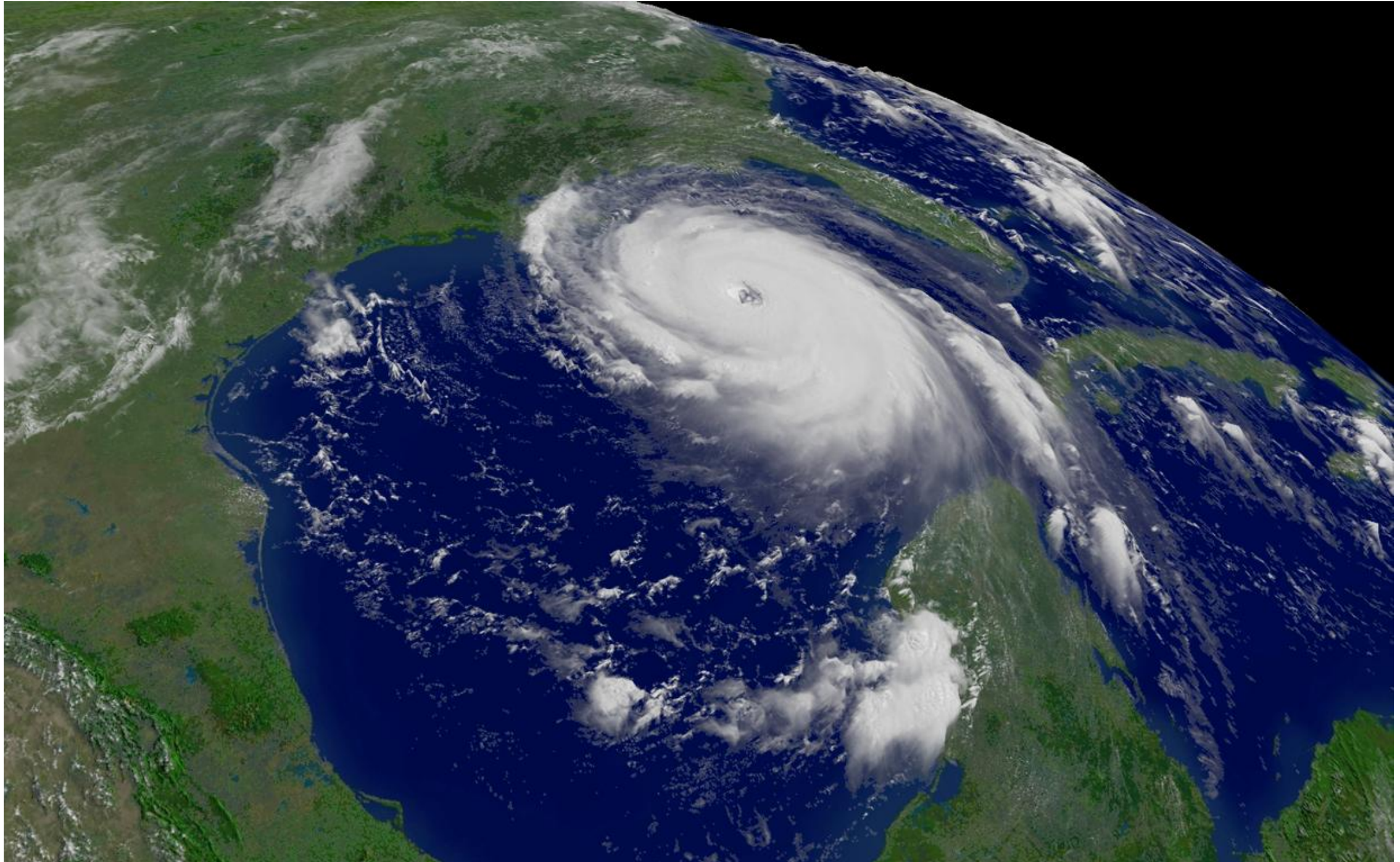


Hurricanes



Hurricanes

- Whirling tropical cyclones that produce sustained winds of at least 74 mph or 119 kph.
- Hurricanes go by different names in other parts of the world, these severe tropical storms can be called:
 - **In the Pacific they are called typhoons**
 - In the Indian Ocean they are called cyclones

