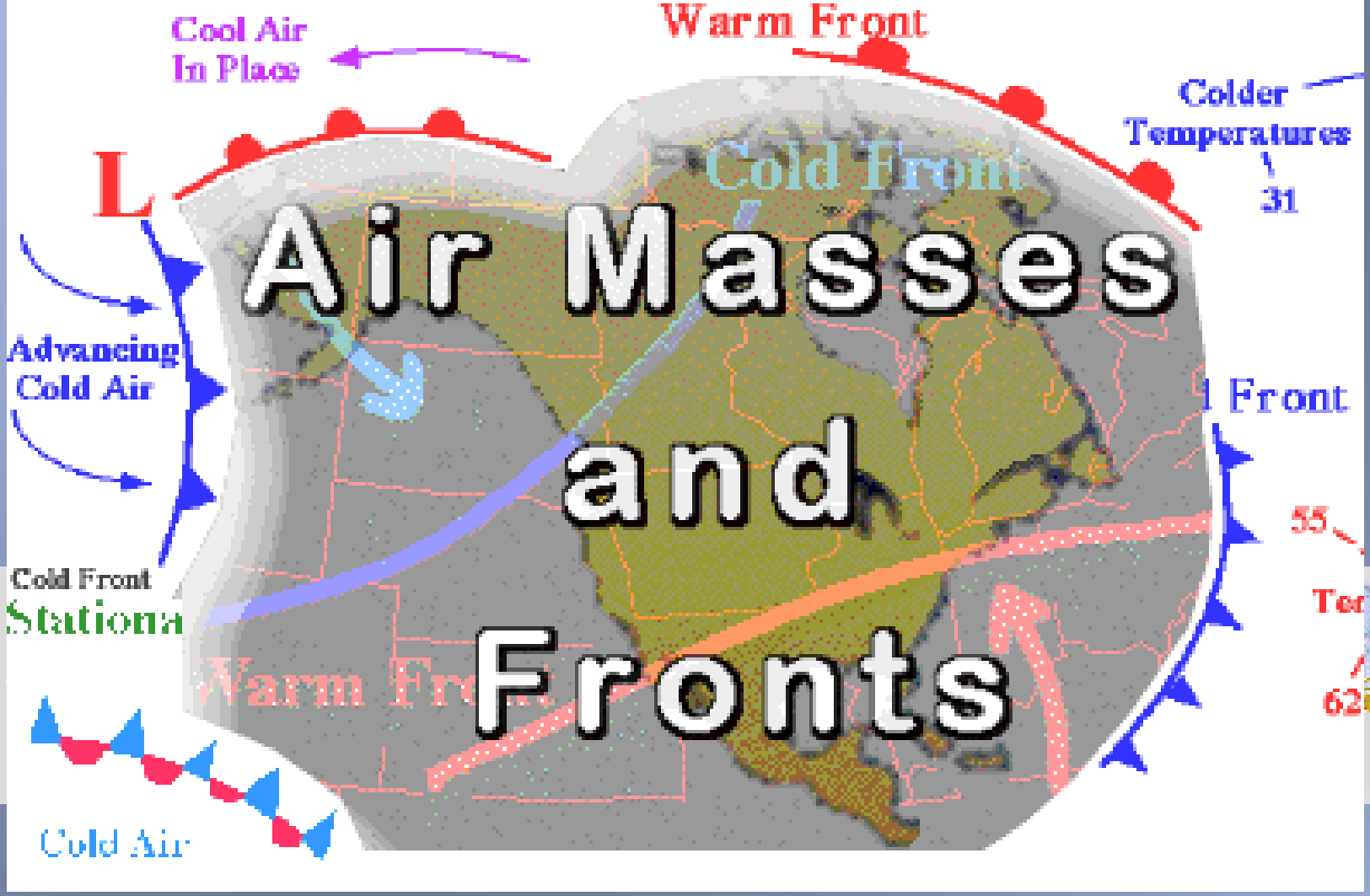
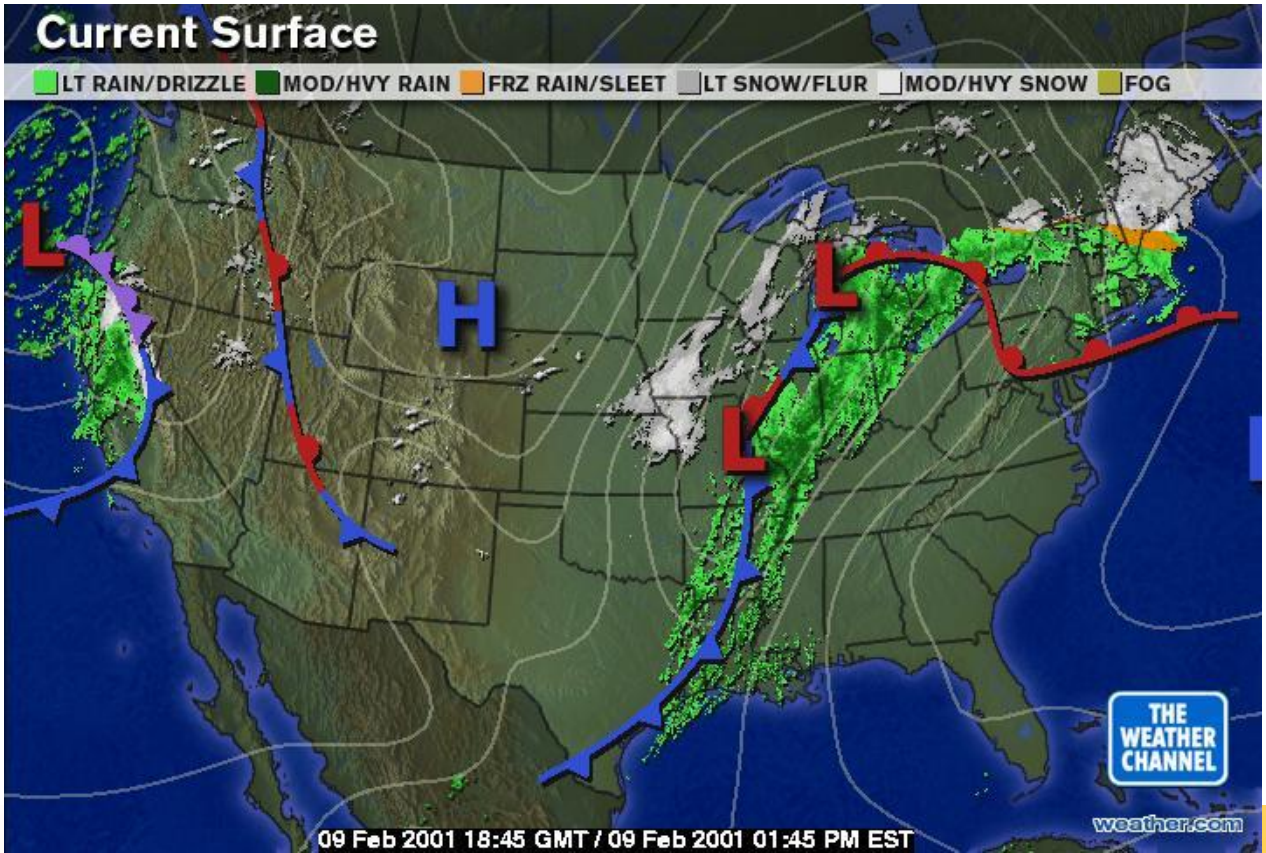


Ch 20.2

- I can identify 4 different fronts
- I can define what a front is.

20.2 Formation of Fronts

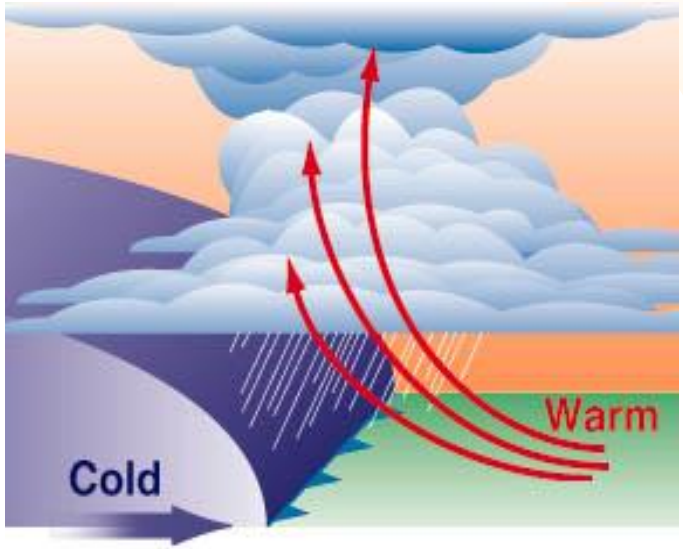
- When two air masses meet, they form a **front**, which is a boundary that separates two air masses.

