

# Location and Frequency of Hurricanes

## Tracks and Intensity of All Tropical Storms

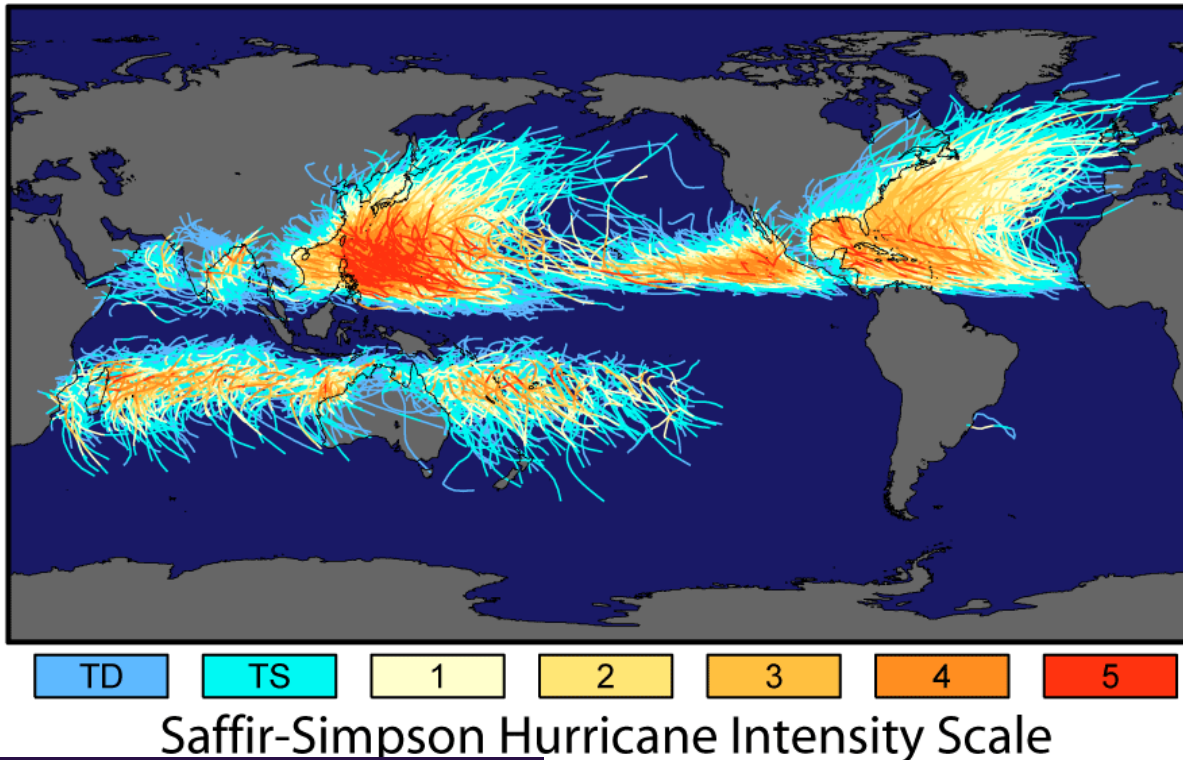


Image: NASA's Earth Observatory

hurricanes do not  
cross equator  
(Coriolis Effect)

- strongest hurricanes in W. Pacific
- no hurricanes in S. Atlantic  
(1 exception: hurricane Catarina, Mar 2004)
- no hurricanes in S.E. Pacific