INSIDE

Eye wall

Composed of dense clouds that contain the strongest winds in the storm

Eye

Relatively calm, clear area approximately 20-40 miles across

Dense cloud shield

Outflow

Cool air

Rising warm air

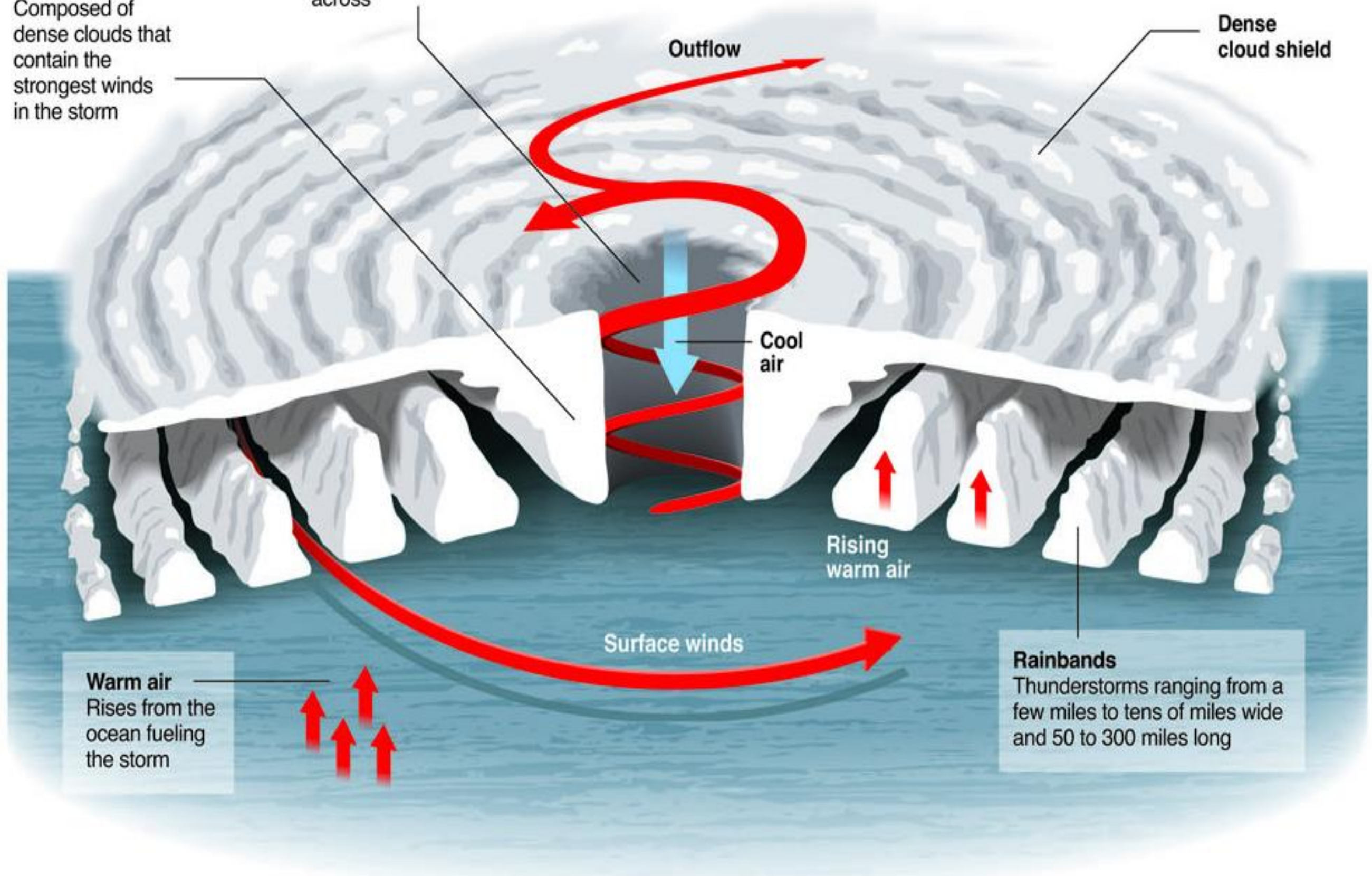
Surface winds

Warm air

Rises from the ocean fueling the storm

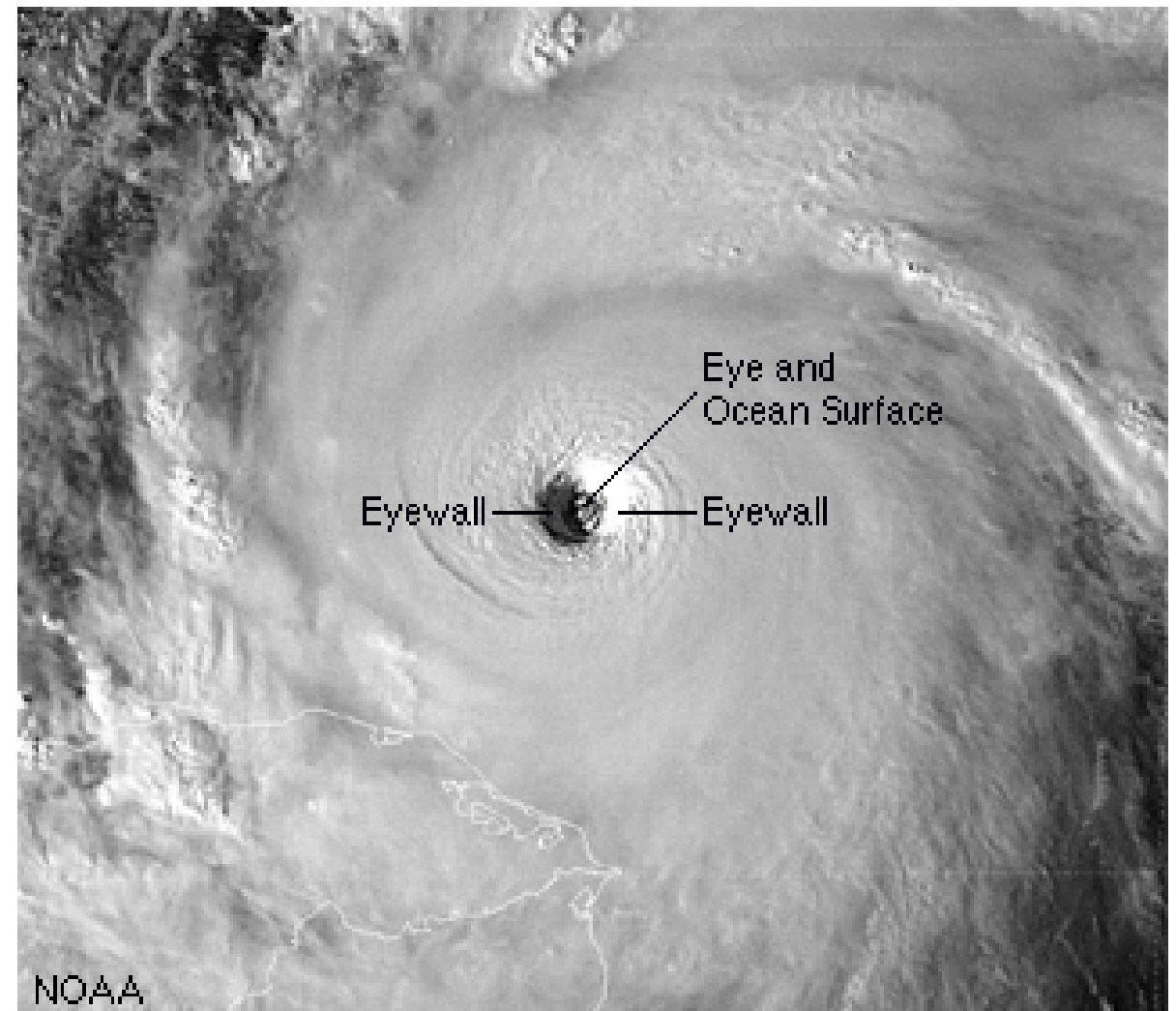
Rainbands

Thunderstorms ranging from a few miles to tens of miles wide and 50 to 300 miles long



