Abstract for an Invited Paper for the HAW09 Meeting of The American Physical Society

Latest Results from Heavy Flavor Measurements

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Heavy flavors are ideal probes to quantify the QCD medium properties in relativistic heavy ion collisions. In this talk, I will review the most recent measurements and results on open heavy flavor and heavy quarkonium production from heavy ion experiments. I will discuss our current understandings of heavy flavor hadron production mechanisms, heavy quark in-medium interactions, QCD medium properties we've learned so far, as well as the limitations of these measurements. In the end, I will outlook a bright future in heavy flavor measurements with machine and detector upgrades in the RHIC II era.