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Scattering of kinks in a non-polynomial model

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We study a model described by a single real scalar field in the two-dimensional spacetime. The model is specified by a potential which is non-polynomial and supports analytical kink-like solutions that are similar to the standard kinklike solutions that appear in the ϕ^4 model when it develops spontaneous symmetry breaking. We investigate the kink-antikink scattering problem in the non-polynomial model numerically and highlight some specific features, which are not present in the standard case.

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