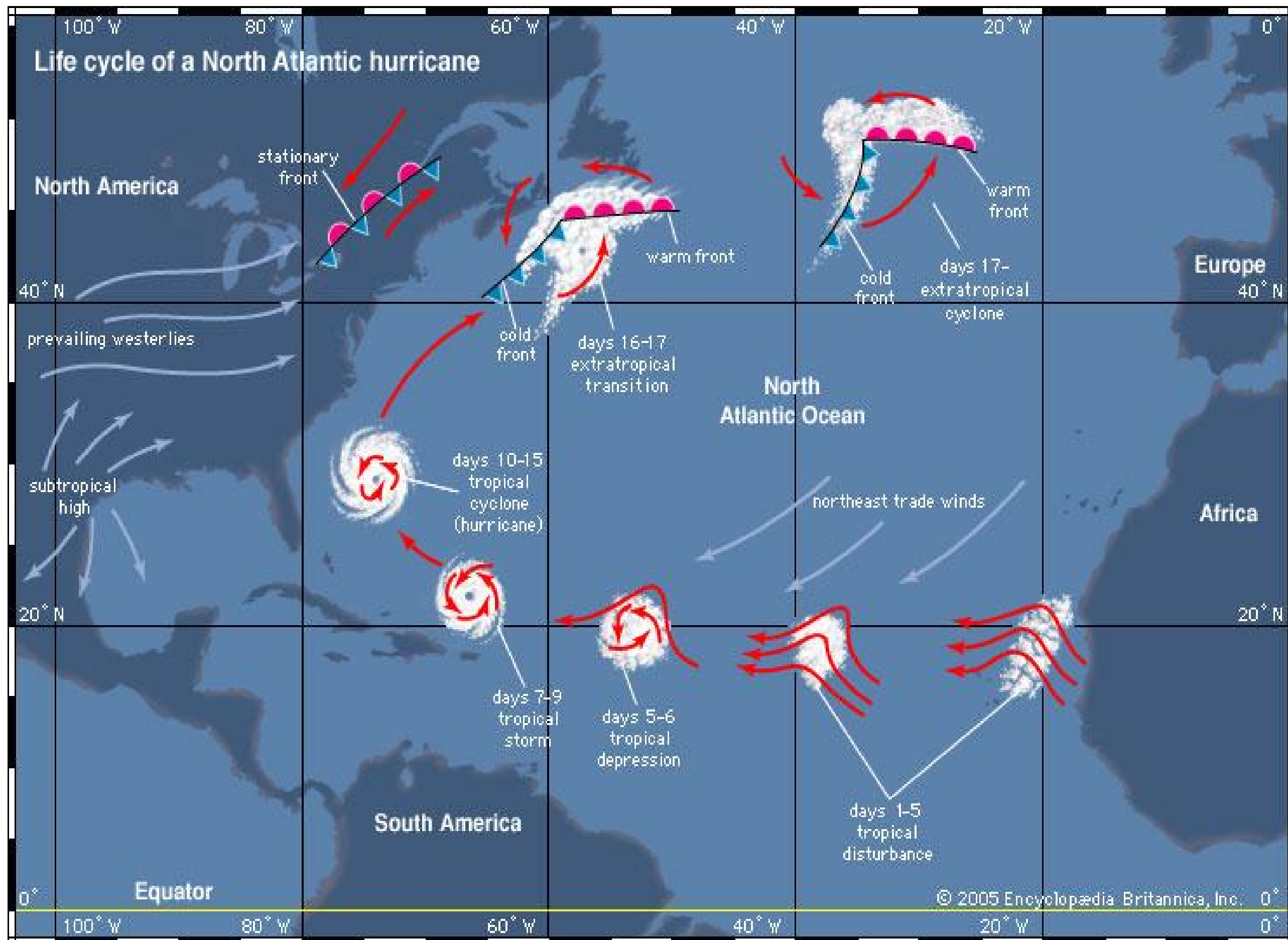
Parts of a Hurricane

- Eye – center of the hurricane
 - Calmest and warmest part of the storm.
- Eyewall – Thick clouds surrounding the eye with the most intense winds of the hurricane



