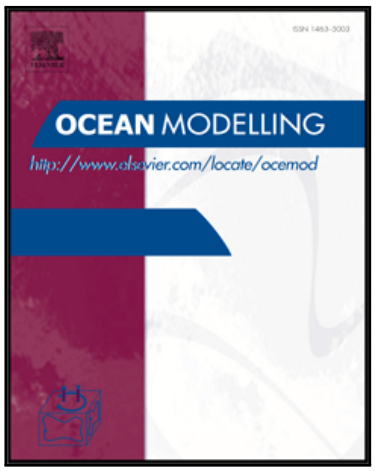
Accepted Manuscript



Bottom Boundary Layer Forced by Finite Amplitude Long and Short Surface Waves Motions

H. Elsafty, P. Lynett

PII: S1463-5003(18)30051-9
DOI: 10.1016/j.ocemod.2018.02.005
Reference: OCEMOD 1288

To appear in: *Ocean Modelling*

Received date: 26 October 2017
Revised date: 5 February 2018
Accepted date: 22 February 2018

Please cite this article as: H. Elsafty, P. Lynett, Bottom Boundary Layer Forced by Finite Amplitude Long and Short Surface Waves Motions, *Ocean Modelling* (2018), doi: 10.1016/j.ocemod.2018.02.005

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Highlights

- This work aims to incorporate bottom boundary layer effects forced by single and two wave motions.
- The fluid velocities and pressure are decomposed into two components: potential and rotational.
- A coupling term between the potential and rotational component has shown a significant improvements of the model results.
- The numerical cost for the model is an order of magnitude less compared to other models while obtaining the same results.
- The bottom shear stress under solitary wave is calculated using the rotational velocity and the sign change is captured.

ACCEPTED MANUSCRIPT

Download English Version:

https://daneshyari.com/en/article/8886520

Download Persian Version:

https://daneshyari.com/article/8886520

Daneshyari.com