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Study of the hadronic contributions to the running of the QED coupling

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The electromagnetic coupling receives significant contributions to its running from non-perturbative QCD effects. We present an update of our study of the Adler function and of its application to the determination of leading order hadronic contribution to the running of the QED coupling. We use a high-statistics lattice QCD computation with two flavours of O(a) improved Wilson fermions in a broad range of the momentum transfer Q^2. The running of the QED coupling, including valence contributions from u, d, s and c quarks, is compared to phenomenological results at intermediate Q^2 values.

Primary author: HERDOIZA, Gregorio (IFT UAM-CSIC)

Co-authors: Dr JAEGER, Benjamin (Swansea University); HORCH, Hanno (Uni Mainz); Prof. WITTIG, Hartmut (Institut für Kernphysik, Johannes Gutenberg-Universität Mainz)

Presenter: HERDOIZA, Gregorio (IFT UAM-CSIC)

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