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Measurement of the Underlying Event in pp collisions at $\sqrt{s} = 13$ TeV with the ALICE experiment at the LHC

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Large In LHC RUN II, the Large Hadron Collider restarted with luminosities close to the nominal performances, and with a centre-of-mass energy increase of around 60% with respect to the end of the LHC RUN I. At this new energy it is absolutely essential to restudy the general features of the pp interaction, in particular the soft or semi-hard bulk of particles that form the Underlying Event, which is defined to be the complementary activity with respect to the leading interaction.

The measurement of the Underlying Event allows us to access fundamental information on the hadron structure. This has important consequences for lepton and photon isolation, and also for jet calibration.

In order to estimate the contributions of the Underlying Event, we present a characterization of the event properties focusing on the orthogonal plane with respect to the beam direction: the primary charged particle with the highest transverse momentum - defined to be the leading charged particle - is used to give the energy scale of the interaction. Primary charged particle and energy densities are measured in different azimuthal regions with respect to the leading charged particle.

In this poster, the performance results relevant to Underlying Event measurement in pp collisions at $\sqrt{s} = 13$ TeV will be shown.

Summary

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