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Logarithmic corrections to a^2 scaling in lattice QCD with Wilson and GW quarks

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We analyse the leading logarithmic corrections to the a^2 scaling of lattice artefacts in QCD, following the seminal work of Balog, Niedermayer and Weisz in the O(n) non-linear sigma model. Limiting to contributions from the action, the leading logarithmic corrections can be determined by the anomalous dimensions of mass-dimension 6 operators. These operators form a minimal on-shell basis of the Symanzik Effective Theory. We present results for non-perturbatively O(a) improved Wilson and Ginsparg-Wilson quarks.

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