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# Underlying-event Activity Studies at $\sqrt{s_{\mathrm{NN}}}$ = 200 GeV by STAR

Underlying-event activity is defined as the soft particle production in proton+proton and proton+nucleus collisions which is not directly related to the final fragmentation of hard-scattered partons. Underlying-event measurements therefore provide a tool to study non-factorizable and non-perturbative phenomena. Systematic measurements of the relationship between the underlying event and jet processes help to disentangle initial and final state effects. Jet-hadron correlations give insights into the jet contribution to the underlying event, which needs to be accounted for when making collectivity measurements in small systems. Underlying-event activity is measured by particle production in the azimuthal direction perpendicular to the leading jet in the event. Measurements of underlying-event activity dependence on the leading jet transverse momentum in p+p collisions at 200 GeV will be presented and a comparison with Monte Carlo simulations, other energies, and asymmetrical collisions will be discussed.

## Preferred Track

Jets and High pT Hadrons

## Collaboration

STAR

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**Session Classification:** Poster Session