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Beyond the electroquenched approximation

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Lattice QCD determinations of hadronic matrix elements required for precision tests of the Standard Model are now approaching an accuracy where the electromagnetic interactions of the quarks can no longer be neglected. In particular, the electric charge of the sea quarks cannot be ignored a priori without introducing an uncontrolled systematic uncertainty. In this talk I will outline the challenges encountered in going beyond the electroquenched approximation, either when the QED effects are included perturbatively as in the RM123 method or when they are included in the Monte Carlo simulation. I will review the strategy of the *RCcollaboration* who are working towards implementing both approaches using C boundary conditions.

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