

Abstract Submitted
for the DFD11 Meeting of
The American Physical Society

Temporal decay of water waves over a mud layer in a small tank
YOUNES NOURI, ROBERT A. DALRYMPLE, KHATOON MELICK, Johns Hopkins University — Several field observations have recorded drastic dissipation of water waves traveling over a soft muddy bottom. However, current understanding of mechanisms of interaction of waves and mud layer is still at a preliminary level. Here, the temporal decay in amplitude of standing water waves over a layer of kaolinite mud in a small tank was examined to study role of mud layer thickness, density and rheological properties, as well as initial wave amplitude. An important parameter was found to be the history of the mud prior to the tests. The data set provides a suitable benchmark for verification of theoretical and numerical models of waves-mud interaction.

Robert Dalrymple
Johns Hopkins University

Date submitted: 05 Aug 2011

Electronic form version 1.4