



Inelastic character of solitons of slowly varying gKdV equations

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In this paper we describe the inelastic character of solitons of some slowly varying gKdV equations. We give precise lower bounds, in the energy space, of the defect induced by the potential on the solution as time goes to infinite. For the proof, we consider suitable Lyapunov functionals that propagate the defect along the dynamics in a non trivial fashion, in the spirit of the recent breakthroughs made by Martel and Merle in the case of the two soliton collision for non integrable gKdV equations. In addition, we also consider a special, degenerate case, where the defect is formally of second order.

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