winds unfavorable

strong cold currents

# Where do Hurricanes Occur? Naming

## Tracks and Intensity of All Tropical Storms

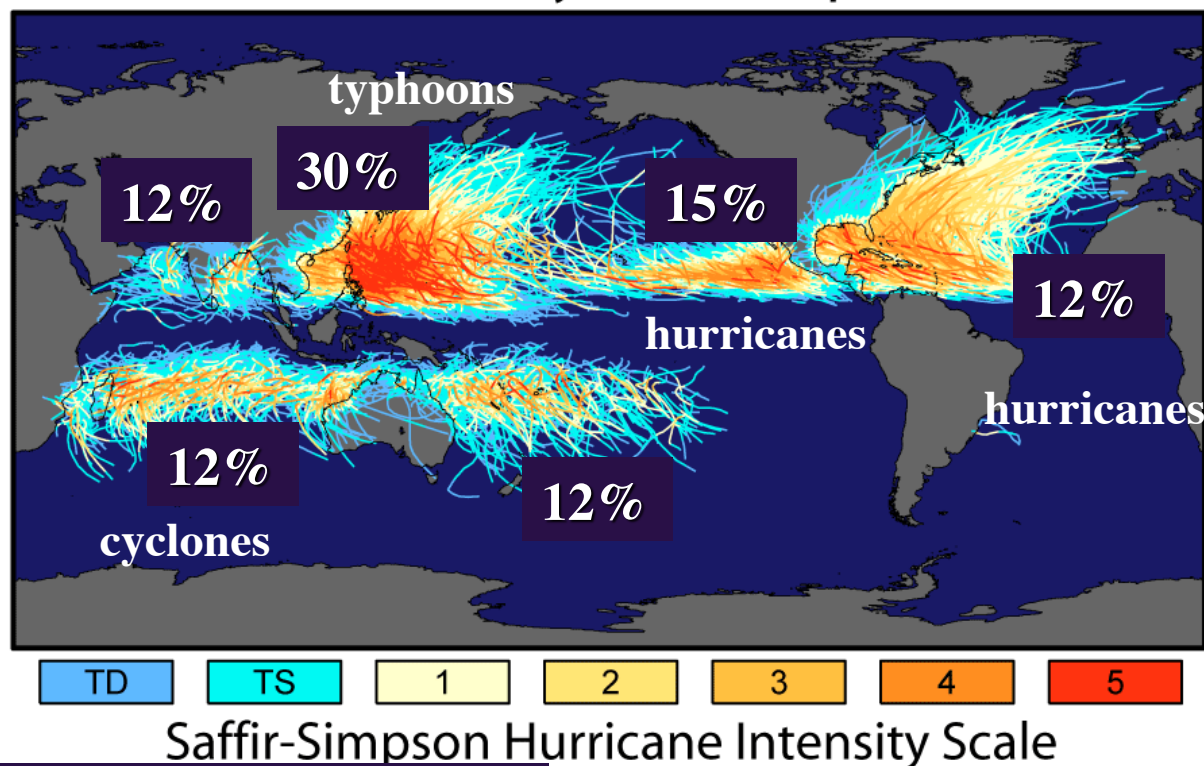


Image: NASA's Earth Observatory

- most hurricanes in W. Pacific (typhoons)
- more hurricanes in E. Pacific than in Atlantic
- Indian Ocean: cyclones

