

## Phenomenology 2022 Symposium: From Virtual to Real



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### Search for heavy resonances in diboson final states at CMS

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Searches for new resonances in di-boson final states (VV and VH, where  $V = W, Z$ ) and tri-boson (VVV) final states, with the CMS detector are presented. The results are based on the large dataset collected during Run 2 of the LHC at a centre-of-mass energy of 13 TeV. The analyses are optimised for high sensitivity over a large range in resonance mass. Jet substructure techniques are used to identify hadronic decays of highly-boosted W, Z, and H bosons. A statistical combination of these searches provides the most stringent constraints on heavy vector bosons with large couplings to standard model bosons and fermions.

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