Author's Accepted Manuscript

Analytical approach for sheet flow transport in purely acceleration-skewed oscillatory flow

Xin Chen, Fujun Wang, Xuelin Tang



www.elsevier.com/locate/ijsrc

 PII:
 S1001-6279(17)30359-1

 DOI:
 https://doi.org/10.1016/j.ijsrc.2018.05.001

 Reference:
 IJSRC181

To appear in: International Journal of Sediment Research

Received date: 3 November 2017 Revised date: 11 April 2018 Accepted date: 4 May 2018

Cite this article as: Xin Chen, Fujun Wang and Xuelin Tang, Analytical approach for sheet flow transport in purely acceleration-skewed oscillatory flow, *International Journal of Sediment Research*, https://doi.org/10.1016/j.ijsrc.2018.05.001

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 galley proof before it is published in its final citable 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.

Analytical approach for sheet flow transport in purely acceleration-skewed oscillatory flow

The authors

Xin Chen^{*}, Fujun Wang, Xuelin Tang

Beijing Engineering Research Center of Safety and Energy Saving Technology for Water Supply Network System, China Agricultural University, Beijing 100083, China.

^{*} Corresponding author. Email: chenx@cau.edu.cn. Mobile: +0086 138 1162 6640.

Manuscript details

There are 6888 words in the manuscript, which includes 5 key words, 2 tables, 12 figures, 32 references and an abstract of 194 words.

Statement of all funding sources

National Natural Science Foundation of China (Grant Nos. 51609244 and 51779258)

We appreciate your consideration of our manuscript, and we look forward to receiving comments from the reviewers. If you have any queries, please don't hesitate to contact me: chenx@cau.edu.cn.

Thank you and best regards.

Yours sincerely,

Xin Chen, Corresponding author

An instantaneous analytical approach is developed to predict sheet flow transport in purely acceleration-skewed oscillatory flow. The approach is derived from exponential approximations of velocity and concentration profiles above a mobile seabed, and it particularly considers factors of phase lead; phase lag (i.e. phase residual and phase shift); acceleration modification; and asymmetries in shear stress, roughness height, and boundary layer development. The approach can predict net boundary layer flow above a mobile seabed,

Download English Version:

https://daneshyari.com/en/article/8959583

Download Persian Version:

https://daneshyari.com/article/8959583

Daneshyari.com