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Making sense of the LHC diboson and diphoton excesses

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Towards the end of Run-1 data taking, an excess in the diboson as well as $eejj$ channel was announced. During the first round of Run-2 data taking, an excess in diphoton channel has been announced. I consider possible explanations of these excesses in two different BSM scenarios. I demonstrate the feasibility of accommodating the diboson and $eejj$ excess in a Left-Right Symmetric Standard Model. For the diphoton excess, I scrutinise a simplified model with scalar resonance coupling to gluons, photons and fermionic dark matter. I illustrate the monojet constraints on such a simplified model scenario and inspect the possibility of reconciling the diphoton excess with dark matter constraints.

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