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Study of Diboson Physics with the ATLAS Detector at LHC
HAI-JUN YANG, University of Michigan, Ann Arbor, ATLAS COLLABORATION — The talk will present studies of Standard Model diboson productions (WW,WZ,ZZ,Wγ,Zγ) based on the ATLAS detector at LHC with proton-proton collisions at center-of-mass energy of 14 TeV. Through their leptonic decay channels with electron, muon and photon final states, we estimate SM diboson detection sensitivities in early LHC physics run using full ATLAS detector simulation Monte Carlo data samples. Advanced pattern recognition algorithm - Boosted Decision Trees is applied to improve the diboson signal selection efficiency significantly. The sensitivities of anomalous triple-gauge-boson couplings are also estimated using selected diboson signal.

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