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Energy dependence of underlying event observables measured with ALICE at the LHC

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The transverse region of di-hadron correlations is known to be very sensitive to the underlying event (UE), and initial- and final-state radiation (ISR and FSR). In pp collisions, particle production in the transverse azimuthal region, with respect to the leading particle, reaches a plateau for $p_T^{leading} > 5$ GeV/c. In this contribution, a study of the multiplicity distributions in the plateau region for pp collisions at \sqrt{s} = 0.9, 2.76, 5.02, 7 and 13 TeV with ALICE is reported within $|\eta| < 0.8$. This region is further divided into trans-max and trans-min regions which are sensitive to ISR, FSR and UE, respectively. The UE component is found to increase like a power of the center-of-mass energy, resembling the center-of-mass energy dependence of the parameter which regulates multiparton interactions in event generators like Pythia. KNO-like scaling properties of the multiplicity distributions are also reported. Measurements are compared with general-purpose Monte Carlo generators.

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