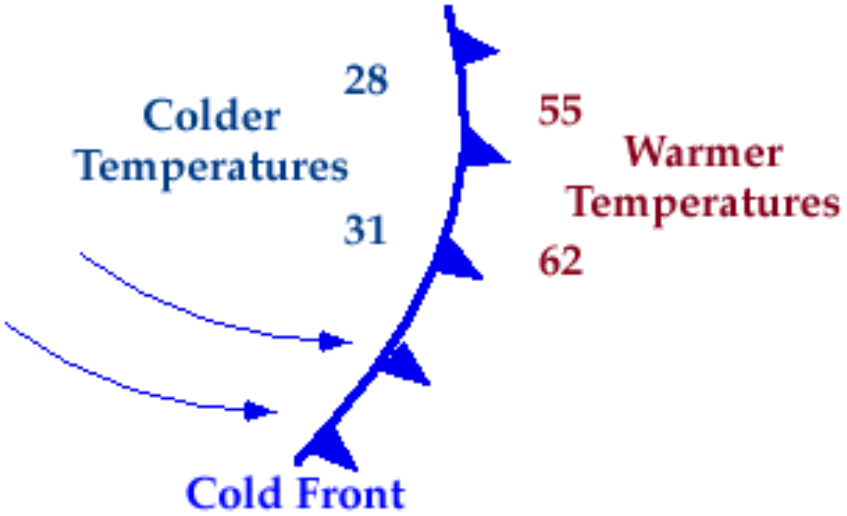


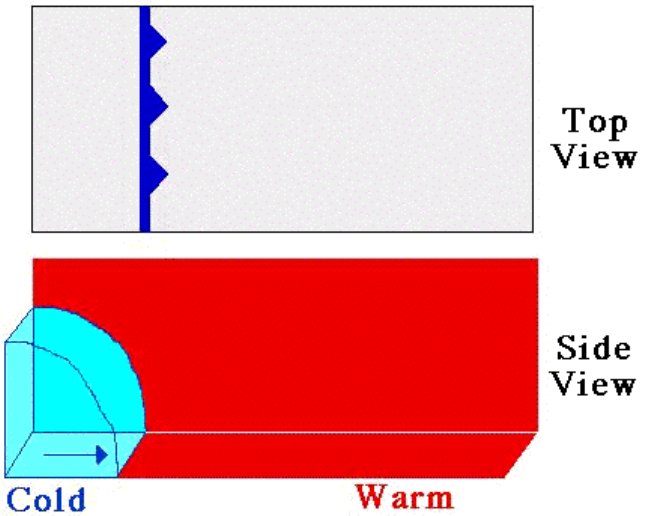
20.2 Types of Fronts

Cold Fronts

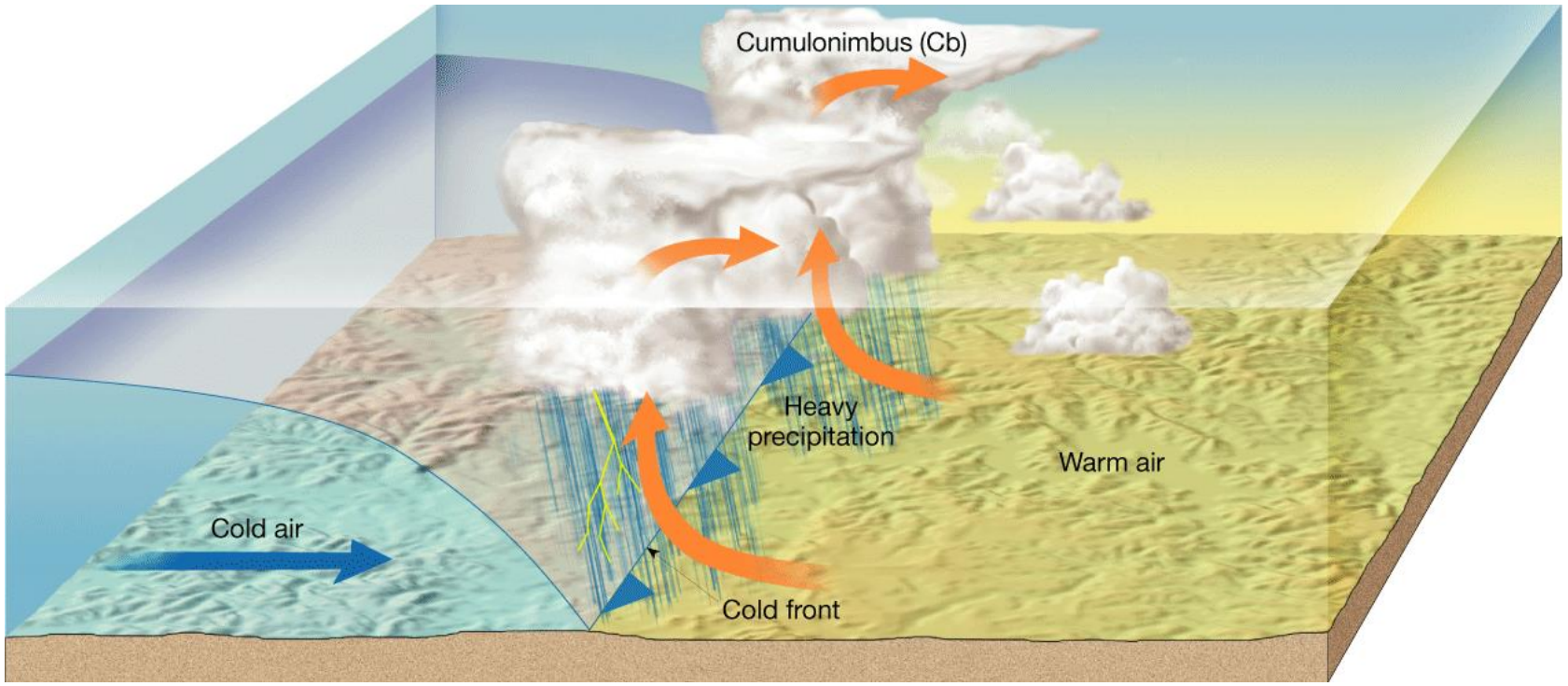
- A cold front forms when cold air overtakes warmer air.
- Warm air is forced sharply upward
- Thunderstorms typically form along this front.







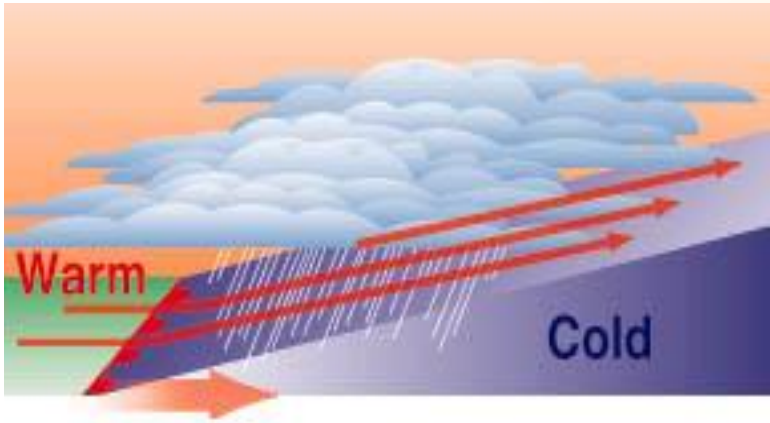
Formation of a Cold Front

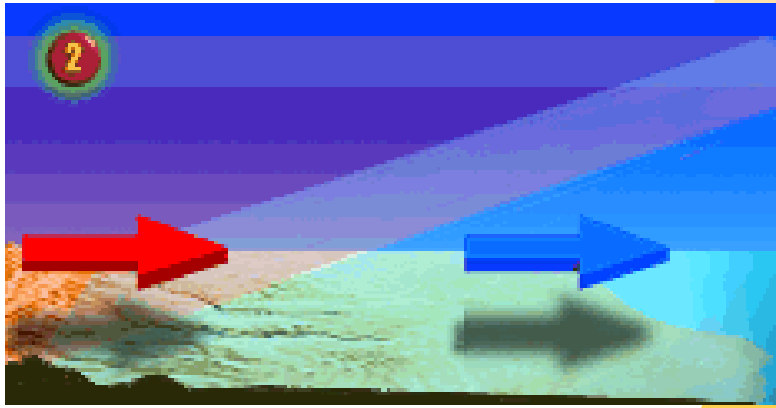


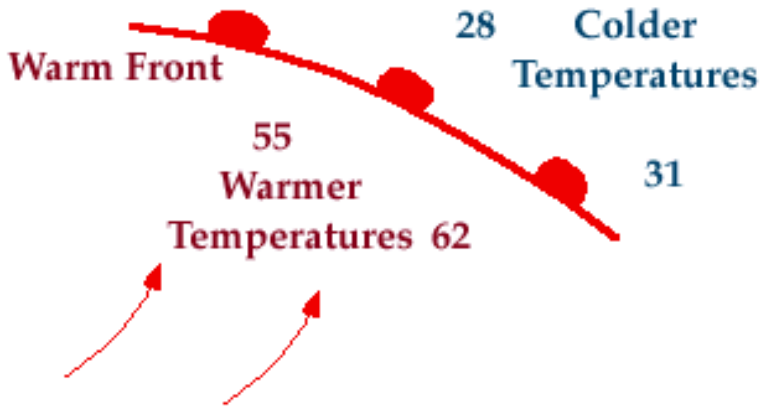
20.2 Types of Fronts

Warm Fronts

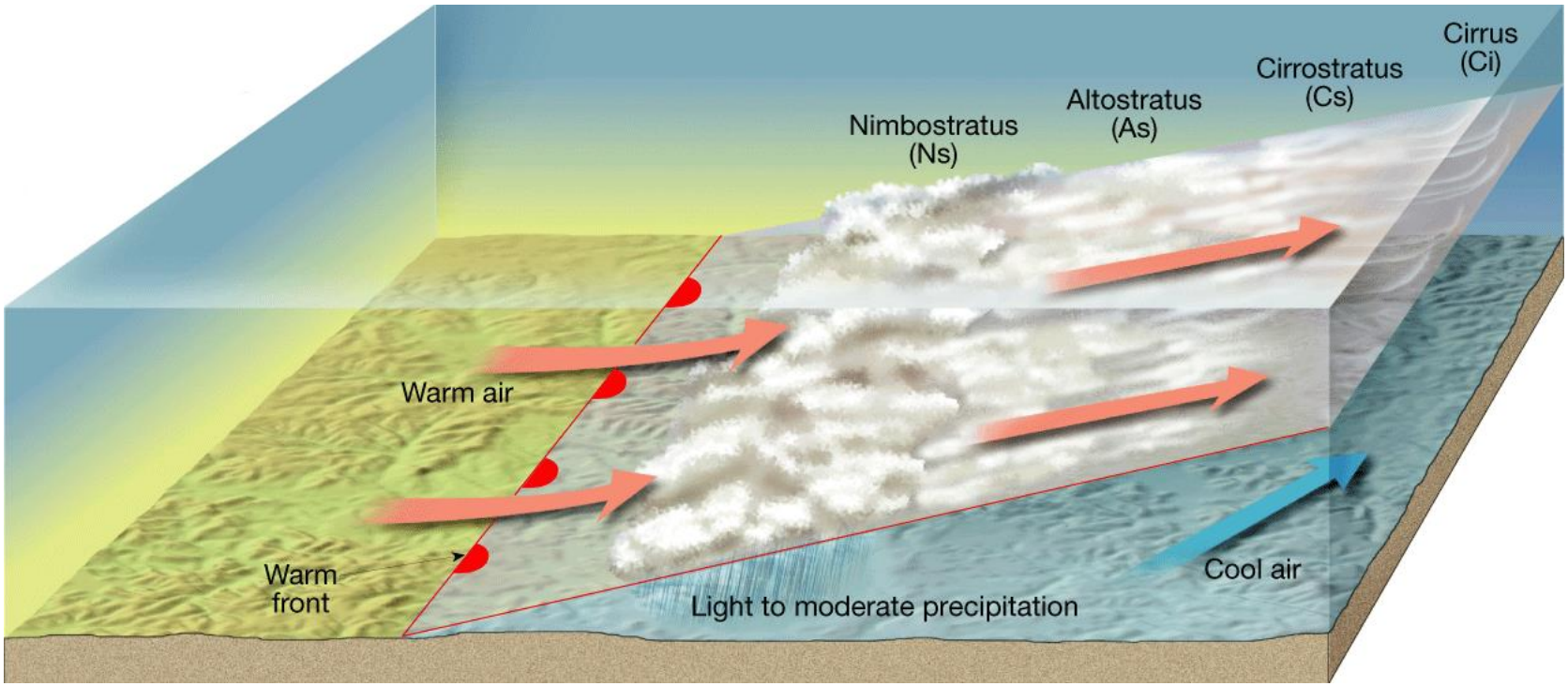
- A warm front forms when warm air moves into an area formerly covered by cooler air.
- Lifting of air is more gentler than along a cold front.
- Steady and wide spread rains or snows







