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The moat regime in the quark meson model with the FRG

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We use the functional renormalization group in the local potential approximation, with the full effective potential, to investigate the quark meson model for the presence of inhomogenious phases. To this end, we solve the flow equation for the bosonic two point function, to investigate if the two point function shows a negative wave function renormalization or even a zero crossing.
Furthermore we observe the necessity of employing the correct numerical procedure to avoid oscillations in the higher derivatives of the effective potential which appear in the flow equation of the two point function.

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