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## sPHENIX measurements of collective behavior in small and large systems

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sPHENIX is a next-generation collider detector at RHIC which was successfully commissioned in 2023 and 2024 and took physics data in p+p and Au+Au collisions. In addition to its high- $p_T$  jet and heavy flavor physics program, sPHENIX is a general purpose collider detector with excellent capabilities for exploring collective phenomena in small and large systems. This is due to its large pseudorapidity and full-azimuth acceptance, dedicated forward detectors such as the sPHENIX Event Plane Detector (sEPD), and large data samples collected in RHIC Run-24. This talk presents new measurements of collective phenomena in Au+Au collisions using the sEPD, and in p+p collisions through two-particle correlation and cumulant methods. These measurements can help shed light on the nature of collective behavior at RHIC energies, especially in small systems, with a greatly expanded statistical and kinematic reach.

### Category

Experiment

### Collaboration (if applicable)

sPHENIX Collaboration

**Authors:** JHENG, Hao-Ren (Massachusetts Inst. of Technology (US)); COLLABORATION, sPHENIX

**Presenter:** JHENG, Hao-Ren (Massachusetts Inst. of Technology (US))

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