Geophysical Research Abstracts
Vol. 19, EGU2017-8125, 2017
EGU General Assembly 2017

Evolution of the compound soliton of Gardner's equation in the region near the critical point; specific features cylindrically converging and diverging solitons

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Previously, we have proposed an approach approximate description of the evolution of solitons, permitting the view of composite structures, formed a more simple stationary waves-kinks. The key point in the proposed approach is the transition from traditional descriptions of the evolution of solitons as coherent entities(essentially, particles,characterized by one coordinate, speed, etc.) to the description of the dynamics of being their kinks. The use of this approach allowed to investigate non-quasi-stationary processes arising from the interaction of solitons and their propagation in media with variable parameters , when the magnitude of disturbances become comparable and even significantly smaller-scale solitary waves. To non-quasi-stationary behavior of solitons leads and evolution is not flat fronts of solitary waves. The study of these processes is of interest as from fundamental and applied points of view. In the present work using this approach is discussed a simple from such problems with cylindrically converging(and diverging) composite solitons in the framework of the Gardner equation, the augmented term is responsible for the cylindrical geometry tasks.