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## Properties of the $\eta$ and $\eta'$ mesons Part II: Gluonic matrix elements

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We present results of gluonic and pseudoscalar matrix elements of the  $\eta$  and  $\eta'$  mesons at the physical quark mass point, in the continuum limit. The simulations are carried out on  $n_f=2+1$  CLS ensembles, with non-perturbatively improved Wilson fermions. We discuss the renormalization of these quantities and check the consistency with the singlet and non-singlet axial Ward identities. Our results are well described in terms of Large- $N_c$  ChPT at NLO. We comment on phenomenological applications.

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