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## Two-loop perturbative corrections to the thermal effective potential in gluodynamics

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The thermodynamics of pure glue theories can be described in terms of an effective action for the Polyakov loop. This effective action is of the Landau-Ginzburg type and its variables are the angles parametrizing the loop. We compute perturbative corrections to this action. Remarkably, two-loop corrections turn out to be proportional to the one-loop action, independent of the eigenvalues of the loop. By a straightforward generalization of the 't Hooft coupling this surprisingly simple result holds for any of the classical and exceptional groups.

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