{1}{\#} \frac{dN}{dp_T} \frac{d\lambda}{d\lambda}$ versus multiplicity. The y-axis is logarithmic, ranging from 10^{-4} to 10^0 . The x-axis is multiplicity, ranging from 0 to 40. The plot shows data from CMS (black squares) and several Pythia 6.428 models (350, 370, 380, p0, p2010) for the central dijet region ($65 < p_T^{\text{jets}} < 88$ GeV) at 13 TeV. The CMS data shows a peak at multiplicity 12 and a sharp drop at multiplicity 34. The Pythia models generally follow the CMS data at low multiplicities but overpredict at high multiplicities.

Bottom Panel: Ratio of the event rate to the CMS data versus multiplicity. The y-axis is linear, ranging from 0.5 to 2.5. The x-axis is multiplicity, ranging from 0 to 40. The plot shows the ratio of the event rate to the CMS data for the same models and region. The ratio is generally close to 1 for multiplicities 4 to 12, but increases significantly for multiplicities 16 and above, reaching a peak of about 2.5 at multiplicity 25. Shaded regions indicate the uncertainty of the CMS data.