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Searching for heavy ZZ resonance in four-lepton or di-lepton and di-neutrino final states with the ATLAS experiment

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This talk presents a search for heavy resonances decaying into a pair of Z bosons which decay subsequently to \ell\ell\ell\ell and \ell\ell\nu\nu final states. The search uses proton-proton collision data at a center-of-mass energy of 13 TeV corresponding to an integrated luminosity of 36 fb−1 collected with the ATLAS detector during 2015 and 2016. The maximum deviation from SM background is reported. In addition, the results are also interpreted as generic upper limits on the production cross section of a spin-0 and spin-2 resonance, and the exclusion contour in the context of two-Higgs-doublet Model.

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