

## SMS-303: Integrative marine sciences III.

### Lab 2, Waves.

Purpose of the lab: familiarize the students with waves. Students generate seich, measure three dimensional velocities associated with waves, observe particles in waves and generate internal waves. The students observe the development of mean circulation by periodic forcing. Concepts such as wavelength, frequency, period, amplitude, resonance are all emphasized.

#### Stations:

##### III.

Large tank with paddle + current meter (ADV) attached to a computer.

A power supply is attached to the paddle allowing us to change the frequency of the forcing.



Manipulating the forcing Sarah, Dominique, Jen, Phillip and Michelle observe the effect on wave propagating in a tank. A current meter provides velocity at three directions.



Greta, Zahira, Shelly and Chris observe how the wave change as a beach is inserted to the end of the tank.

## VII.

Wave applets (four computers each with a different applet).



Kyle and Morgan explore different applets. Applets are great tools to explore physical concepts. They allow one to vary conditions and observe how they change the physical phenomena such as waves.

