

1035-76-1501

Chen Chunli* (c1chen@sjtu.edu.cn), Department of Mathematics, Shanghai Jiao Tong University, Shanghai, 200240, Peoples Rep of China. *On Head-on Collisions Between Two Solitary Waves of general Boussinesq Model.*

In this paper, we consider the head-on collision between two solitary waves of general Boussinesq equation which contains three parameters that are related to the depth of water. We apply the perturbation method to derive an approximate solution to this equation and investigate the mechanics of the head-on collision. The impacts of the parameters on the phase shifts and the maximum run-up amplitude of two colliding waves are studied. Comparison between our results and that of the integral classical Boussinesq equation is also given. (Received September 20, 2007)