Dynamic Air-Sea Interactions

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Part 1 – Exploration

Navigate to the [OOI Dynamic Air-Sea Interactions page](https://datalab.marine.rutgers.edu/explorations/2019/airsea.php) and select the Exploration option. Spend a few minutes orientating yourself with the graphs.

1. What two variables are shown on the y-axis?
2. What variable does the blue line represent? What variable does the yellow line represent?
3. What timespan does this data cover?
4. Where was this data collected? Hint: Scroll to the Background Information section at the bottom of the page.
5. Describe the relationship between wave height and wave period shown on the graph.
6. Draw a picture of a wave and label wave height and wave period.

# Part 2 – Concept Invitation

Navigate to the [OOI Dynamic Air-Sea Interactions page](https://datalab.marine.rutgers.edu/explorations/2019/airsea.php) and select the Concept Invitation option. Spend a few minutes orientating yourself with the graphs.

1. Click the Next button to display a graph of wind speed. Describe how wind speed is related to wave height and wave period.
2. Click the Next button to display current. Describe how current is related to wind speed, wave height, and wave period.
3. What do you think happened on Jan. 4? What other oceanographic data would you need to confirm this?

# Part 3 – Application

Navigate to the [OOI Dynamic Air-Sea Interactions page](https://datalab.marine.rutgers.edu/explorations/2019/airsea.php) and select the Application option. Spend a few minutes orientating yourself with the graphs.

1. Describe the relationship between barometric pressure and wave height, wave period, wind speed, and current.
2. What is barometric pressure? Research online if you’re unsure.
3. Draw your prediction of rainfall on the rain graph, then click the Check Prediction box. Did your prediction match up with the recorded rainfall?
4. What do you think happened on Jan. 4? Revise your answer to Question 9 here if needed.