# Where do Hurricanes Occur? Naming

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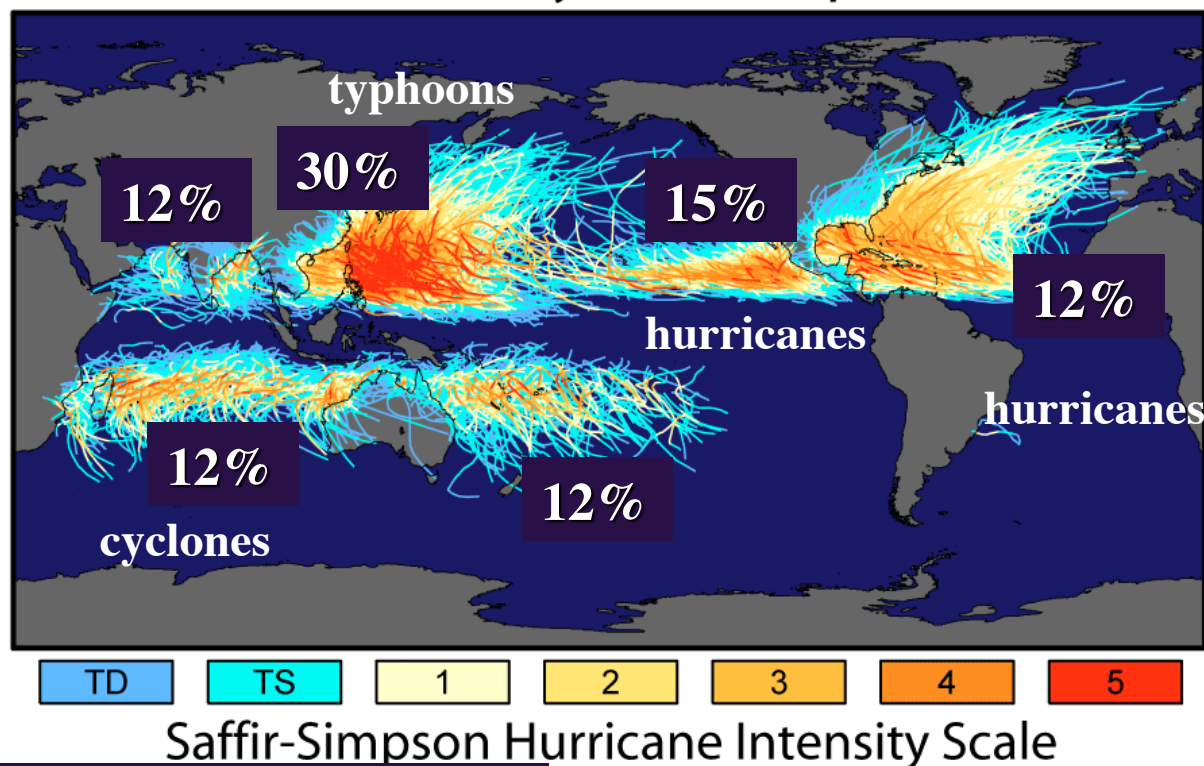


Image: NASA's Earth Observatory

Hurricane **winds**:  
N hemisphere: ccw  
S hemisphere: cw

Hurricane **paths**:  
N hemisphere: cw  
S hemisphere: ccw

# Paths of Atlantic Hurricanes

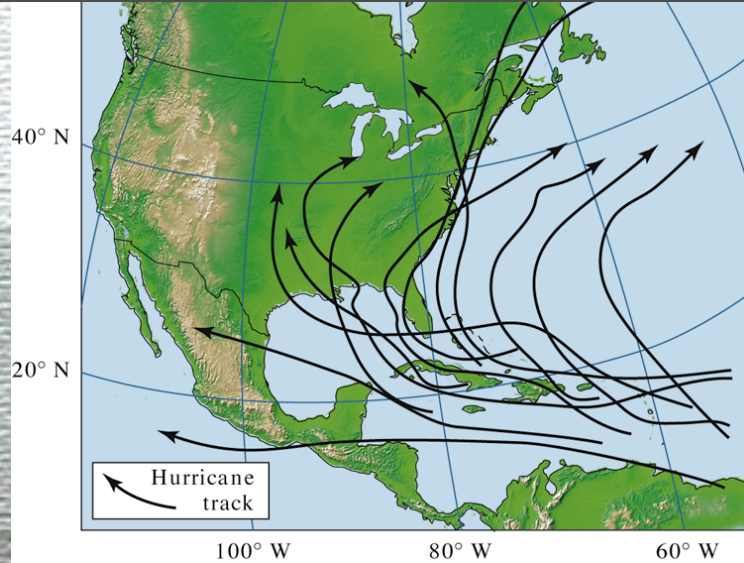
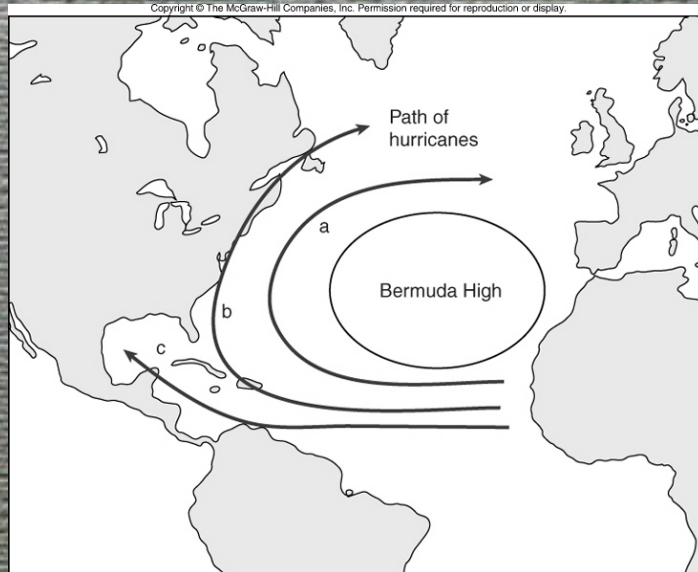


