

SWASH ZONE MEASUREMENTS IN A WAVE FLUME

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Wave set-up has been measured on impermeable fixed plane beaches by a number of researchers, from Bowen et al (1968) to Stive (1985). All the results refer to beach slopes ranging between 0.022 and 0.1. Starting from the outcomes resulting from research up to now, we have carried out new experiments on a impermeable beach with constant slope and with different values of the surf similarity parameter. The main aim of these experiments is to take detailed measurements in the swash zone, where strongly non-linear processes occur, and to compare the results with some existing models. The experiments took place in the wave tank (0.8 m x 0.8 m x 50 m) of Florence Department, equipped with second order generation. The measurements refer to free surface profiles, to run-up and run-down limits and to fluid velocities. The specific equipment used were twin wire water level meters, pressure transducers, image analysis, LDA and micro propeller. All the tested waves are monochromatic, with possible future extension to irregular waves.