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Quark-gluon plasma effects on hadrons in AdS/QCD SEAN BARTZ, THEODORE JACOBSON, Macalester College — The AdS/CFT correspondence has succeeded in describing qualitatively many features of non-perturbative QCD. An approach known as bottom-up AdS/QCD uses a dilaton field to break conformal symmetry, introducing confinement and describing well the features of hadronic spectra at zero temperature. Introducing a black hole into the AdS metric allows for the study of thermodynamic properties of QCD, mimicking the behavior of hadrons interacting with a hot, dense medium such as the quark-gluon plasma produced in heavy ion collisions. We present an improved AdS/QCD model for meson and glueball spectra at finite temperature and baryon chemical potential. The spectra match the experimental and lattice data qualitatively well at low temperature, but we also find some subtleties in connecting to the best zero-temperature models. We find a melting temperature for light mesons that is below the current estimates for the deconfinement temperature. Finally, we examine the melting and jet-quenching of heavy quarkonia, which more commonly act as probes of the QGP in heavy ion collisions.

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