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## Measurement of differential cross sections for Z boson pair production in association with jets at s=8 and 13 TeV (Article) [Open Access](#)

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### Abstract

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This Letter reports measurements of differential cross sections for the production of two Z bosons in association with jets in proton–proton collisions at s=8 and 13 TeV. The analysis is based on data samples collected at the LHC with the CMS detector, corresponding to integrated luminosities of 19.7 and 35.9fb<sup>-1</sup> at 8 and 13 TeV, respectively. The measurements are performed in the leptonic decay modes ZZ→ℓ<sup>+</sup>ℓ<sup>-</sup>ℓ<sup>+</sup>ℓ<sup>-</sup>, where ℓ,ℓ′=e,μ. The differential cross sections as a function of the jet multiplicity, the transverse momentum p<sub>T</sub>, and pseudorapidity of the p<sub>T</sub>-leading and subleading jets are presented. In addition, the differential cross sections as a function of variables sensitive to the vector boson scattering, such as the invariant mass of the two p<sub>T</sub>-leading jets and their pseudorapidity separation, are reported. The results are compared to theoretical predictions and found in good agreement within the theoretical and experimental uncertainties. © 2018 The Author(s)

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