## 2003 Vol. 40 No. 4 pp. 390-392 DOI:

Breather Dynamics in the Perturbed sine-Gordon Equation

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Abstract: We show that a direct perturbation theory can be used to give a systematic description of the evolution of breather in perturbed sine-Gordon equation. The error in inverse scattering method is also pointed out and corrected to obtain the accurate results.

PACS: 05.45.Yv

Key words: sine-Gordon equation, soliton, perturbation theory

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