Modulation Instability of Optical Waves in the Cubic-Quintic Complex Ginzburg-Landau Equation with Fourth-Order Dispersion and Gain Terms

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The modulation instability of the one-dimensional cubic-quintic complex Ginzburg-Landau equation with fouth-order dispersion and gain terms, a. k. a., the quintic complex Swift-Hohenberg equation, is investgated. The effects of the fourth-order terms to the modulational instability is studied. We numerically investigate the dynamics of the modulational instability in the presence of the fourth-order dispersion and gain terms. – PACS numbers: 42.65.Tg, 42.81DP, 42.65Sf

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