

Extension of the stability criterion for dissipative optical soliton solutions of a two-dimensional Ginzburg-Landau system generated from asymmetric inputs

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Résumé en anglais	<p>The evolution and stability of dissipative optical spatial solitons generated from an input asymmetric with respect to two transverse coordinates x and y are studied. The variational approach used to investigate steady state solutions of a cubic-quintic Ginzburg-Landau equation is extended in order to consider initial conditions without radial symmetry. The stability criterion is generalized to the asymmetric case. A domain of dissipative parameters for stable solitonic solutions is determined. Following numerical simulations, an asymmetric input laser beam with dissipative parameters from this domain will always give a stable dissipative spatial soliton.</p>
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