Quantum chromodynamics: string theory meets collider physics



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Meson and baryon excitations in AdS/QCD

Thursday 27 September 2007 18:00 (30 minutes)

We construct an approximate holographic dual of QCD from experimental hadron properties. Conformal symmetry breaking and other IR effects are described exclusively by deformations of the anti-de Sitter background metric. This framework allows us to reproduce the empirically found linear square-mass trajectories of universal slope for radially and orbitally excited hadrons. The predictions for the light hadron spectrum include new relations between ground state masses and trajectory slopes and are in good overall agreement with experimental data.

Based on preprint

http://www.slac.stanford.edu/spires/find/hep/www?eprint=arXiv:0705.1857

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Session Classification: String theory (1) (continued)