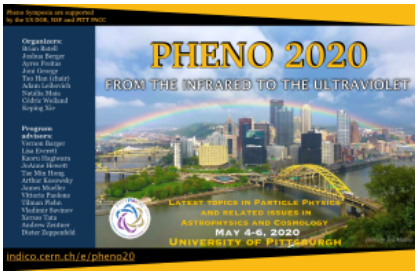


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# Jet and Photon Measurements using the ATLAS detector

*Tuesday 5 May 2020 17:45 (15 minutes)*

The production of jets and prompt isolated photons at hadron colliders provides stringent tests of perturbative QCD and can be used to evaluate the probability density functions of partons in the proton. In this talk we discuss a variety of measurements in this section done using proton-proton collision data collected by the ATLAS experiment at $\sqrt{s}$=13 TeV . For final states containing photons, we present measurements of inclusive isolated photons and isolated photons produced in association with jets. If available, a measurement of photon pair production will also be presented. For multijet production, we present a measurement of event shape variables calculated using hadronic jets. We also present measurements of the internal properties of jets. First, a comprehensive suite of substructure observables are measured for jets reconstructed with the soft-drop algorithm applied. In addition, a measurement of the Lund Plane performed using charged particles will be presented. Finally, if available, a measurement of the fragmentation properties of jets containing B-hadrons will also be presented. All measurements are corrected for detector effects and are compared to the predictions of state-of-the-art Monte Carlo event generators.

## Summary

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