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Dielectron Continuum in p+p Collisions at $\sqrt{s} = 200\text{GeV}$ measured by the PHENIX Experiment at RHIC JASON KAMIN, Stony Brook University, PHENIX COLLABORATION — Color neutral probes, such as e^+e^- pairs, do not interact with the hot, dense medium created in RHIC collisions. Therefore, they are effective tools for investigating the full time evolution and dynamics of this new state of matter. The intermediate mass region of the dielectron continuum ($1 < m < 3 \text{ GeV}/c^2$) is dominated by semi-leptonic charm decays and allows a measurement of medium modifications of charm correlations. The PHENIX experiment has measured the dielectron continuum in both p+p and heavy-ion collisions at $\sqrt{s_{NN}} = 200\text{GeV}$. The p+p data from the 2005 RHIC run allowed a measurement of the charm cross section as well as providing a tantalizing glimpse of the bottom cross section. The increased luminosity of the 2006 RHIC run along with a higher electron trigger threshold provides increased statistics for the measurement of the dielectron continuum, particularly in the higher mass region ($m > 1 \text{ GeV}/c^2$). This enables an analysis of additional dependencies, such as the p_T and azimuthal correlations, of e^+e^- pairs originating from heavy flavor decays. Such a study can illuminate the production mechanism for heavy flavor and can provide a crucial benchmark to test pQCD while also providing a baseline for future heavy-ion runs. The status of the p+p analysis from the 2006 RHIC run will be discussed.

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