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## Jet production in Drell-Yan and Multiboson process at ATLAS

Precision measurements of Drell-Yan and multiboson produced in association with jets at the LHC provide stringent tests of the perturbative QCD. The talk will present differential Z+jets results in extreme phase-spaces with high  $p_T$  jets. Various selections are employed to study dedicated configurations with the Z boson produced collinearly to jets or recoiling against them. In addition, differential distributions of events with Z $\gamma$  produced in association with jets is studied. The measurement is made in both one and two observables, including those sensitive to the hard scattering in the event and others which probe additional soft and collinear radiation. Results are compared to the state-of-the-art NNLO theoretical predictions. If available, the talk will present a novel machine learning-based unfolding method using an iteratively trained neural network. The simultaneous measurement of a large number of observables is performed in events with a Z boson produced in association with track jets.

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