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Search for New Resonance in the photon and jet final state using CMS data

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To address the incompleteness of the Standard Model (SM), many models, e.g compositeness, extra dimensions, have predicted the existence of new resonances at the LHC in the final state of a photon and a jet. If such a resonance exists, the signal would appear as a bump on top of the smooth invariant mass distribution of the SM background processes. A search is presented for new resonances decaying to a photon and a jet in proton-proton collisions at a center-of-mass energy of 13 TeV using the data collected by the CMS experiment between 2016 and 2018, corresponding to an integrated luminosity of 138 fb-1

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