Production and Elliptic Flow of Dileptons and Photons in the semi-Quark Gluon Plasma

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We consider the thermal production of dileptons and photons at temperatures above the critical temperature in QCD. In the semi Quark Gluon Plasma (QGP), color excitations are suppressed by a small value of the Polyakov loop. Comparing the semi-QGP to the usual, perturbative QGP, we find a mild enhancement of thermal dileptons. In contrast, to leading logarithmic order in weak coupling there are far fewer photons from the semi-QGP than the usual QGP. To illustrate the possible effects we use a hydrodynamic model. Dileptons uniformly exhibit a small elliptical flow, but the strong suppression of photons in the semi-QGP tends to bias the elliptical flow of photons to that generated in the hadronic phase.