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Electromagnetic form factors of the $D_{(s)}$ mesons in holographic QCD

Studying electromagnetic form factors is crucial to understand the internal structure of hadrons, which provides information about the charge distributions and magnetic moments of hadrons. However, quantum chromodynamics cannot be used to compute these non-perturbative quantities.
In this talk, we present a study on the meson spectra, decay constants, electromagnetic form factors, and charge radius of the charmed vector, axial vector, and pseudoscalar mesons using the soft-wall holographic model with four flavors. We have obtained the electromagnetic form factors of the D and D_s mesons, as well as electric form factors of the D^* and D_s^* mesons, which are consistent with the lattice QCD data. We have also predicted the electric, magnetic, and quadrupole form factors of the D_1 and D_{s1} mesons. Finally, we computed the charge radius of the vector, axial vector, and pseudoscalars charmed mesons.

Primary author: AHMED, Hiwa (University of Chinese Academy of Scineces)

Co-authors: Prof. HUANG, Mei (University of Chinese Academy of Scineces); Dr CHEN, Yidian (Hangzhou Normal University)

Presenter: AHMED, Hiwa (University of Chinese Academy of Scineces)

Session Classification: Poster session with snacks and coffee