Geophysical Research Abstracts,
Vol. 11, EGU2009-13507, 2009
EGU General Assembly 2009

Runup of asymmetric solitary waves on a non-plane beach

E. Francev
VNII "CORS", St Petersburg, Russia (bonifacio05@mail.ru)

Didenkulova et al (2006, 2007) shown that the runup of long asymmetric waves on plane beach leads to increase the maxima of runup height and velocity. This analysis has been done in the framework of nonlinear shallow – water theory. The extreme runup characteristics are the same within nonlinear and linear theories. The same process here is studied for non-plane beach, when the bottom profile is described by various functions of the offshore coordinate. Analytical integral solutions are obtained in the framework of linear theory of long waves, and they are solved numerically using the Fourier transform.