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OPTICAL SOLITON PERTURBATION WITH QUADRATIC-CUBIC NONLINEARITY BY RICCATI-BERNOULLI SUB-ODE METHOD AND KUDRYASHOV'S SCHEME

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Abstract

This paper obtains soliton solutions to the perturbed nonlinear Schrödinger's equation with quadratic-cubic nonlinearity. Two integration algorithms are employed. They are Riccati-Bernoulli sub-ODE method and Kudryashov's scheme. This leads to dark, singular and several other forms of soliton solutions that are being reported for the first time in this paper.

Keywords: solitons; integrability; quadratic-cubic nonlinearity.

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