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## Non-Gaussian elliptic-flow fluctuations in PbPb collisions at $s_{NN} = 5.02$ TeV (Article) [Open Access](#)

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### Abstract

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Event-by-event fluctuations in the elliptic-flow coefficient  $v_2$  are studied in PbPb collisions at  $s_{NN} = 5.02$  TeV using the CMS detector at the CERN LHC. Elliptic-flow probability distributions  $p(v_2)$  for charged particles with transverse momentum  $0.3 < p_T < 3.0$  GeV/c and pseudorapidity  $|\eta| < 1.0$  are determined for different collision centrality classes. The moments of the  $p(v_2)$  distributions are used to calculate the  $v_2$  coefficients based on cumulant orders 2, 4, 6, and 8. A rank ordering of the higher-order cumulant results and nonzero standardized skewness values obtained for the  $p(v_2)$  distributions indicate non-Gaussian initial-state fluctuations. Bessel-Gaussian and elliptic power fits to the flow distributions are studied to characterize the initial-state spatial anisotropy. © 2018 The Author(s)

### SciVal Topic Prominence $\text{\textcircled{i}}$

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