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Journal of High Energy Physics [Open Access](#)
Volume 2019, Issue 6, 1 June 2019, Article number 143

Search for supersymmetry in final states with photons and missing transverse momentum in proton-proton collisions at 13 TeV (Article)

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Abstract

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Results are reported of a search for supersymmetry in final states with photons and missing transverse momentum in proton-proton collisions at the LHC. The data sample corresponds to an integrated luminosity of 35.9 fb^{-1} collected at a center-of-mass energy of 13 TeV using the CMS detector. The results are interpreted in the context of models of gauge-mediated supersymmetry breaking. Production cross section limits are set on gluino and squark pair production in this framework. Gluino masses below 1.86 TeV and squark masses below 1.59 TeV are excluded at 95% confidence level.[Figure not available: see fulltext.]. © 2019, The Author(s).

SciVal Topic Prominence ⓘ

Topic: Supersymmetry | Mass | Gauge mediation

Prominence percentile: 79.320 ⓘ

Author keywords

Hadron-Hadron scattering (experiments)

Supersymmetry

ISSN: 11266708

Source Type: Journal

Original language: English

DOI: 10.1007/JHEP06(2019)143

Document Type: Article

Publisher: Springer Verlag

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(2019) *Physical Review D*

Searches for supersymmetry in events with photons at CMS

Schulz, J.
(2019) *Proceedings of Science*

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(2017) *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*

Search for supersymmetry in events with a photon, jets, b-jets, and missing transverse momentum in proton-proton collisions at 13 TeV

- 1 Nappi, C.R., Ovrut, B.A.
Supersymmetric extension of the $SU(3)\times SU(2)\times U(1)$ model

(1982) *Physics Letters B*, 113 (2), pp. 175-179. Cited 457 times.
doi: 10.1016/0370-2693(82)90418-X

[View at Publisher](#)

- 2 Dine, M., Fischler, W.
A phenomenological model of particle physics based on supersymmetry

(1982) *Physics Letters B*, 110 (3-4), pp. 227-231. Cited 494 times.
doi: 10.1016/0370-2693(82)91241-2

[View at Publisher](#)

- 3 Alvarez-Gaumé, L., Claudson, M., Wise, M.B.
Low-energy supersymmetry

(1982) *Nuclear Physics, Section B*, 207 (1), pp. 96-110. Cited 687 times.
doi: 10.1016/0550-3213(82)90138-9

[View at Publisher](#)

- 4 Dine, M., Nelson, A.E.
Dynamical supersymmetry breaking at low energies

(1993) *Physical Review D*, 48 (3), pp. 1277-1287. Cited 816 times.
doi: 10.1103/PhysRevD.48.1277

[View at Publisher](#)

- 5 Dine, M., Nelson, A.E., Shirman, Y.
Low energy dynamical supersymmetry breaking simplified

(1995) *Physical Review D*, 51 (3), pp. 1362-1370. Cited 979 times.
doi: 10.1103/PhysRevD.51.1362

[View at Publisher](#)

- 6 Dine, M., Nelson, A.E., Nir, Y., Shirman, Y.
New tools for low energy dynamical supersymmetry breaking

(1996) *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 53 (5), pp. 2658-2669. Cited 989 times.
doi: 10.1103/PhysRevD.53.2658

[View at Publisher](#)

- 7 Barbieri, R., Giudice, G.F.
Upper bounds on supersymmetric particle masses

(1988) *Nuclear Physics, Section B*, 306 (1), pp. 63-76. Cited 869 times.
doi: 10.1016/0550-3213(88)90171-X

[View at Publisher](#)

Sirunyan, A.M. , Tumasyan, A. , Adam, W.
(2019) *European Physical Journal C*

Inclusive Searches for Supersymmetry with the CMS detector at $\sqrt{s}=8$ TeV

Duarte, J.M.
(2016) *Nuclear and Particle Physics Proceedings*

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