



Contribution ID: 365

Type: **Oral Presentation**

## An update on QCD+QED simulations with $C^*$ boundary conditions

*Friday, 12 August 2022 16:40 (20 minutes)*

We give an update on the ongoing effort of the  $RC^*$  collaboration to generate fully dynamical QCD+QED configurations with  $C^*$  boundary conditions using the openQ\*D code. The simulations are tuned to the U-symmetric point ( $m_d = m_s$ ) with pions at  $m_{\pi^\pm} \approx 400$  MeV. The splitting of the light mesons is used as one of three tuning observables and fixed to  $m_{K^0} - m_{K^\pm} \approx 5$  MeV and  $m_{K^0} - m_{K^\pm} \approx 25$  MeV on ensembles with renormalized electromagnetic coupling  $\alpha_R \approx \alpha_{\text{phys}}$  and  $\alpha_R \approx 5.5\alpha_{\text{phys}}$ , respectively. In this talk we will discuss some details concerning our tuning strategy, we will present our calculation of the meson and baryon masses, and we will comment on finite-volume effects comparing meson masses on two different volumes with  $m_{\pi^\pm} L \approx 3.2$  and  $m_{\pi^\pm} L \approx 5.1$ . Finally, we will also present a cost analysis for our simulations. More technical details will be discussed in the companion poster presented by A. Cotellucci.

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**Session Classification:** Hadron Spectroscopy and Interactions

**Track Classification:** Hadron Spectroscopy and Interactions