



Nonlinear wave transformation in basin of variable depth

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The Korteweg-de Vries equation is appropriated model to describe the nonlinear water wave transformation in the shallow water. In the case of variable depth, the variable-coefficient Korteweg – de Vries equation has been derived in papers by Ostrovsky & Pelinovsky (1970) and Johnson (1972). The results of the numerical simulation of this equation for the case when bottom profile can be approximated by tanh-function are presented. The shape of the incident wave is the solitary wave (soliton). Numerical simulation demonstrates the strong wave amplification in shallow water with forming of soliton group