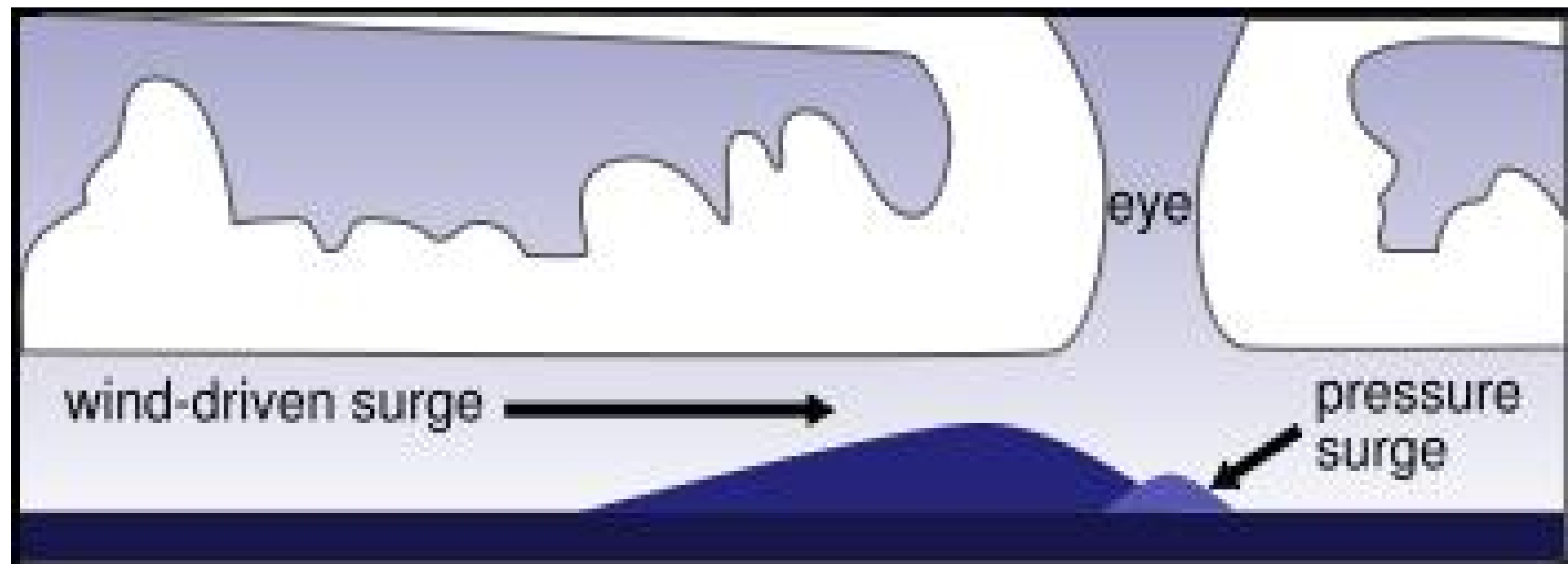
Stages of a Hurricane

- Tropical Disturbance - is the first stage of consisting of a mass of thunderstorms that have only a slight wind circulation.
- Tropical Depression- whirling area of low pressure and storm activity with sustained winds up to 38 mph.
- Tropical Storm- sustained winds over 39 mph. This is the stage when the storm is given a name.
- Hurricane – winds over 74 mph



Storm Surge

- Greatest damage from hurricanes comes from the storm surge.
- Storm Surge - a combination of high tide and water that is pushed onshore by the strong winds of a hurricane; can produce surges 1-5.4+ meters.
- Most deaths from hurricanes are by drowning due to the storm surge.





<http://video.nationalgeographic.com/video/environment/environment-natural-disasters/hurricanes/katrina-formation/>

Hurricanes are classified according to intensity using the Saffir-Simpson scale

Category	Sustained Winds (mph)	Surge (ft)	Damage
1	74-95	4-5	Minimal
2	96-110	6-8	Moderate
3	111-130	9-12	Extensive
4	131-155	13-18	Extreme
5	156+	19+	Catastrophic

