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Automation of next-to-leading order computations in QCD of the WWjj Background for the Dilepton Final State

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A study is performed for the autonomous computation for cross section at the next-to- leading order in QCD for the WWjj background. The WWjj process is described and simulated using MadGraph with aMC@NLO framework, particularly suited for its parallel computation in Standard Model as well as Beyond the Standard Model theories. Interfacing with PYTHIA8 and HERWIG++ in leading order and next- to-leading order allows for parton shower calculations. The study presents different distributions measured in our phase space characterized by the kinematic and energy behaviour of the process.

Apply to be
 considered for a student
   award (Yes / No)?

Yes

Level for award
 (Hons, MSc,
   PhD, N/A)?

MSc

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