Geophysical Research Abstracts, Vol. 7, 00093, 2005
SRef-ID: 1607-7962/gra/EGU05-A-00093

Asteroid impact tsunamis

E. Pelinovsky (1) and C. Kharif (2)

(1) Institute of Applied Physics, Nizhny Novgorod, Russia (Email: pelinovsky@hydro.appl.sci-nnov.ru), (2) IRPHE, Marseille, France (Email: Christian.kharif@irphe.univ-mrs.fr)

A review of the known historic asteroid impacts generating huge tsunamis at the sea surface is provided. Different approaches from the linear theories to Navier-Stokes equations and hydrocode models are very briefly presented or referenced. The propagation and run-up stage of tsunamis is discussed and the important role of the sea bottom topography is emphasized. For comparison the modeling of the 1883 Krakatau tsunami is presented to demonstrate the global character of the tsunami propagation. Further studies focusing on propagation and run-up are suggested to extend previous works on the subject.