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Effective Potential and Conformal Symmetry in phi4

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We present the study of the multi-loop effective potential evolution in φ4-theory using the conformal symmetry. We demonstrate that the conformal symmetry can still be useful for the effective potential approach even at the presence of the mass parameter. To this goal, it is necessary to introduce the special treatment of the mass terms as sorts of interaction in an asymptotical expansion of the generating functional. The new-introduced vacuum Vz,x-operation is the main tool to the algebraic scheme of anomalous dimension calculations. It is shown that the vacuum Vz,x-operation transforms the given Green functions to the corresponding vacuum integrations which generate the effective potential.

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