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The STAR Heavy Flavor Tracker[1] FLEMMING VIDEBAEK, Brookhaven National Laboratory, STAR COLLABORATION — The Heavy Flavor Tracker (HFT) is an on-going upgrade for the STAR detector at RHIC that aim to study heavy quark production. In relativistic heavy-ion collisions at RHIC, heavy quarks are primarily created from initial hard scatterings. Since their large masses are not easily affected by the strong interaction with QCD medium they may carry information from the system at early stage. The interaction between heavy quarks and the medium is sensitive to the medium dynamics; therefore heavy quarks are suggested as an ideal probe to quantify the properties of the strongly interacting QCD matter. The HFT detectors will study this via the topological reconstruction of open charm hadrons. The HFT that consists of a thin two layer inner Pixel vertex detector, and two outer concentric layers of silicon, the Silicon Strip Detector, and the Intermediate Silicon Tracker. We will show how this detector system can assess heavy flavor physics with great precision. An overview of the HFT that will be completed for the upcoming RHIC run-14, its expected performance, and current status will be presented.

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