

## Description of University of Michigan Wind Flume Experiments raw data files

A more detailed description of the raw data can be obtained from the technical report Laboratory Study of Wind Effect on Runup over Fringing Reefs, Report 1 (Demirbilek et al. 2007). Each test has its own file containing data from 11 probes (wave Gauges 1 to 9, runup gauge, and hot-film anemometer). Each data file has a header section, which is followed by a data section.

A sample data file is shown as follows:

Channels 11

Samples 18000

Frequency 20

Gains

0.252 0.309 0.266 0.375 0.327 0.239 0.1265 0.1299 0.117 0.9386 1

Offsets

-0.191051 3.517864 5.331282 4.992504 -6.59183 -5.723676 -1.871649 -1.189118 -1.099374 1.681036 0.015758

Wave1; Wave2; Wave3; Wave4; Wave5; Wave6; Wave7; Wave8; Wave9; Runup; Wind1;  
0.113878 0.08559 -0.16698 0.063019 -0.005499 -0.004673 -4.011867 0.010578 0.006332 -0.00989 -0.000499  
0.129621 0.10238 0.095746 0.036977 0.102759 0.019587 -10.95492 -0.034059 0.155007 -0.003062 0.000111

The header section in each data file contains information about the number of data acquisition channels (11), number of data points in each record (18,000), sampling frequency (20 Hz) and the values of the calibration gains (cm/volt) and offsets (volts). The data section contains 11 columns of data. Columns 1–9 represent the measured water-surface elevation at Gauges 1–9 respectively in centimeters, column 10 represents the runup elevation time-history in centimeters, and column 11 represents the direct anemometer output in volts. The wind speed conversion factor for the anemometer output is 1.25 m/sec per volt.