

Abstract Submitted  
for the APR13 Meeting of  
The American Physical Society

**Azimuthal anisotropy in central U+U collisions at STAR**<sup>1</sup> HUI WANG, Brookhaven National Lab, STAR COLLABORATION COLLABORATION — The azimuthal anisotropy of particle production is commonly used in high-energy nuclear collisions to study the early evolution of the expanding system. The prolate shape of uranium nuclei provides the possibility to study how the initial geometry of the nuclei affects the azimuthal distributions. This allows one to study a variety of topics such as local parity violation, path length dependence of jet quenching, and particle production in heavy ion collisions. In this talk, the two-particle cumulant,  $v_2$ , from central U+U collisions at  $\sqrt{s_{NN}} = 193$  GeV and central Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV for inclusive charged hadrons will be presented. The STAR Zero Degree Calorimeters were used to select the most central collisions. Differences were observed between the multiplicity dependence of  $v_2$  for central Au+Au and U+U collisions. The observed  $v_2$  slope results were compared to Glauber model predictions and it was seen that this model cannot explain the present results on the multiplicity dependence of  $v_2$  in central collisions.

<sup>1</sup>for STAR Collaboration

Gary Westfall  
Michigan State University

Date submitted: 06 Feb 2013

Electronic form version 1.4