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## PHENIX results on centrality and collision energy dependent Lévy analysis of HBT correlation functions

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Varying the center of mass energy and the centrality in heavy-ion collisions allows us to investigate different regions of the QCD phase diagram. In our latest measurements at the PHENIX experiment at RHIC, we utilize Lévy-type sources to describe the measured HBT correlation functions at different beam energies and centralities. The different source parameters can yield different information about the source. The scale parameter  $R$  is related to the physical size of the source, while the  $\lambda$  parameter (the strength of the correlation function) may provide an indirect measurement of in-medium mass modification. The index of stability  $\alpha$  is related to one of the critical exponents (the so-called correlation exponent  $\eta$ ), so it may yield information on the nature of the quark-hadron phase transition. In this poster we report the current status of the analysis of the centrality and beam energy dependence of Lévy source parameters in Au+Au collisions from  $\sqrt{s_{NN}} = 15$  GeV to  $\sqrt{s_{NN}} = 200$  GeV.

### Content type

Experiment

### Collaboration

PHENIX

### Centralised submission by Collaboration

Presenter name already specified

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