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## Predictions for event-by-event flow harmonic distributions at RHIC

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Hydrodynamical models must be able to reproduce data not only in average for a given centrality class but for each event. In particular they must reproduce the scaled  $v_n$  distributions obtained by ATLAS [1,2] and ALICE [3]. These distributions are independent of medium properties such as viscosity, and so directly probe the initial conditions.

They in fact provide a strong test for initial condition models: many models (e.g. Glauber and MC-KLN) can be ruled out and so far only two models lead to satisfactory results [4,5]. In this work, we show that NeXus initial conditions also provide reasonable results for scaled  $v_n$  distributions at LHC energies and make predictions for RHIC top energy.

References:

- [1] ATLAS Collaboration Nucl. Phys. A 904-905 421c (2013)
- [2] ATLAS Collaboration JHEP 1311 183 (2013)
- [3] ALICE Collaboration J. Phys. Conf. Ser. 446 012031 (2013)
- [4] C. Gale, S. Jeon, B. Schenke, P. Tribedy, and R. Venugopalan, Phys. Rev. Lett. 110, 012302 (2013),
- [5] H. Niemi, K. J. Eskola, and R. Paatelainen, Phys. Rev. C 93, 024907 (2016)

### Content type

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### Collaboration

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