Image: Marshak "Earth, Portrait of a Planet"



S Image: Abbott "Natural Disasters"

## Caribbean/G.o.M. type

- L forms in Caribbean when ITCZ shifts northward
- fed by warm local waters

## Cape Verde type

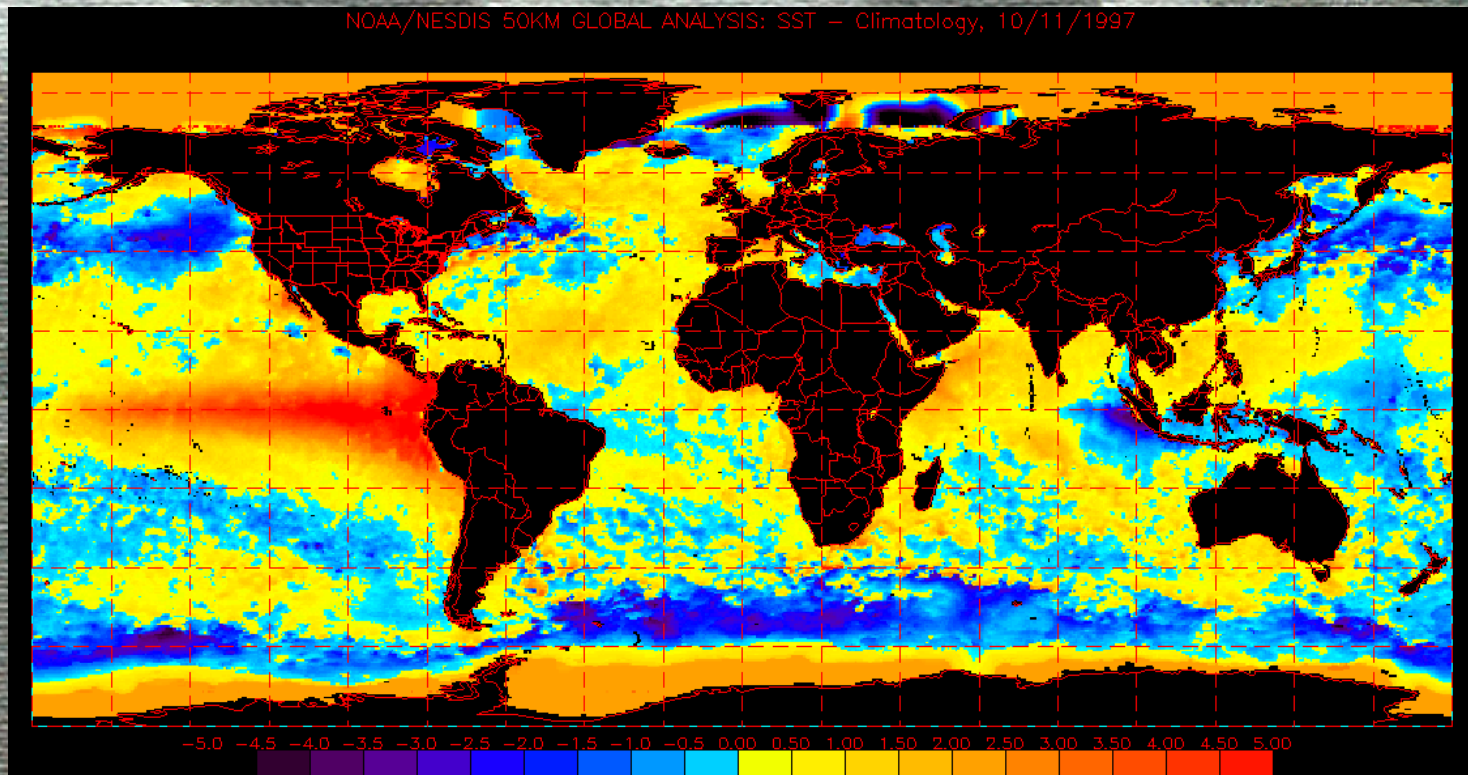
- L forms in Sahel
- fed by waters off Cape Verde
- tropical storm stage
- fed while crossing Atlantic

## Bermuda H controls path

- weak north -> open Atlantic
- strong north -> East coast
- south -> Gulf o. M.

