

Abstract Submitted
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D-branes in the QCD Vacuum HARRY THACKER, University of Virginia — Recent Monte Carlo evidence for long range sign-coherent membranes of topological charge in the vacuum of pure-gluon QCD is considered in the context of string/gauge duality. Witten's holographic brane construction of four-dimensional Yang-Mills theory from type IIA string theory is reviewed. This leads to a picture of the pure-gluon QCD vacuum as consisting of multiple discrete vacua separated by domain walls, a picture suggested much earlier by large- N chiral lagrangian arguments. In the holographically equivalent string theory, the topological charge membranes correspond to D6-branes, which play a fundamental role as the carriers of Ramond-Ramond charge type IIA string theory.

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