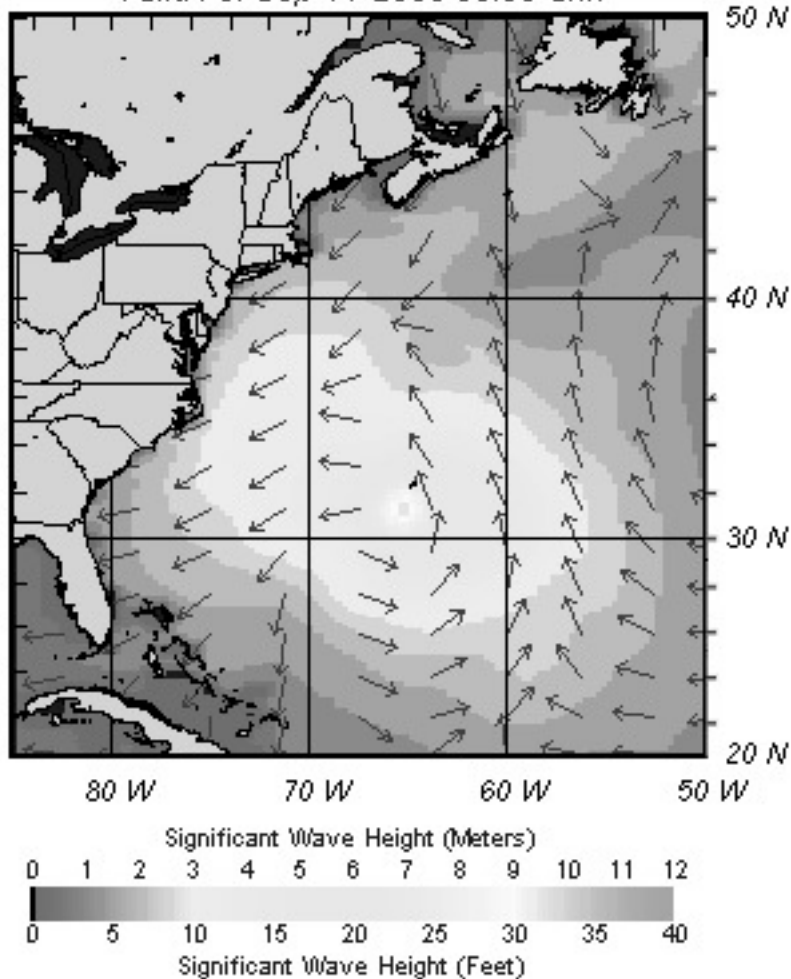


Hurricane Florence takes a turn to the east

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ADV	LAT	LONG	TIME	WIND	PR	STAT
27A	28	-65.9	09/10/12Z	80	976	HURRICANE-1
28	28.7	-65.9	09/10/15Z	70	976	HURRICANE-1
28A	29.2	-66.1	09/10/18Z	80	976	HURRICANE-1
29	29.9	-66.2	09/10/21Z	80	975	HURRICANE-1
29A	30.5	-66.2	09/11/00Z	80	975	HURRICANE-1
30	31	-66.1	09/11/03Z	55	975	TROPICAL STORM
30A	31.2	-66.1	09/11/06Z	80	975	HURRICANE-1
31	31.8	-66	09/11/09Z	70	976	HURRICANE-1

Significant Wave Height with Wave Direction
Valid For Sep-11-2006 06:00 GMT



Use the Hurricane Florence (2006) advisory data above to answer/do the following:

- In what general direction was Florence moving during the 10th and 11th?

- At approximately what latitude did Florence reach the farthest point west in her travels?

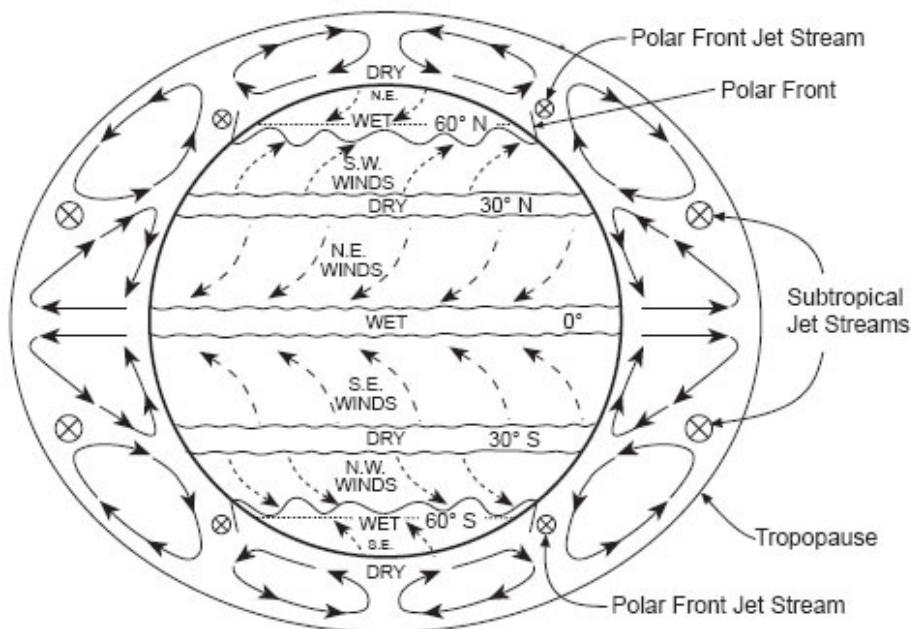
- Plot (and label) the position of Florence at advisory #'s 27A, 29, and 31
- Recalling observations you've made of other storm tracks, use a dotted line to indicate the path Florence probably followed in the days before 9/10, and where you think she might have gone after 9/11. If you're not sure, you can view Florence's entire track here:
<http://www.hpc.ncep.noaa.gov/tropical/rain/florence2006trk.gif>
- The arrows on the map indicate the direction the sea waves are moving. What evidence can you cite that suggests that the waves around

the storm are driven by the hurricane winds?

5a. What direction are the waves that are hitting the east coast of the US coming from? _____

5b. Why do you suppose residents of the northeastern coast of the US refer to storms that move north along the coast "Nor'easters"?

5c. Notice that the waves cycle counterclockwise around the storm (like the winds that are driving them), but that they are not moving into the center of the storm (like the winds around the storm do). Why do you think the waves are not cycling into the storm? (Think about where the air pulled into the center of a hurricane goes, and try to imagine what would happen if the sea waves moved into the center of the storm!)



Planetary Wind and Moisture Belts in the Troposphere

The drawing to the left shows the locations of the belts near the time of an equinox. The locations shift somewhat with the changing latitude of the Sun's vertical ray. In the Northern Hemisphere, the belts shift northward in summer and southward in winter.

6. Draw Hurricane Florence's 9/10 - 9/11 position on the chart above with an arrow indicating where she's headed.

6a. What planetary winds drove Hurricane Florence before September 10? _____

6b. What planetary winds will drive Florence from September 11 on? _____

7. Explain WHY so many Atlantic hurricanes veer off to the east if they get as far north as 30° N latitude.
