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The sPHENIX experiment at RHIC

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The sPHENIX experiment at RHIC is currently under construction and on schedule for first data in early 2023. Built around the excellent BaBar superconducting solenoid, the central detector consists of a silicon pixel vertexer adapted from the ALICE ITS design, a silicon strip detector with single event timing resolution, a compact TPC, novel EM calorimetry, and two layers of hadronic calorimetry. The hybrid streaming/triggered readout of the detector enables full exploitation of the luminosity provided by RHIC. The experiment will deliver unprecedented data sets for a wide variety of multi-scale measurements at RHIC, including studies of jet modification, upsilon suppression and open heavy flavor production in p+p, p+Au and Au+Au collisions. The talk will describe the readiness of the experiment for operations, present current projections of key jet and heavy flavor measurements, and discuss their potential scientific impact.

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