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Measurement of the underlying event activity in inclusive Z boson production in proton-proton collisions at √s=13 TeV (Article) (Open Access)

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Abstract

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This paper presents a measurement of the underlying event activity in proton-proton collisions at a center-of-mass energy of 13 TeV, performed using inclusive Z boson production events collected with the CMS experiment at the LHC. The analyzed data correspond to an integrated luminosity of 2.1 fb^{-1}. The underlying event activity is quantified in terms of the charged particle multiplicity, as well as of the scalar sum of the charged particles' transverse momenta in different topological regions defined with respect to the Z boson direction. The distributions are unfolded to the stable particle level and compared with predictions from various Monte Carlo event generators, as well as with similar CDF and CMS measurements at center-of-mass energies of 1.96 and 7 TeV respectively.[Figure not available: see fulltext.]. © 2018, The Author(s).

SciVal Topic Prominence

Topic: jets | production | parton shower

Prominence percentile: 99.875

Author keywords

Event-by-event fluctuation | Hadron-Hadron scattering (experiments) | Minimum bias

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