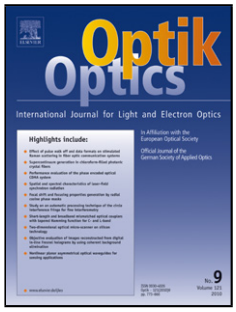

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PERTURBATION THEORY AND OPTICAL SOLITON COOLING WITH ANTI-CUBIC NONLINEARITY

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Abstract

Soliton perturbation theory is applied to obtain the adiabatic variation of its parameters and slow change in velocity. The dynamical system leads to a stable fixed point to which the soliton amplitude and frequency gets locked into for a stable propagation down the fibers with anti-cubic nonlinearity.

Keywords: solitons; perturbation; adiabaticity.