# El Niño and SST anomaly

sea surface temperature  
anomaly (SST)

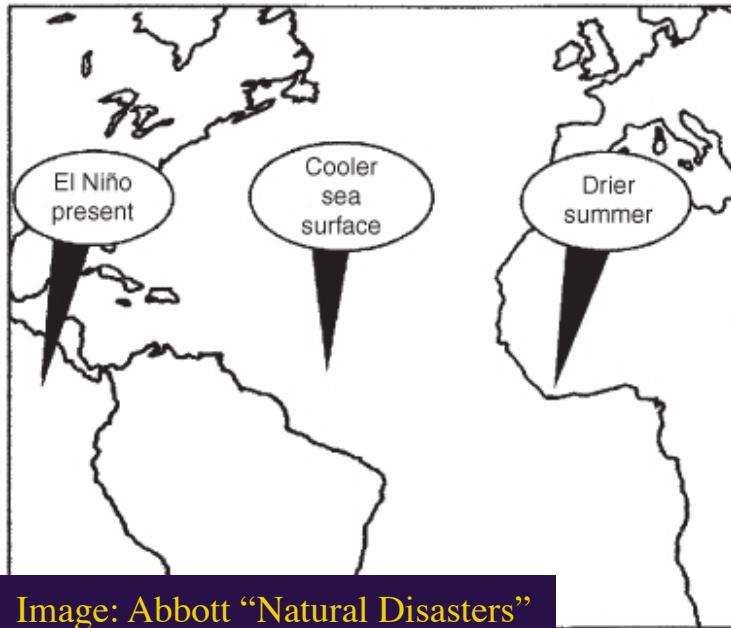


# El Niño and Atlantic/Pacific Hurricanes

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## Hurricanes are

### Fewer when



### Frequent when

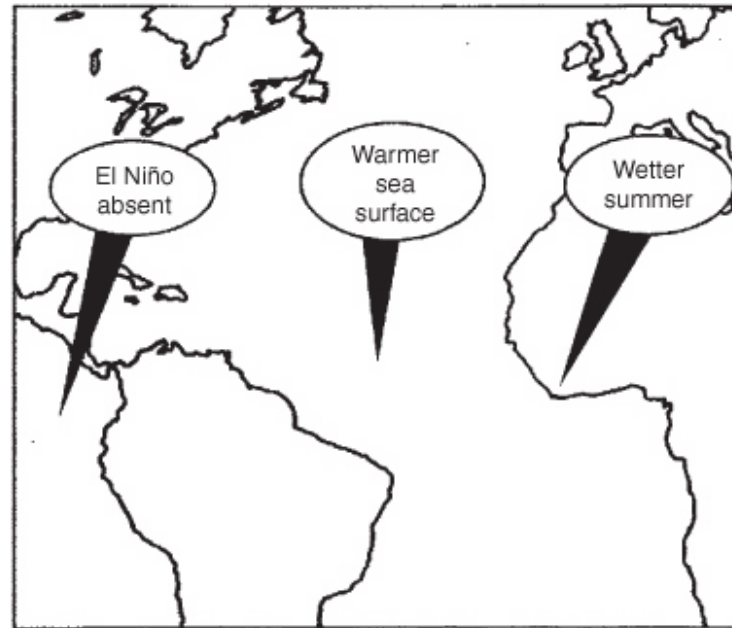


Image: Abbott "Natural Disasters"

-1997 **El Nino**  
cooler trop. Atl.  
dry summers in West Africa  
-less Atl. hurricanes  
-more E Pac hurricanes

-1998 **La Nina**  
warmer trop. Atl.  
wet summers in West Africa  
-more Atl. hurricanes  
-less E Pac. hurricanes