



Spectrum of a Walking Gauge Theory

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We study the spectrum of vector and scalar mesons in the holographic dual of a walking gauge theory, obtained by embedding D7 - anti-D7 probe branes in a certain type IIB background. We show that there is a nontrivial relation that needs to be satisfied in order for axial-vector modes to exist. The scalar mesons arise from fluctuations of the probe flavour branes and complement the (axial-)vector meson spectra. By explicitly finding the spectrum of scalar masses, we show that the nonsupersymmetric D7 - anti-D7 embedding is stable with respect to such fluctuations. Interestingly, it turns out that the mass splitting between the scalar and vector meson spectra is of subleading order in a small parameter expansion. We also estimate the Peskin Takeuchi S parameter of this theory and show that it is positive definite.

Summary

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