

A study of the H-dibaryon in holographic QCD

Wednesday, 27 July 2016 15:50 (30 minutes)

We investigate the H-dibaryon ($uuddss$) in holographic QCD [1, 2]. Holographic QCD is derived from a QCD-equivalent D-brane system in the superstring theory via the gauge/gravity correspondence. In holographic QCD, all baryons appear as topological chiral solitons of Nambu-Goldstone bosons and (axial) vector mesons [1, 2]. In this framework, the H-dibaryon can be described as an $SO(3)$ -type hedgehog state [3]. In this paper, we present the formalism of the H-dibaryon in holographic QCD, and investigate its properties. [1] T. Sakai and S. Sugimoto, Prog. Theor. Phys. 113 (2005) 843; 114 (2005) 1083. [2] K. Nawa, H. Suganuma and T. Kojo, Phys. Rev. D75 (2007) 086003. [3] A.P. Balachandran et al., Phys. Rev. Lett. 52 (1984) 887.

Presenter: MATSUMOTO, Kohei (Kyoto University)

Session Classification: Meson-Nucleon Interactions