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Low Transverse Momentum K_S Production in Au + Au Collisions at $\sqrt{s_{NN}}$ = 200 GeV ZHAOZHONG SHI, University of California, Berkeley and Lawrence Berkeley National Laboratory, STAR COLLABORATION — The Heavy Flavor Tracker (HFT) detector installed in the STAR experiment is aimed for precision measurement of charm production in heavy-ion collisions by topologically reconstructing the secondary decays of charmed hadrons. With the significantly improved pointing resolution enabled by the HFT, we can also reconstruct low transverse momentum ($p_T < 0.3$ GeV/c) K_S particles that decay very close to collision vertices, which was difficult before with the Time Projection Chamber (TPC) only. Measurement of the low transverse momentum yield will further constrain the total kaon yield in the full kinematic phase space. In this presentation, we will present the first measurement of the K_S production focusing on the low transverse momentum region ($p_T < 0.3$ GeV/c) with the HFT detector from Au + Au collisions at $\sqrt{s_{NN}}$= 200 GeV. We will report the invariant yield and elliptic flow vs. p_T in different centrality bins. The results will be compared with previous measurements at RHIC.

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