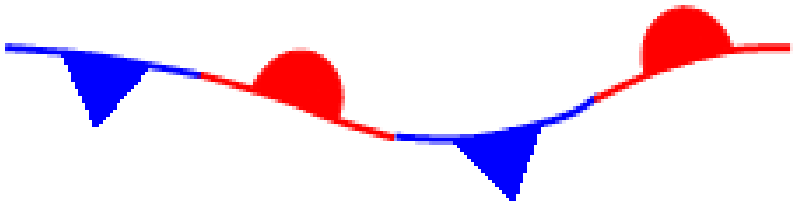
Formation of a Warm Front

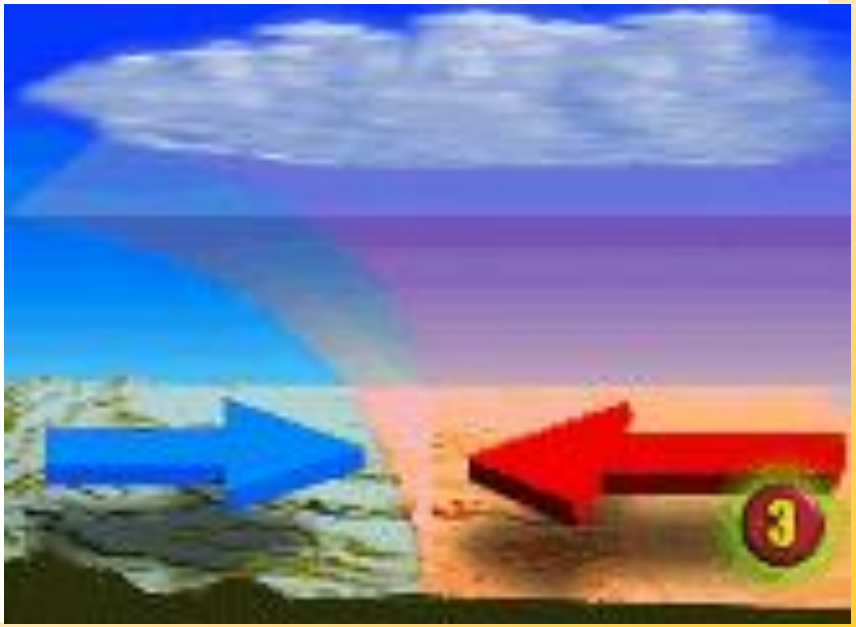


20.2 Type of Fronts

Stationary Fronts

- Warm air and cold air are not advancing.
- The front does not move much.
- Several days of cloudy and wet weather

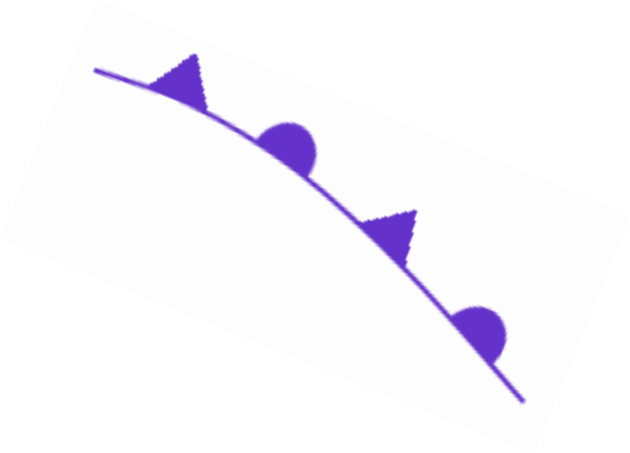


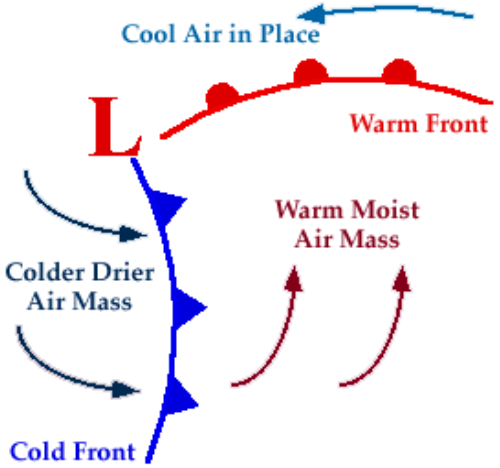


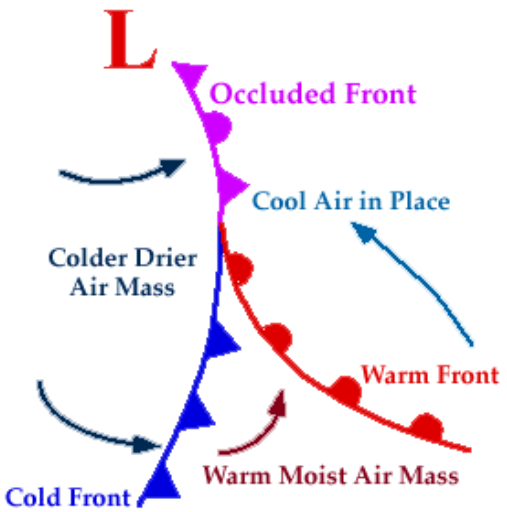
20.2 Type of Fronts

Occluded Fronts

- When an active cold front overtakes a warm front, an **occluded front** forms.
- Low pressure is surrounded by cold air at the surface.

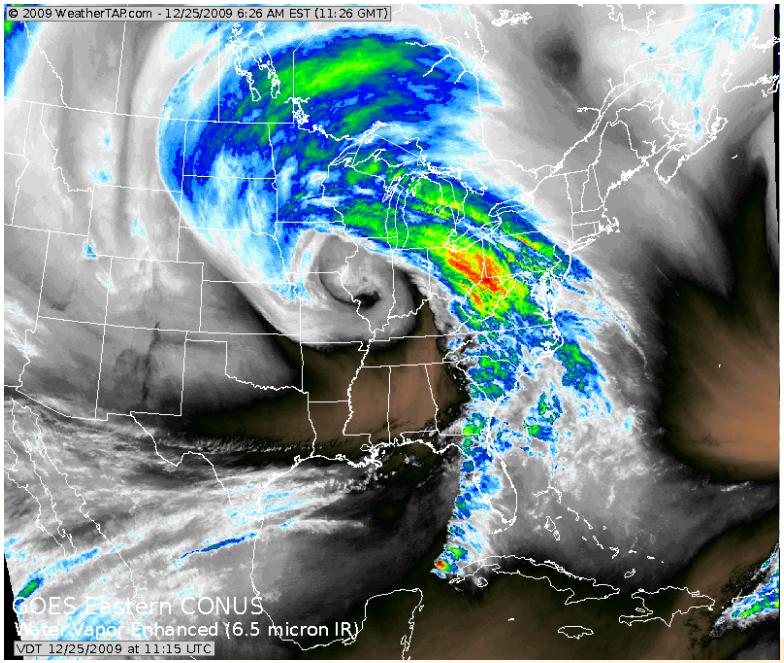


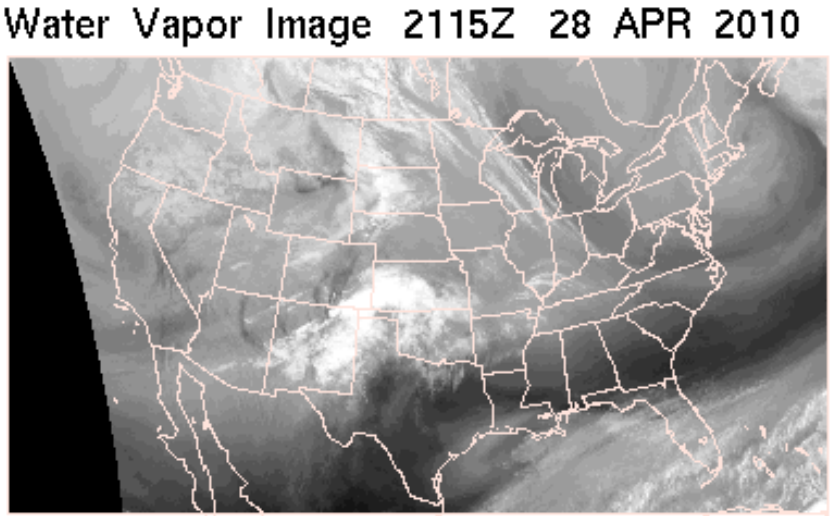




20.2 What is the main weather producer for the U.S.?

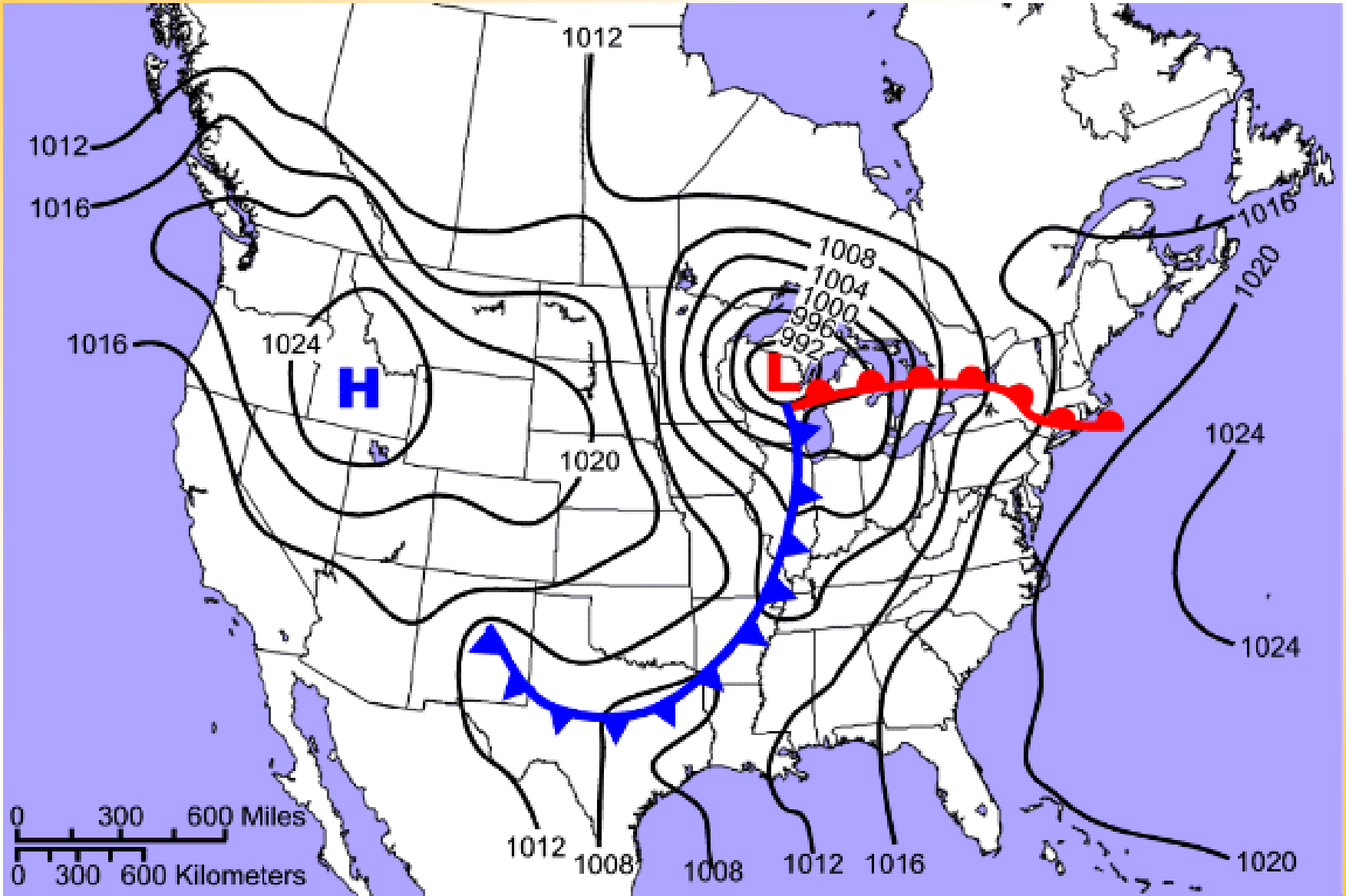
- ***Middle-latitude cyclones*** are large centers of ***low pressure*** that generally travel from west to east and cause stormy weather.



