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## Measurement of $D^0$ elliptic and triangular flow in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV at RHIC

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Due to their large masses, heavy quarks are predominantly produced through initial hard scatterings in heavy-ion collisions. As such, they experience the entire evolution of the hot and dense medium created in such collisions and are expected to thermalize much more slowly than light flavor quarks.

For instance, the azimuthal anisotropy of charm quarks with respect to the reaction plane over a broad momentum range can provide insights into the degree of thermalization and the bulk properties of the system. Specifically at low transverse momenta we can examine the bulk properties in the strongly coupled regime.

In this talk we present the STAR measurement of elliptic ( $v_2$ ) and triangular flow ( $v_3$ ) of  $D^0$  mesons in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV obtained from the first year of physics running with the new STAR Heavy Flavor Tracker.

Comparison with the azimuthal anisotropy of other particle species and a series of model calculations will be shown, and the charm quark dynamics in the sQGP medium will be discussed.

### On behalf of collaboration:

STAR

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**Session Classification:** Flow