

Abstract Submitted
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WWW triboson production using 139 fb^{-1} of data taken by the ATLAS detector¹ WENHAO XU, Univ of Michigan - Ann Arbor, ATLAS COLLABORATION — The joint production of three heavy vector bosons is a rare process in the Standard Model (SM) of particle physics and is one of the least studied SM process. Studies of triboson production can test the non-Abelian gauge structure of the SM theory and any deviations from the SM prediction would indicate hints of new physics at higher energy scales. I will present the full run2 study of WWW triboson production using data collected in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector between 2015 and 2018, corresponding to an integrated luminosity of 139 fb^{-1} . In the measurement, events containing two same-sign leptons and at least two jets are selected for the $WWW \rightarrow \ell\nu\ell\nu qq$ channel, while events with three leptons without any same-flavor opposite-sign leptons are used for the $WWW \rightarrow \ell\nu\ell\nu\ell\nu$ channel. Detailed results will be presented.

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