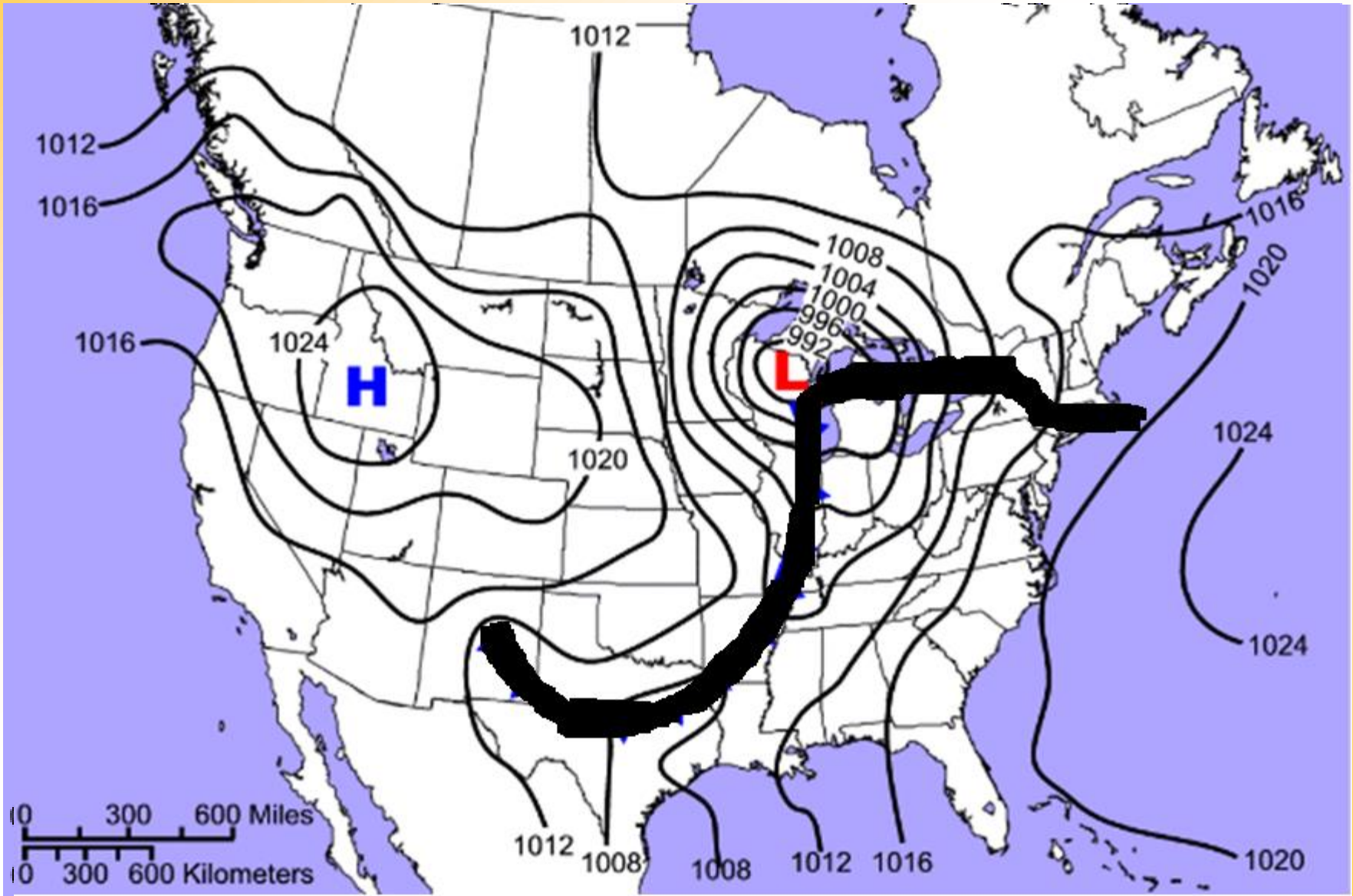


NCEP/NWS/NOAA

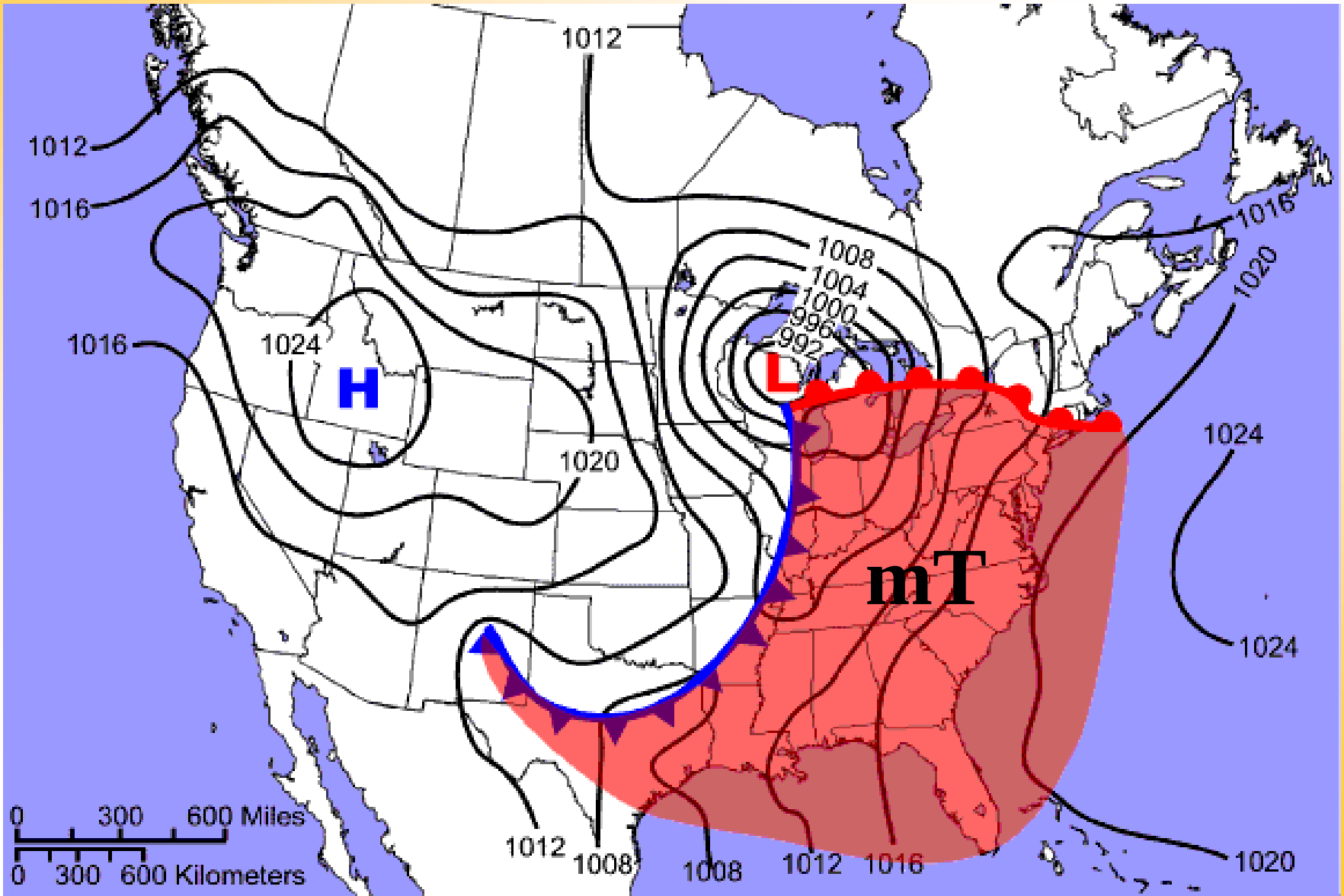
Color red where you would expect the warmest temperatures to occur.



