



Contribution ID: 285

Type: **Talk**

Dashen's theorem and electromagnetic contributions to pseudoscalar meson masses

Tuesday, 14 July 2015 18:10 (20 minutes)

We present results on the pseudoscalar meson masses from a fully dynamical simulation of QCD plus QED. We concentrate particularly on the question of how to divide the measured masses into a QED contribution and a QCD contribution. This decomposition is not unique, it depends on the renormalisation scheme and scale. We suggest a renormalisation scheme in which Dashen's theorem holds, so that the electromagnetic self-energies of the neutral mesons are zero, and discuss how the self-energies change when we transform to a scheme such as $\overline{\text{MS}}$, in which Dashen's theorem is violated.

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Session Classification: Hadron Spectroscopy and Interactions

Track Classification: Hadron Spectroscopy and Interactions