

XXVIII International Workshop on Deep Inelastic Scattering and Related Subjects



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Measurements of the underlying event at ATLAS

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In order to perform precise Standard Model measurements or to search for new physics phenomena at hadron colliders, it is important to have a good understanding of not only the short-distance hard scattering process, but also of the accompanying activity – collectively termed the underlying event. In this talk we present a study of the underlying event activity in events containing a Z-boson in $\sqrt{s}=13$ TeV data collected by the ATLAS experiment. Unfolded differential cross sections are presented for charged particle multiplicity and charged particle transverse momentum in regions of azimuth measured with respect to the Z-boson direction. If available, a study of the underlying event activity will be also presented for events where strange particles are identified in $\sqrt{s}=13$ TeV data. In both measurements, the data are compared to a wide variety of predictions from Monte Carlo event generators.

Primary authors: RIU, Imma; ADAM, Lennart

Presenter: ADAM, Lennart

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