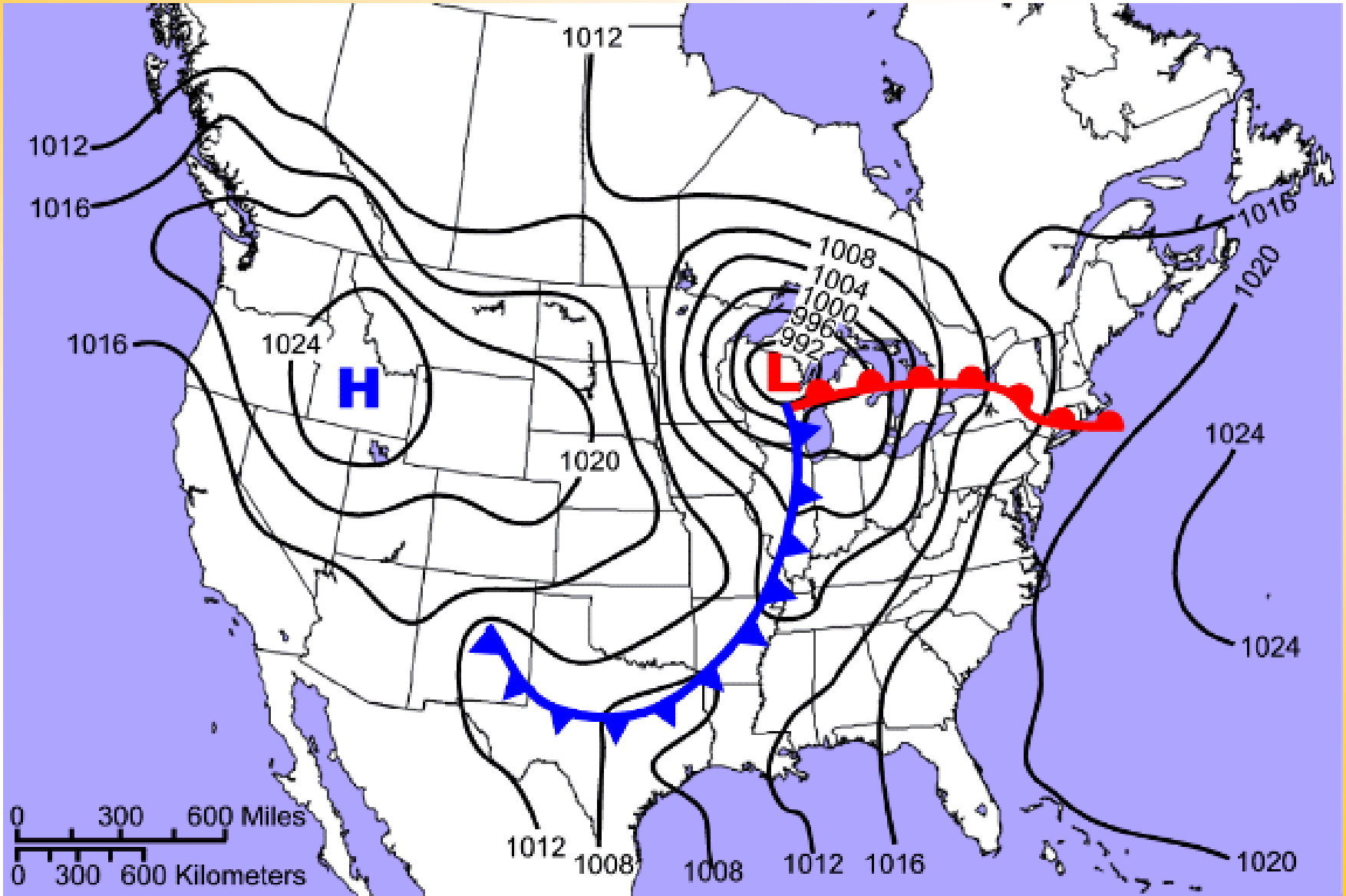
Color red where you would expect the warmest temperatures to occur.



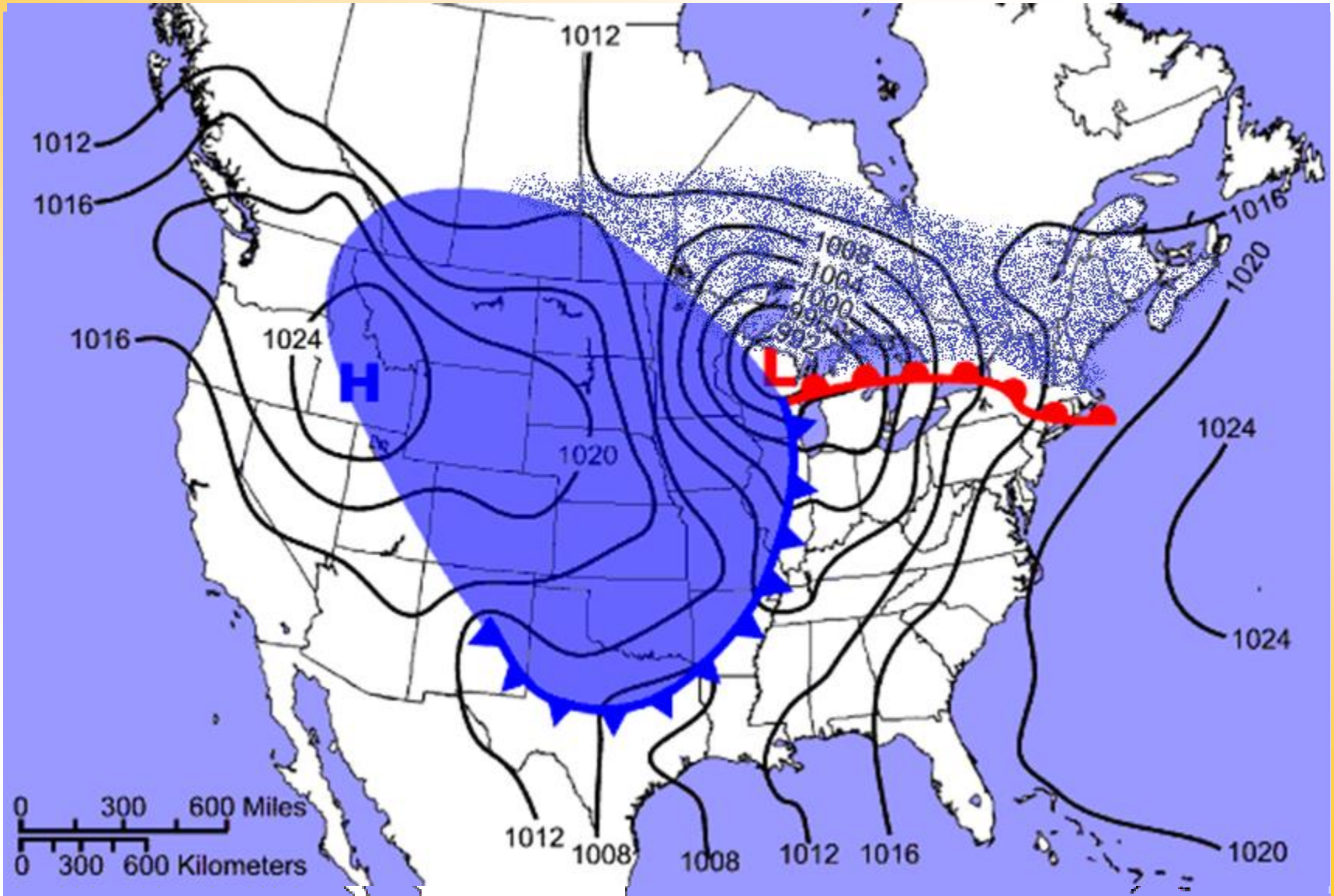
The warmest temperatures are found in the warm air mass that lies behind the warm front and ahead of the cold front.



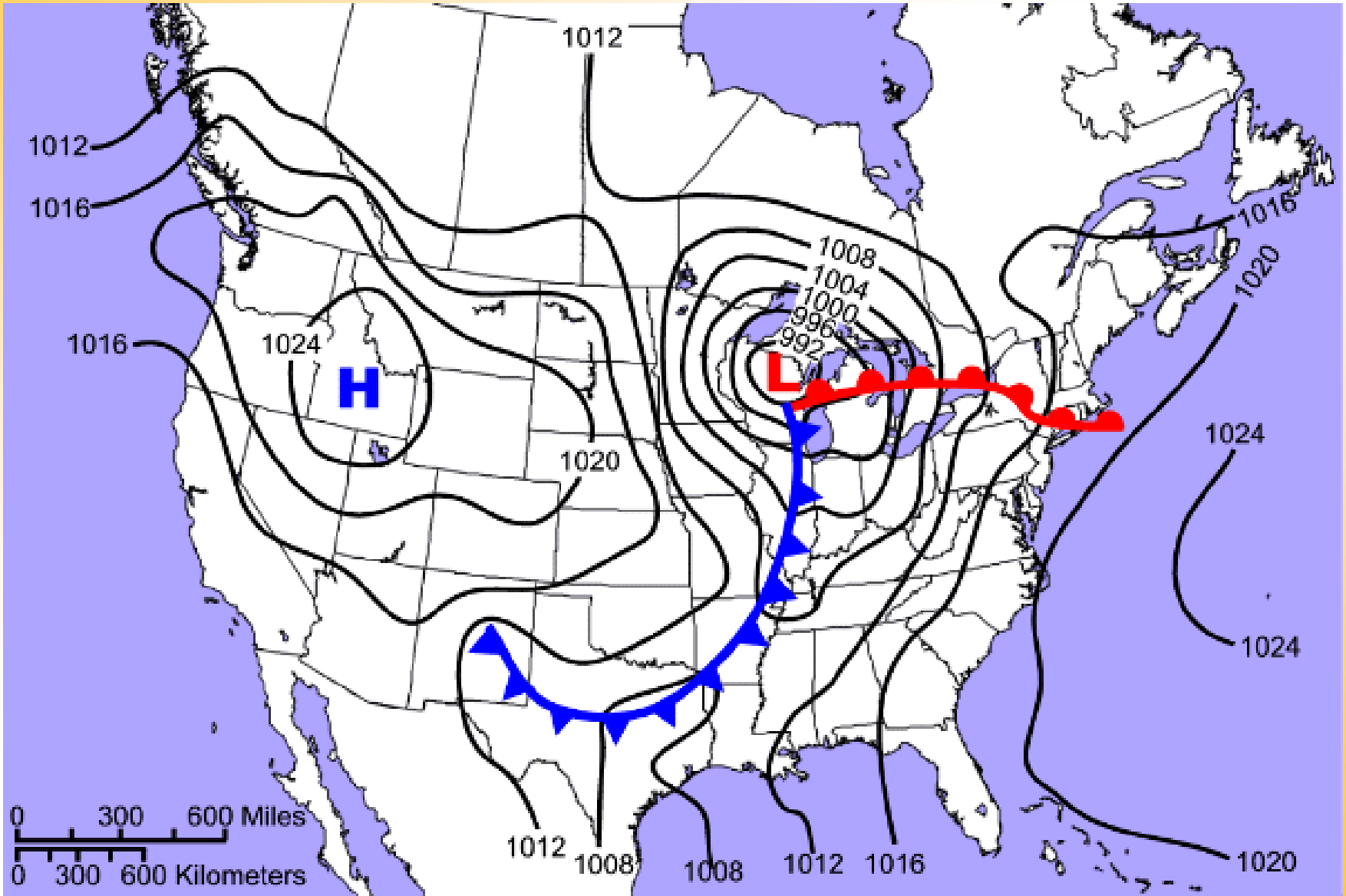
Color blue where you would expect to find the coolest temperatures.



