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Nonlinear Processes in Geophysics
Discussions

Interactive comment on "Laboratory and numerical experiments on stem waves due to monochromatic waves along a vertical wall" *by* Sung Bum Yoon et al.

Anonymous Referee #2

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The authors study stem waves along a breakwater. Their motivation is stated:" Even though the existence and the properties of stem waves for sinusoidal waves are well known theoretically via numerical simulations (e.g., Yue and Mei, 1980; Yoon and Liu, 1989), they are not yet fully supported by physical experiments. Berger and Kohlhase (1976) and Mase et al. (2002) conducted hydraulic experiments to show the existence of stem waves for the cases of sinusoidal waves. Their experimental data, however, failed to produce clear stem waves, possibly due to partial reflection from the beach, diffraction from the ends of vertical wall, or insufficient space in the wave basin. Thus, there is still need to perform a precisely controlled experiment to investigate the existence and the properties of stem waves" The authors have published a similar paper

in English in 2007: 1) Lee, J & Kim, Young-Taek. (2007). Numerical Analysis of Stem Waves along a Vertical. Journal of Coastal Research, SI 50 (Proceedings of the 9th International Coastal Symposium), 1101 - 1105. Gold Coast, Australia, ISSN 0749.0208 They also published 2 papers (in Korean) in 2003 and in 2006: 2) Lee Jong-In, Kim Young-Teak, Cho Yong-Sik 2003, 2003.10, 4939-4943 (5 pages) Hydraulic Model Test for Stem Waves along Vertical Wall under Regular Wave Actions 3) Lee, Jong-In, and Sung-Bum Yoon. "Hydraulic and numerical experiments of stem waves along a vertical wall" Journal of The Korean Society of Civil Engineers 26.4B (2006): 405-412. the figures and the content of this paper seem to match very well the content of the current manuscript. They do not mention any of these 3 papers in the present manuscript. It seems that the current manuscript is lacking a proper discussion of previously published work, in English and in Korean, in particular by the authors themselves (from more than a decade ago). Such discussion is a prerequisite to evaluate the originality and merit of the present manuscript.

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