

Wavefunctions and their implications on S^2 with flux and branes

Tuesday 25 June 2019 17:00 (15 minutes)

We formulate a six dimensional $U(1)$ gauge theory compactified on a (two dimensional) sphere S^2 with flux and localized brane sources. Profiles of the lowest Kaluza-Klein (KK) wavefunctions and their masses are derived analytically. In contrast to ordinary sphere compactifications, the above setup can lead to the degeneracy of and the sharp localizations of the linearly independent lowest KK modes, depending on the number of branes and their tensions. Moreover, it can naturally accommodate CP violation in Yukawa interactions.

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