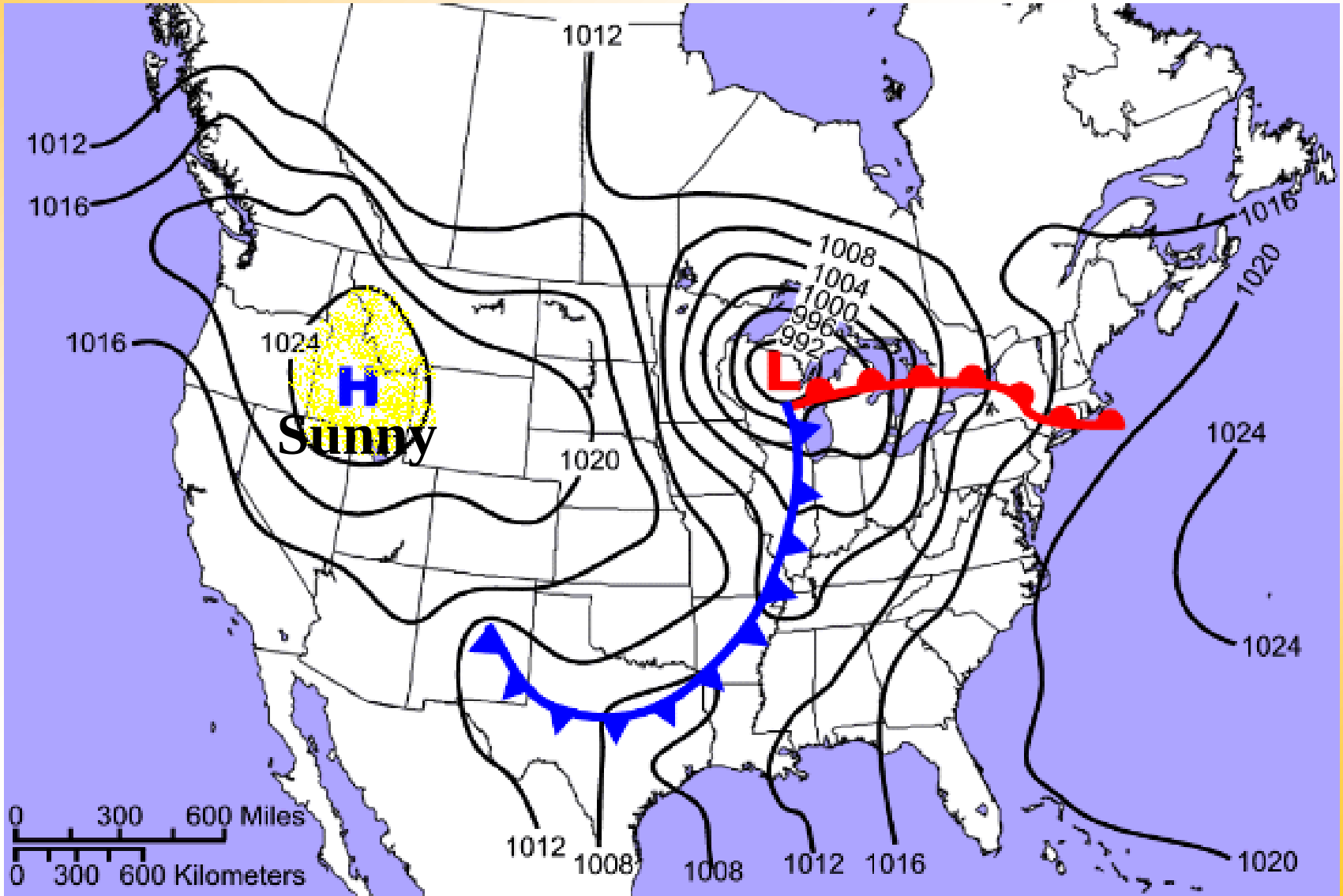
The coolest temperatures are found in the *cold air mass* that lies behind the *cold front*.



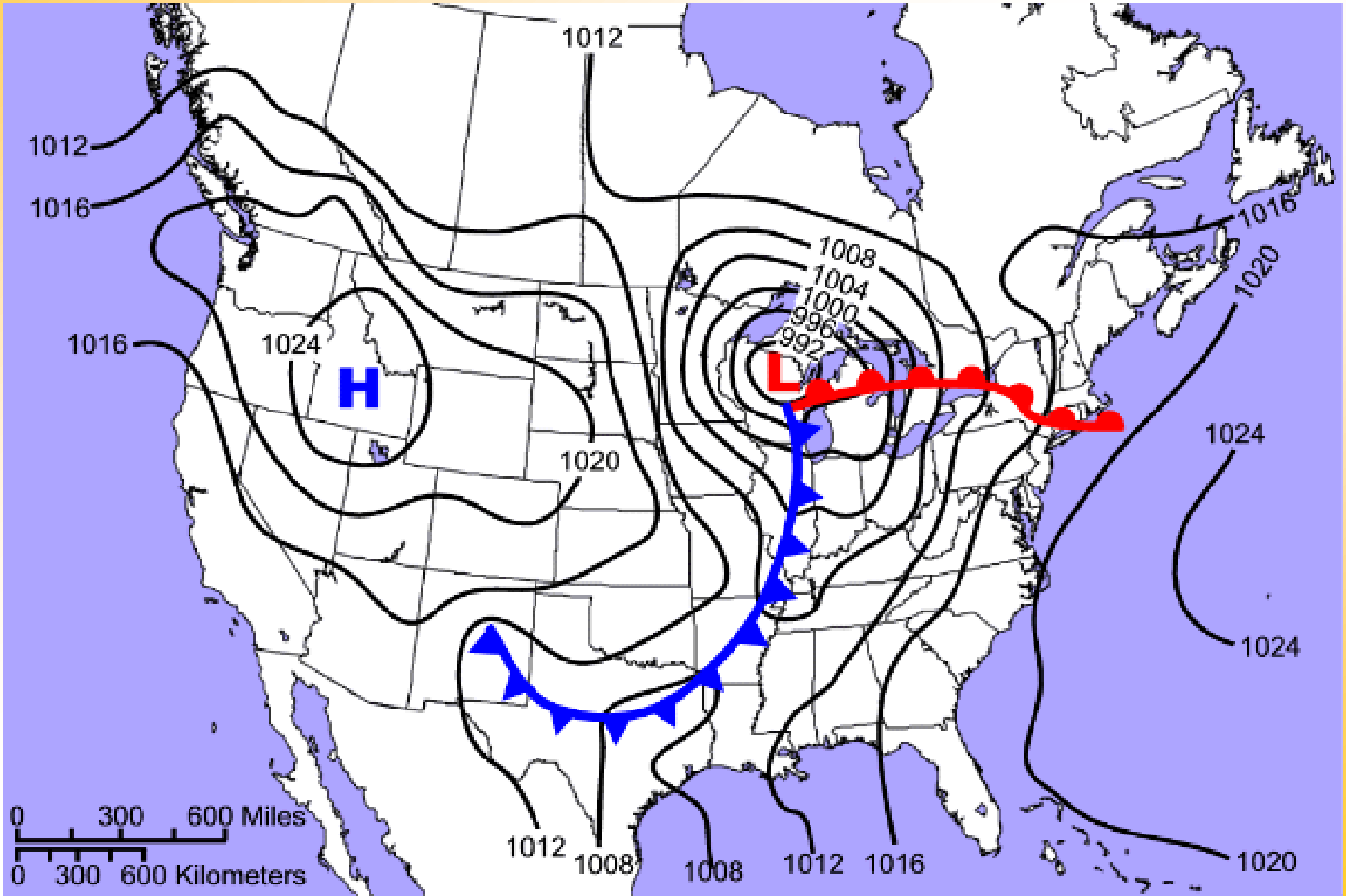
Where you would expect to find the highest atmospheric pressure?



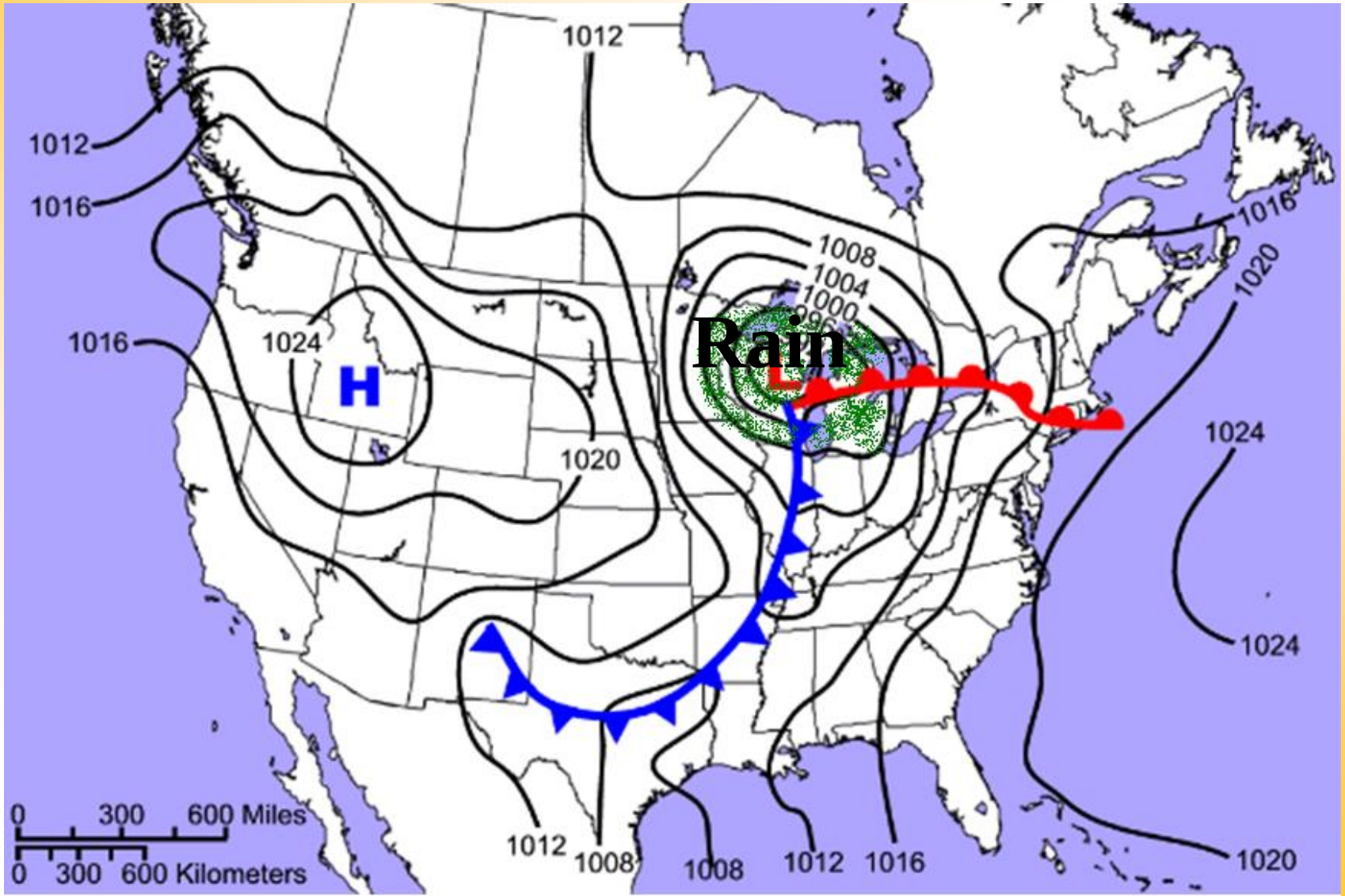
The highest atmospheric pressure is found at the center of a high pressure system, labeled with a capital **H** on a weather map. Nice weather is associated with it.



