

Name _____

Putting Hurricanes on the Map

Key for interpreting daily storm data:

Reading Daily Data in HURDAT2 Reports

number of data rows for storm

AL031999		BRET		26
19990818, 1800	, TD	19.5N, 94.4W	30	1010
19990819, 0000	, TD	19.5N, 94.5W	30	1008
19990819, 0600	, TD	19.6N, 94.6W	30	1008
19990819, 1200	, TD	19.7N, 94.6W	30	1008
19990819, 1800	, TS	19.8N, 94.7W	35	1005
19990820, 0000	, TS	19.8N, 94.7W	40	1000
19990820, 0600	, TS	20.0N, 94.6W	45	998
19990820, 1200	, TS	20.4N, 94.5W	50	993
19990820, 1800	, TS	21.2N, 94.4W	55	991
19990821, 0000	, HU	21.9N, 94.5W	65	983
19990821, 0600	, HU	22.5N, 94.7W	75	980
19990821, 1200	, HU	23.1N, 94.9W	80	979
19990821, 1800	, HU	23.8N, 95.0W	90	975
19990822, 0000	, HU	24.7N, 95.1W	120	954
19990822, 0600	, HU	25.5N, 95.5W	125	950
19990822, 1200	, HU	26.2N, 96.1W	125	944
19990822, 1800	, HU	26.6N, 96.8W	120	946
19990823, 0000	L, HU	26.9N, 97.4W	100	951
19990823, 0600	, HU	27.0N, 97.9W	80	963
19990823, 1200	, TS	27.3N, 98.3W	60	980
19990823, 1800	, TS	27.6N, 98.8W	35	993
19990824, 0000	, TD	28.0N, 99.5W	30	1000
19990824, 0600	, TD	28.0N, 100.4W	30	1003
19990824, 1200	, TD	27.8N, 101.3W	25	1006
19990824, 1800	, TD	27.7N, 102.1W	25	1007
19990825, 0000	, TD	27.6N, 103.0W	20	1008

Date and time
 Location, storm intensity, wind speed, and air pressure are reported 4 times a day, at 0Z, 6Z, 12Z, and 18Z.
 Note: Sometimes a different time is reported for landfall rows.

landfall data row

storm intensity

Example for 08/22 at 0Z:
 24.7N, 95.1W, 120, 954,
 latitude longitude wind speed air pressure
 (knots) (mm Hg)

Part A: Create a Storm Track

1: How would your line look if you plotted the locations for all 4 reports per day? Describe why you might want to plot the location more often than once per day.

Earthlabs: Investigating Hurricanes – Lab 4
<https://serc.carleton.edu/eslabs/hurricanes/4.html>

2: Use the Ruler tool to estimate the total length of your storm track. Use that value to estimate the average speed of the storm per day. Show all your work.

3: Scroll to the bottom of the report to compare the graphs that show the storm's wind speed and air pressure. What do you notice about the two graphs? What does this indicate about the two parameters?

Part B: Exploring Storm Tracks

4: Describe your interpretation of the overall pattern of colors formed by storm tracks in the Atlantic Ocean.

5: West of the prime meridian along 35°N latitude, look for the generally green area that is west of the generally red and yellow area. What evidence could explain why the storms to the west are less intense than the other storms?

6: Compare and contrast the storm tracks in the Atlantic with those of the Pacific. Describe what you think might be responsible for the differences in storms between the two oceans.