Abstract Submitted
for the APR11 Meeting of
The American Physical Society

Testing Non-conformal Holographic Models of Jet Quenching in A+A at RHIC and LHC[1] ANDREJ FICNAR, JORGE NORONHA, MIKLOS GYULASSY, Department of Physics, Columbia University, 538 West 120th Street, New York, NY 10027, USA — We propose a new bottom-up, non-conformal holographic gravity dual model of quenching of both heavy and light quarks in ultra-relativistic nuclear collisions. We generalize the Gubser et al. string drag force model to interpolate between the trailing and falling string scenarios, depending on how the effective mass of the quark varies with temperature. We compare the differential nuclear modification of light and heavy quark jets in expanding sQGP with holographic thermodynamic properties constrained by lattice QCD calculations for both RHIC and new LHC conditions.

[1]We acknowledge support by US-DOE Nuclear Science Grant No. DE-FG02-93ER40764.

Andrej Ficnar
Department of Physics, Columbia University,
538 West 120th Street, New York, NY 10027, USA

Date submitted: 14 Jan 2011 Electronic form version 1.4