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AdS/CFT with Flavour and constant Kalb-Ramond field

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We investigate the effect of a pure electric or magnetic Kalb-Ramond B-field on the physics of a D7 brane probe in the context of the AdS/CFT correspondence, both at finite and zero temperature. We find a confinement/deconfinement phase transition in both cases, and chiral symmetry breaking for the magnetic field. The general behaviour is that the magnetic field acts confining, while the electric field acts deconfining by ionizing the mesons. We also investigate the s-state meson spectra and find a shift for the zero temperature electric case similar to the second-order Stark effect.

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