

Erratum: Resonances from QCD bound states and the 750 GeV diphoton excess

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Because of an error in ref. [1], the photon+jet prediction in figure 3 is too small by a factor of 2. The corrected figure (included in the arXiv version 3) is below. The sextet now appears formally excluded, but because of the substantial uncertainties in the prediction, should still be viewed as borderline.

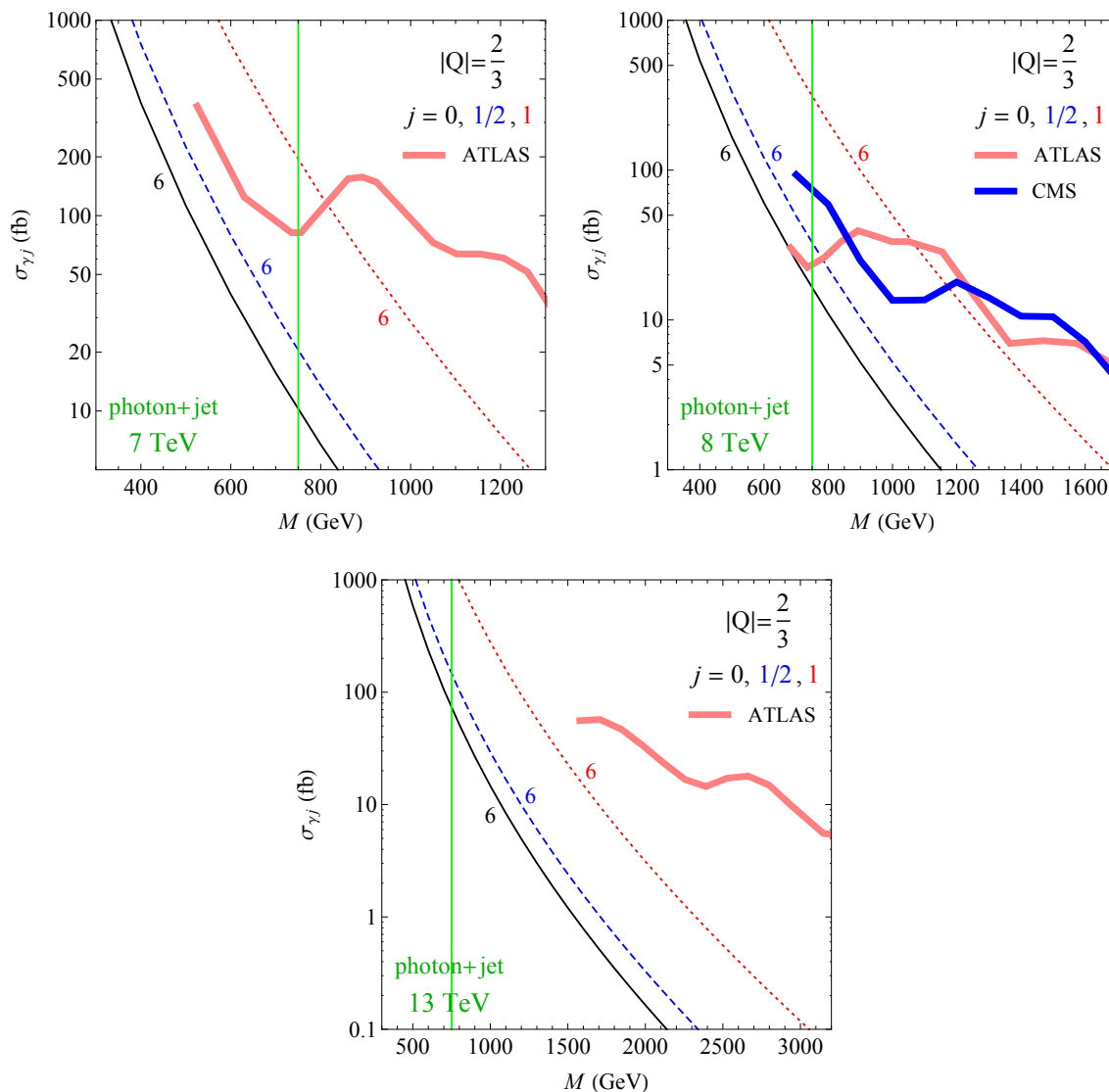


Figure 3. Bound state photon+jet signals for particles with $|Q| = 2/3$ at $\sqrt{s} = 7$ TeV (top-left), 8 TeV (top-right) and 13 TeV (bottom) as a function of the bound state mass. Results are shown for particles with spin $j = 0$ (solid black), $1/2$ (dashed blue) and 1 (dotted red), in the color representation $R = \mathbf{6}$. Limits from ATLAS (7 TeV [2], 8 TeV [3], 13 TeV [4]) are shown in thick pink, and CMS (8 TeV [5]) in thick blue. The green vertical line is at $M = 750$ GeV.

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References

- [1] Y. Kats and M.J. Strassler, *Probing colored particles with photons, leptons and jets*, *JHEP* **11** (2012) 097 [[arXiv:1204.1119](https://arxiv.org/abs/1204.1119)] [[INSPIRE](https://inspirehep.net/literature/1204119)].

- [2] ATLAS collaboration, *Search for production of resonant states in the photon-jet mass distribution using pp collisions at $\sqrt{s} = 7$ TeV collected by the ATLAS detector*, *Phys. Rev. Lett.* **108** (2012) 211802 [[arXiv:1112.3580](#)] [[INSPIRE](#)].
- [3] ATLAS collaboration, *Search for new phenomena in photon+jet events collected in proton-proton collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector*, *Phys. Lett. B* **728** (2014) 562 [[arXiv:1309.3230](#)] [[INSPIRE](#)].
- [4] ATLAS collaboration, *Search for new phenomena with photon+jet events in proton-proton collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector*, *JHEP* **03** (2016) 041 [[arXiv:1512.05910](#)] [[INSPIRE](#)].
- [5] CMS collaboration, *Search for excited quarks in the γ +jet final state in proton-proton collisions at $\sqrt{s} = 8$ TeV*, *Phys. Lett. B* **738** (2014) 274 [[arXiv:1406.5171](#)] [[INSPIRE](#)].