Quark Matter 2015 - XXV International Conference on Ultrarelativistic Nucleus-Nucleus Collisions



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PHENIX results on flow observables in asymmetric Cu+Au collisions

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Asymmetric collisions of large nuclei at high energy offer a unique window into many aspects of excited medium formation and evolution. Unlike symmetric collisions, an asymmetric system can have non-zero odd-order moments in its average transverse distribution of participants, and the pattern of participants from the two nuclei can have different shapes on average. In 2012, PHENIX measured particle production in Cu+Au collisions at $\sqrt{s_{NN}} = 200 \, {\rm GeV}, \ {\rm and} \ {\rm we} \ {\rm report} \ {\rm measurements} \ {\rm of} \ {\rm the} \ {\rm azimuthal} \ {\rm anisotropies} \ v_1, v_2, \ {\rm and} \ v_3 \ ({\rm directed, \ elliptic,} \ {\rm and} \ {\rm triangular} \ {\rm flow}) \ {\rm for} \ {\rm inclusive} \ {\rm and} \ {\rm identified} \ {\rm charged} \ {\rm hadrons} \ {\rm produced} \ {\rm at \ midrapidity.} \ {\rm Implications} \ {\rm for} \ {\rm a} \ {\rm variety} \ {\rm of} \ {\rm unique} \ {\rm initial\text{-state}} \ {\rm geometry} \ {\rm effects} \ {\rm will} \ {\rm be} \ {\rm discussed.}$

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