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Measurement of the differential Drell-Yan cross section in proton-proton collisions at $\sqrt{s} = 13$ TeV (Article) [\(Open Access\)](#)

Sirunyan, A.M.^a, Tumasyan, A.^a, Adam, W.^b, Ambrogi, F.^b, Asilar, E.^b, Bergauer, T.^b, Brandstetter, J.^b, Brondolin, E.^b, Dragicevic, M.^b, Erö, J.^b, Escalante Del Valle, A.^b, Flechl, M.^b, Frühwirth, R.^{b,gs}, Ghete, V.M.^b, Hrubec, J.^b, Jeitler, M.^{b,gs}, Krammer, N.^b, Krätschmer, I.^b, Liko, D.^b, Madlener, T.^b, Mikulec, I.^b, Rad, N.^b, [View additional authors](#)

^aYerevan Physics Institute, Yerevan, Armenia
^bInstitut für Hochenergiephysik, Wien, Austria
^cInstitute for Nuclear Problems, Minsk, Belarus

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Abstract

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Measurements of the differential cross section for the Drell-Yan process, based on proton-proton collision data at a centre-of-mass energy of 13 TeV, collected by the CMS experiment, are presented. The data correspond to an integrated luminosity of 2.8 (2.3) fb⁻¹ in the dimuon (dielectron) channel. The total and fiducial cross section measurements are presented as a function of dilepton invariant mass in the range 15 to 3000 GeV, and compared with the perturbative predictions of the standard model. The measured differential cross sections are in good agreement with the theoretical calculations. [Figure not available: see fulltext.]. © 2019, The Author(s).

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- 1 Hamberg, R., van Neerven, W.L., Matsuura, T.
A complete calculation of the order α_s^2 correction to the Drell-Yan K-factor
(1991) *Nuclear Physics, Section B*, 359 (2-3), pp. 343-405. Cited 734 times.
doi: 10.1016/0550-3213(91)90064-5
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- 2 Hamberg, R., Van Neerven, W.L., Matsuura, T.
Erratum: "A complete calculation of the order α_s^2 correction to the Drell-Yan K-factor"
(Nuclear Physics B (1991) vol. 359 (343) S0550321391003438)
(2002) *Nuclear Physics B*, 644 (1-2), pp. 403-404. Cited 254 times.
doi: 10.1016/S0550-3213(02)00814-3
View at Publisher
- 3 Catani, S., Cieri, L., Ferrera, G., De Florian, D., Grazzini, M.
Vector boson production at hadron colliders: A fully exclusive QCD calculation at next-to-next-to-leading order
(2009) *Physical Review Letters*, 103 (8), art. no. 082001. Cited 441 times.
http://oai.aps.org.ezproxy.um.edu.my/oai?verb=GetRecord&Identifier=oai:aps.org:PhysRevLett.103.082001&metadataPrefix=oai_apsmeta_2
doi: 10.1103/PhysRevLett.103.082001
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- 4 Catani, S., Grazzini, M.
Next-to-next-to-leading-order subtraction formalism in hadron collisions and its application to Higgs-Boson production at the large hadron collider
(2007) *Physical Review Letters*, 98 (22), art. no. 222002. Cited 486 times.
http://oai.aps.org.ezproxy.um.edu.my/oai?verb=GetRecord&Identifier=oai:aps.org:PhysRevLett.98.222002&metadataPrefix=oai_apsmeta_2
doi: 10.1103/PhysRevLett.98.222002
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- 5 Melnikov, K., Petriello, F.
Electroweak gauge boson production at hadron colliders through $O(\alpha_s^2)$
(2006) *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 74 (11), art. no. 114017. Cited 453 times.
http://oai.aps.org.ezproxy.um.edu.my/oai?verb=GetRecord&Identifier=oai:aps.org:PhysRevD.74.114017&metadataPrefix=oai_apsmeta_2
doi: 10.1103/PhysRevD.74.114017
View at Publisher
- 6 Aad, G., Abajyan, T., Abbott, B., Abdallah, J., Abdel Khalek, S., Abdelalim, A.A., Abidinov, O., (...), Zwalinski, L.
Measurement of the high-mass Drell-Yan differential cross-section in pp collisions at $\sqrt{s}=7\text{TeV}$ with the ATLAS detector
(2013) *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 725 (4-5), pp. 223-242. Cited 71 times.
<http://www.sciencedirect.com.ezproxy.um.edu.my/science/journal/03702693>
doi: 10.1016/j.physletb.2013.07.049
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- (2018) *Journal of High Energy Physics*
Drell-Yan differential cross section Measurement at CMS
Lee, K.
(2016) *Proceedings of Science*
Measurement of the differential and double-differential Drell-Yan cross sections in proton-proton collisions at $\sqrt{s} = 7$ TeV
Chatrchyan, S., Khachatryan, V., Sirunyan, A.M.
(2013) *Journal of High Energy Physics*
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