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QCD Gluon Green functions free of Quantum fluctuations

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Paper recently submitted to arXiv on the subject

Summary

I shall report on how the Wilson flow technique can efficaciously kill the short-distance quantum fluctuations of 2- and 3-gluon Green functions, remove the Λ_{QCD} scale and destroy the transition from the confining non-perturbative to the asymptotically-free perturbative sector. After the Wilson flow, the behavior of the Green functions with momenta can be described in terms of the quasi-classical instanton background. The same behavior also occurs, before the Wilson flow, at low-momenta. This last result permits applications as, for instance, the detection of instanton phenomenological properties or a cheap lattice calibration.

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