

# XVth Quark Confinement and the Hadron Spectrum



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## NNLO QCD Corrections to Pion EM form factors

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In this talk, I will present our recent work on two-loop QCD corrections to pion electromagnetic form factors with large momentum transfer.

We explicitly verify the validity of the collinear factorization to two-loop order for this observable, and obtain the respective IR-finite two-loop hard-scattering kernel in the closed form.

Incorporating this new ingredient of correction, we make a comprehensive comparison between the theoretical predictions and pion form factor measurements in both space-like and time-like regions.

Our phenomenological analysis provides constraint on the second Gegenbauer moment of the pion light-cone distribution amplitude

obtained from recent lattice QCD studies.

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