# Lab experiment template

This is a short summary of the experiment. Describe in plain words what is the goal of the experiment, why you’re doing it, and how. This paragraph should include information such as which tank you’ll use, what instruments, and when. Following this template for planning your experiment will help you stay organized, on schedule, and minimize mistakes.

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## Goals

The objectives for this experiment are:

1. …
2. …
3. …

## Experiment parameters

List all components to the experiment in this section, and include any relevant parameters such as:

* Fresh or salt water
* Wave paddle settings
* Fan settings
* Inlet flap and beach configuration
* Water pump / mean current setting
* Mean water depth
* Any water or air seeding, such as oil, plastic, etc.?
* Lights on or off?

## Instruments

### Inventory

This table summarizes the instruments that we’ll use and the measured and derived quantities that we’ll record, for example:

|  |  |  |  |
| --- | --- | --- | --- |
| Instrument | Sampling frequency [Hz] | Measured quantity | Derived quantity |
| Pitot tube | 10 | Pressure difference [] | Wind speed [] |
| Wave staffs | 100 | Water elevation [m] | Omnidirectional elevation spectrum F(f) () |
| … |  |  |  |

### Position and configuration

This section describes the positioning of each instrument in the tank and the technical configuration.

In the table below, list the fetch (distance from inlet), height (distance from mean water level if in air), and depth (distance from the bottom if in water), for each of the instruments used.

|  |  |  |  |
| --- | --- | --- | --- |
| Instrument | Fetch [m] | Height [m] | Depth [m] |
| Pitot tube | 4.64 | 0.29 |
| … |  |  |

### Limitations

List any known limitations or issues regarding the instrument setup, such as:

* Is any instrument obstructing the flow to any other instrument?
* Is any instrument mounted too to the inlet or the beach?
* Are any experiment conditions potentially damaging for any of the instruments, e.g. salt water and high wind for hot film probes.

## Data strategy

Describe the data collection and archive strategy here.

The expected data volume is summarized in the following table:

|  |  |
| --- | --- |
| Instrument | Data size per hour (GB) |
|  |

## Personnel

List personnel that will contribute to the experiment and respnsibilities for each person. Example:

* Milan Curcic (MC) – Experiment design and lead;
* Andrew Smith (AS) – Pressure sensors and assist Milan with experiment management;
* Sanchit Mehta (SM) – Slope and elevation gauges, DPIV;
* …

## Schedule

Specify dates and times when you will conduct:

* **Installation**: Mounting the hardware, wiring, data acquisition software;
* **Testing**: Making sure each instrument does what you want it to do;
* **Experiment**: Actual data collection.

## Checklist

List all components used for the experiment in the table below

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | Person in charge | Installed | Tested | Comments |
| Pitot | MC | Yes |  |  |
| Pressure sensors | AS | Yes | Yes |  |
| … |  |  |  |

## Miscellaneous

Write any miscellaneous notes about the experiment here if they don’t fit anywhere else.

## References

* Reference 1
* Reference 2
* …