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Measurement of two-particle correlations in proton-proton collisions with sPHENIX

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The sPHENIX experiment at RHIC, commissioned in 2023, provides large pseudorapidity coverage and full azimuthal acceptance, enabling detailed studies of collectivity in small-collision systems. Data were collected in proton–proton collisions at $\sqrt{s}$ = 200 GeV in 2024. In this poster, we present the current status of two-particle correlation analyses in proton–proton collisions, using silicon tracklets reconstructed with the Monolithic Active Pixel Vertex Detector (MVTX) and the Intermediate Silicon Tracker (INTT), together with the sPHENIX Event Plane Detector (sEPD). The sEPD provides large forward and backward pseudorapidity coverage, allowing long-range correlations up to $\Delta\eta \approx 9.8$ to be explored.

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