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A Search for new physics in the diphoton final state using multivariate analysis MATTHEW JOYCE, Univ of Virginia, CMS COLLABORATION— Previous analyses utilizing the diphoton plus missing transverse momentum final state have been limited by spurious missing transverse momentum originating from the QCD background. In order to improve the sensitivity of such analyses we need to decrease this background further than previous iterations by using multivariate techniques. Prospects for this technique and a preliminary investigation of the expected sensitivity improvements using the full Run II dataset will be presented.

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