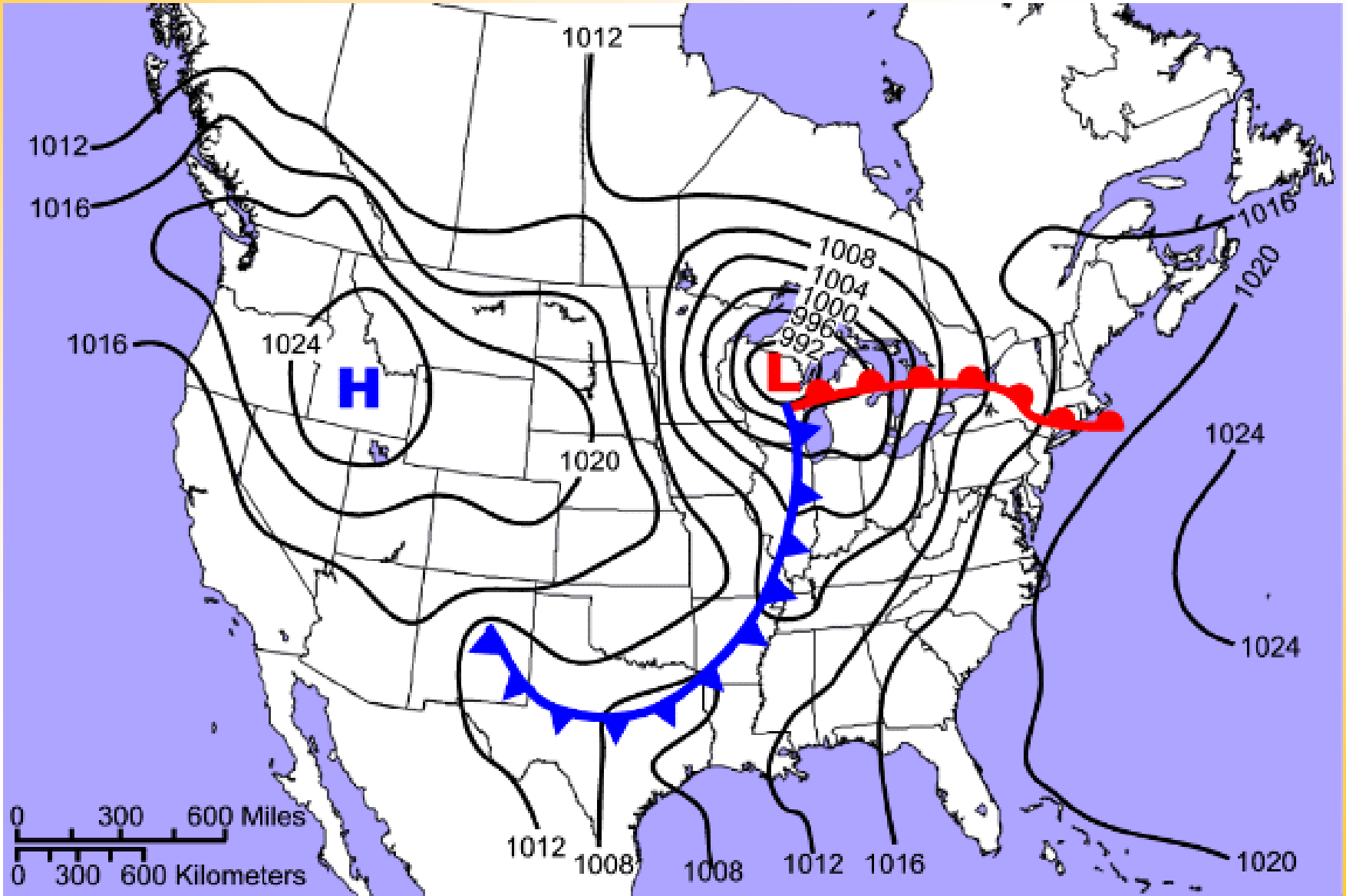
Where you would expect to find the lowest atmospheric pressure?



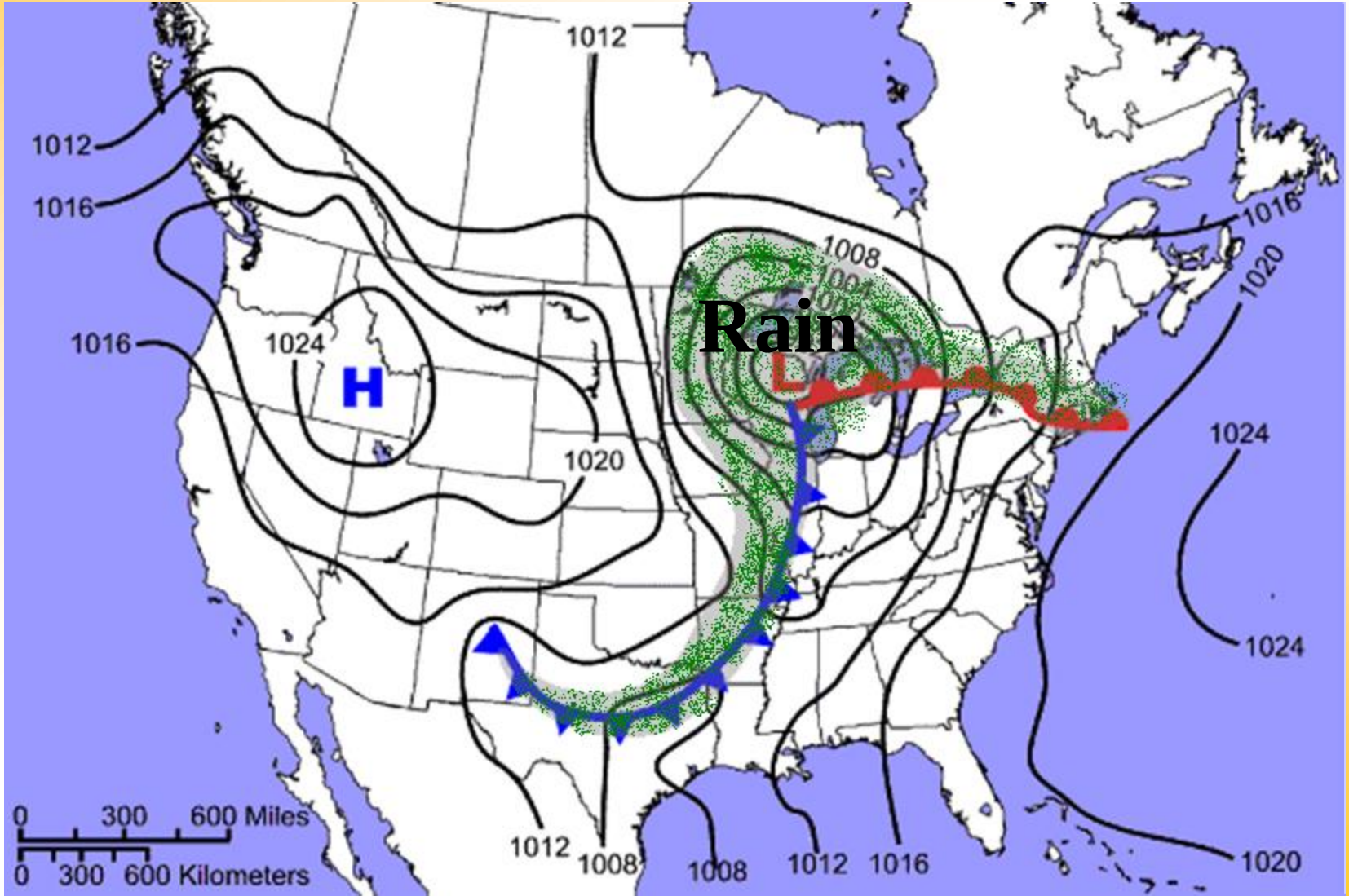
The lowest atmospheric pressure is found at the center of a low pressure system, labeled with a capital **L** on a weather map. Rainy weather is associated with it.



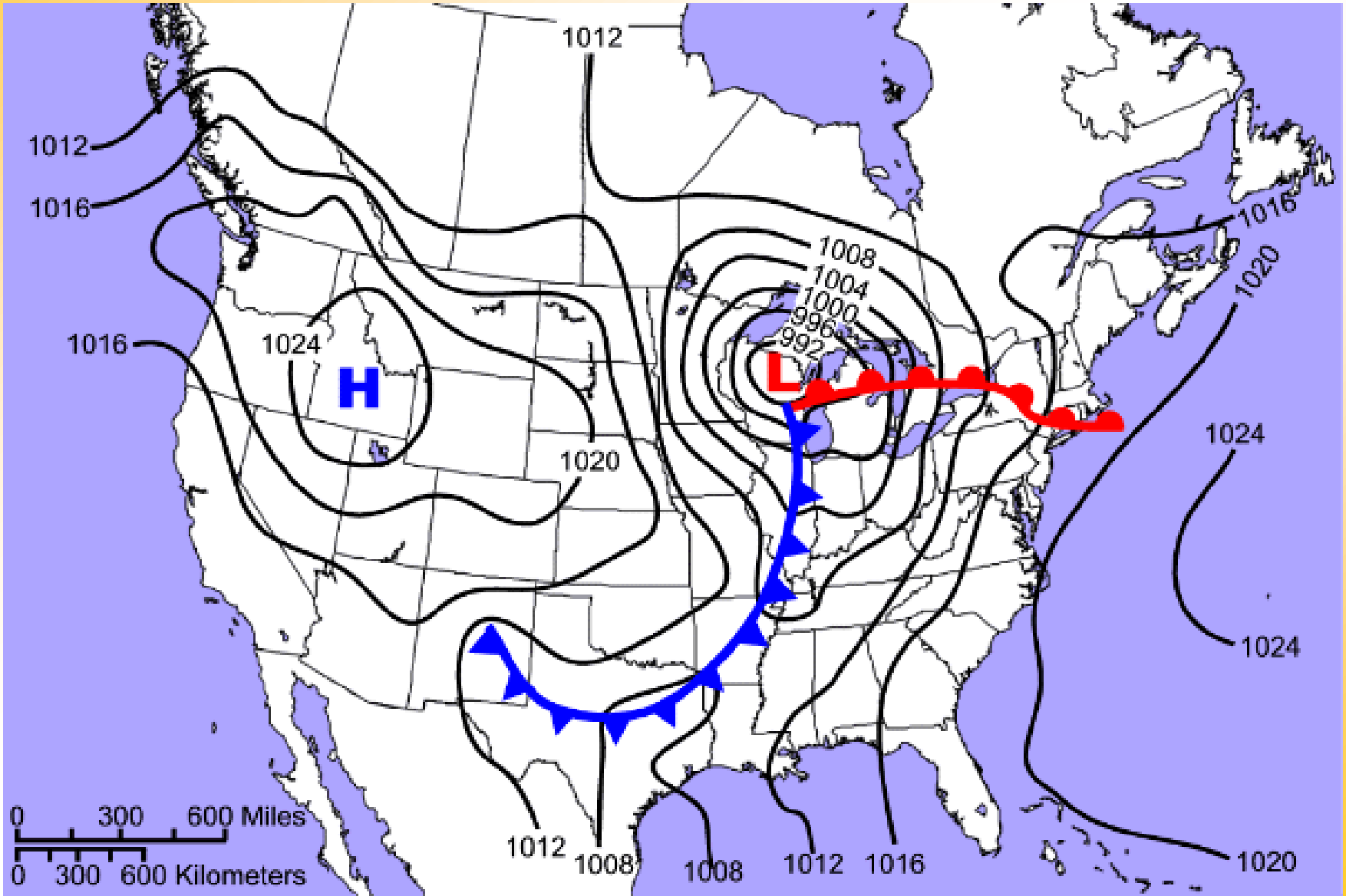
Where you would expect precipitation to occur?



