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The STAR Heavy Flavor Upgrades

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The STAR have already reported on results in pp and AA on heavy flavor production. In order to perform high precision measurements of heavy flavor STAR has embarked on an upgrade program. The primary motivation for the Heavy Flavor Tracker (HFT) is perform measurements of heavy quark collectivity and to separate bottom and charm quark energy loss in the QCD medium. This will be achieved by the HFT by extending the capabilities of STAR by measurements of displaced vertices and direct topological identification of open charm. The motivation for the Muon Telescope Detector (MTD) is to provide muon identification at mid-rapidity for measurements of J/psi and Upsilon.
These detectors will greatly enhance the STAR physics capability to measure heavy quark collectivity and correlations using topologically reconstructed charmed hadrons and heavy quark decay electron-muon correlations and bottom quark production In addition, measurements of the quarkonium muon decay channels will enable us to separate Upsilon 1S from 2S and 3S states in p+p and A+A collisions.
An overview of the upgrades, their expected performance and current status will also be presented. The STAR Collaboration should complete the Heavy Flavor Tracker (HFT) and the Muon Telescope Detector (MTD) upgrades by 2014.

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