

Abstract

We discuss the recent proposal in hep-th/0611312 where it was shown that the critical anomalous dimension associated to the onset of non-linear effects in the high energy limit of QCD coincides with the critical exponent governing the radius of the black hole formed in the spherically symmetric collapse of a massless scalar field. We argue that a new essential ingredient in this mapping between gauge theory and gravity is continuous self-similarity, not present in the scalar field case but in the spherical collapse of a perfect fluid with barotropic equation of state. We identify this property with geometric scaling, present in DIS data at small value of Bjorken x . We also show that the Choptuik exponent in dimension five tends to the QCD critical value in the traceless limit of the energy momentum tensor.