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Searches for new heavy resonances in diboson final states with ATLAS at 13 TeV

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Searches for new heavy resonances decaying to WW, WZ, and ZZ bosons are presented, using Run-2 data of pp collisions at $\sqrt{s}=13$ TeV collected with the ATLAS detector at the LHC. The strategies of the analyses are overviewed, searching for a narrow-width resonance with mass between 500 and 5000 GeV. Three benchmark models are tested: a model predicting the existence of a new heavy scalar singlet, a simplified model predicting a heavy vector-boson triplet, and a bulk Randall-Sundrum model with a heavy spin-2 graviton. Cross-section limits are set at the 95% confidence level and are compared to theoretical cross-section predictions for a variety of models. These results significantly extend the previous limits derived from pp collisions at $\sqrt{s}=8$ TeV during Run-1.

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