Abstract Submitted for the APR07 Meeting of The American Physical Society

Dielectron Mass Spectra from $\sqrt{s_{\rm NN}} = 200$ GeV Cu+Cu Collisions Measured by PHENIX SARAH CAMPBELL, SUNY Stony Brook, PHENIX COLLABORATION — The dielectron mass spectra is rich in physics signals including vector meson decays, hadron Dalitz decays, correlated semi-leptonic heavy flavor decays and direct virtual photon emission. In medium mass modifications of light vector mesons due to the QCD phase transition, the effects of chiral symmetry restoration as well as thermal radiation, may be detectable in the low mass region. The PHENIX $\sqrt{s_{\rm NN}} = 200$ GeV Au+Au analysis suggests the following centrality dependent trends: an excess in the the low mass region of the central Au+Au spectra over the expected reference cocktail of known hadronic sources, and a suppression pattern in the intermediate region, where correlated charm dominates. The status of the PHENIX $\sqrt{s_{\rm NN}} = 200$ GeV Cu+Cu analysis, in minimum bias and separated into centrality classes, will be presented. Similar centrality dependent trends may be evident in Cu+Cu. Comparisons between the Au+Au and the Cu+Cu spectra in centrality classes may be sensitive to surface area and volume effects.

> Sarah Campbell SUNY Stony Brook

Date submitted: 12 Jan 2007

Electronic form version 1.4