Hurricane Watch: issued several days before landfall

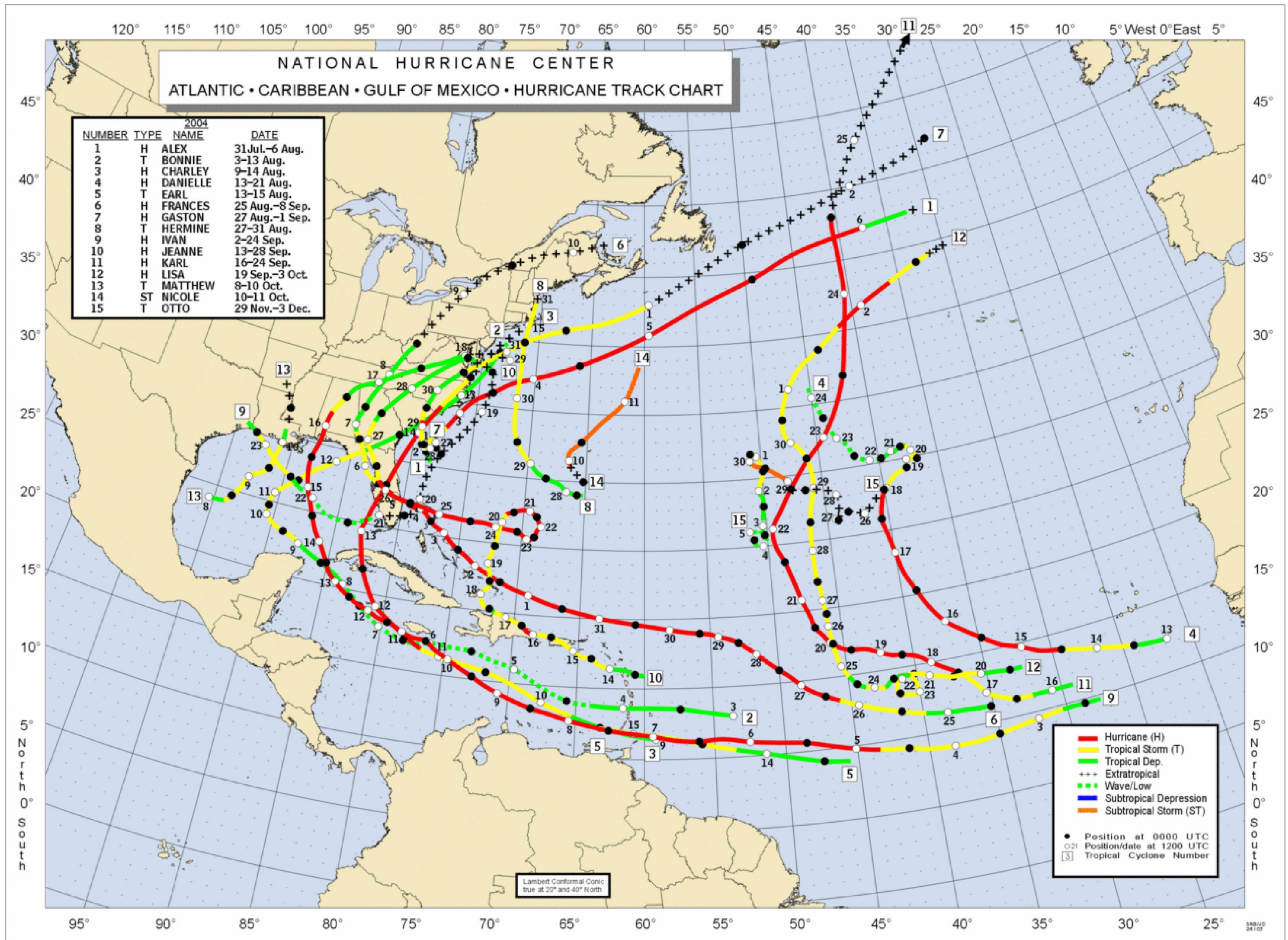
Hurricane Warning: issued 24 hours before landfall

Naming and Forecasting hurricanes:

- 1953: names were female and in ABC order
- 1979: began alternating male and female names
- The list of names was created by the World Meteorological Society and names are recycled every 6 years
- EXCEPTION: If a hurricane was particularly destructive or noteworthy, the name will be retired and replaced on the list with another name beginning with the same letter

Hurricane season in the South East US is June - November

- **The interaction between ocean water temperatures and warm air masses contributes to the formation of hurricanes during the late summer**



<http://www.nhc.noaa.gov/aboutnames.shtml>

North Atlantic Basin

Number of Tropical Storms and Hurricanes

1950-2011

