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Recent hard probe measurements with STAR at RHIC

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Studies of hot and dense QCD matter created in high energy heavy-ion collisions at the Relativistic Heavy Ion Collider (RHIC) revealed that the matter resembles properties of strongly coupled liquid with very low viscosity. High statistics data and major upgrades of the STAR experiment opened recently a new era of tomography of the QCD matter at RHIC using hard probes. In particular, the Heavy Flavor Tracker enables precision measurements of open heavy flavor hadrons and the Muon Telescope Detector greatly improves quarkonium measurements. Studies in the heavy flavor sector are corroborated by measurements of jet properties that provide further insights into the partonic energy loss in the QCD matter. In this talk, an overview of recent results on open heavy flavor hadron, quarkonium and jet production in Au+Au collisions at the top RHIC collision energy of 200 GeV per nucleon pair measured with the STAR experiment will be presented.

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