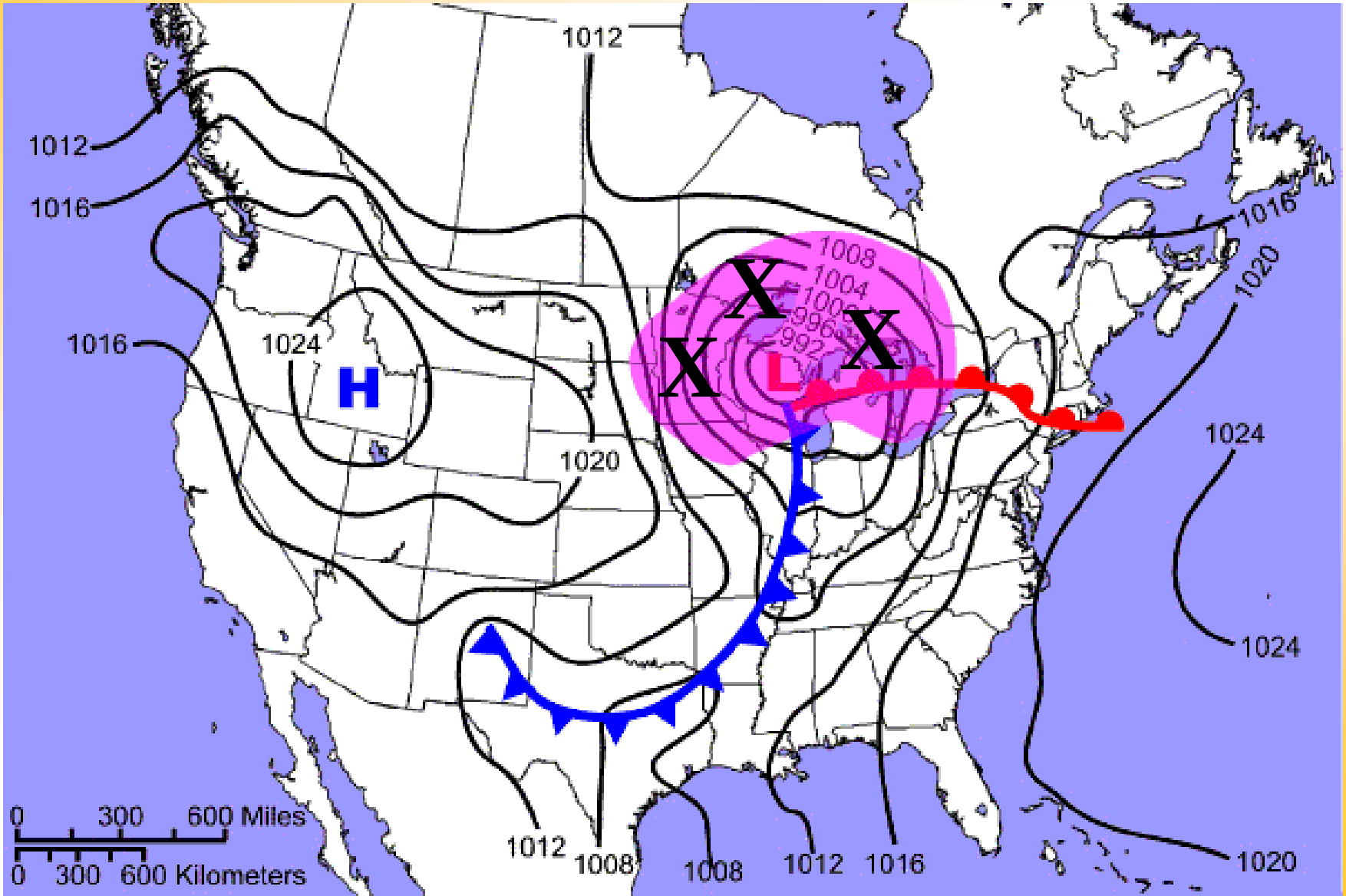
Precipitation typically occurs along and ahead of the warm front, along and behind the cold front, and around the center of a low pressure system.

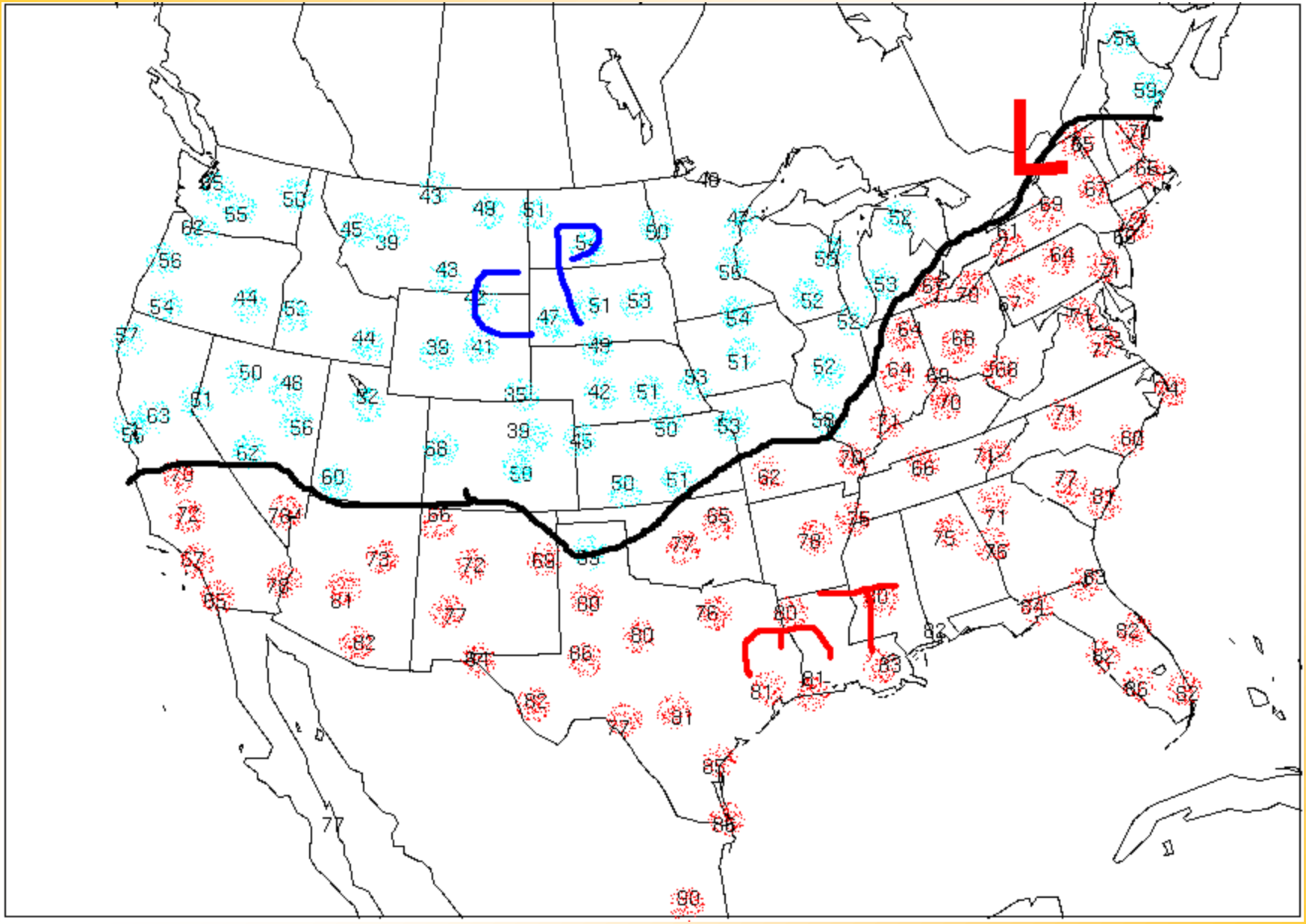


Where you would expect the highest wind speeds to occur?



Where you would expect the highest wind speeds to occur?

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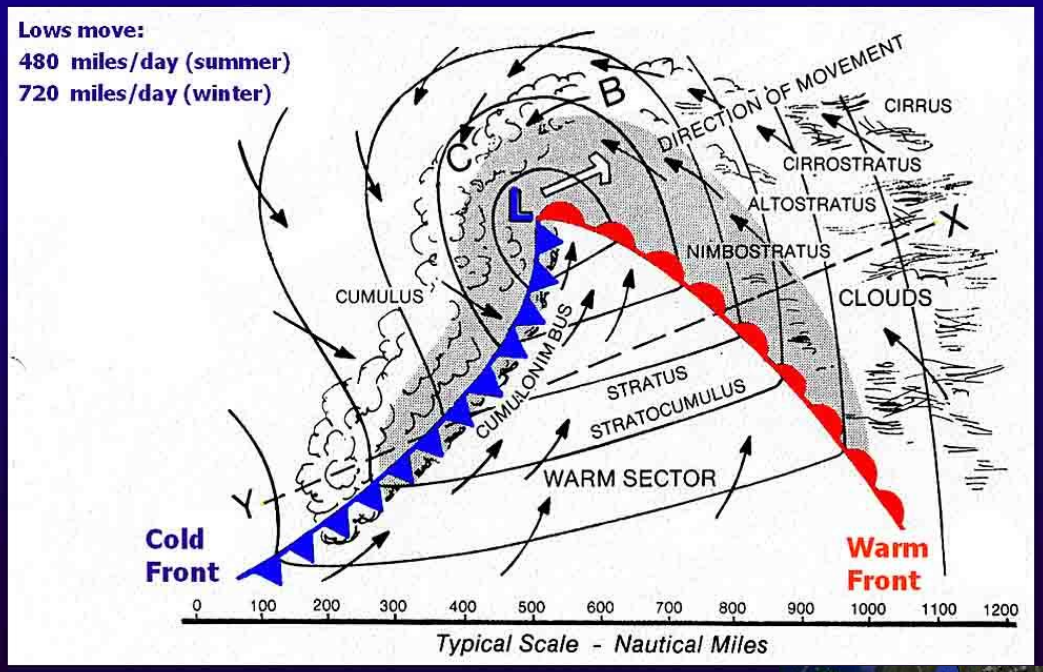
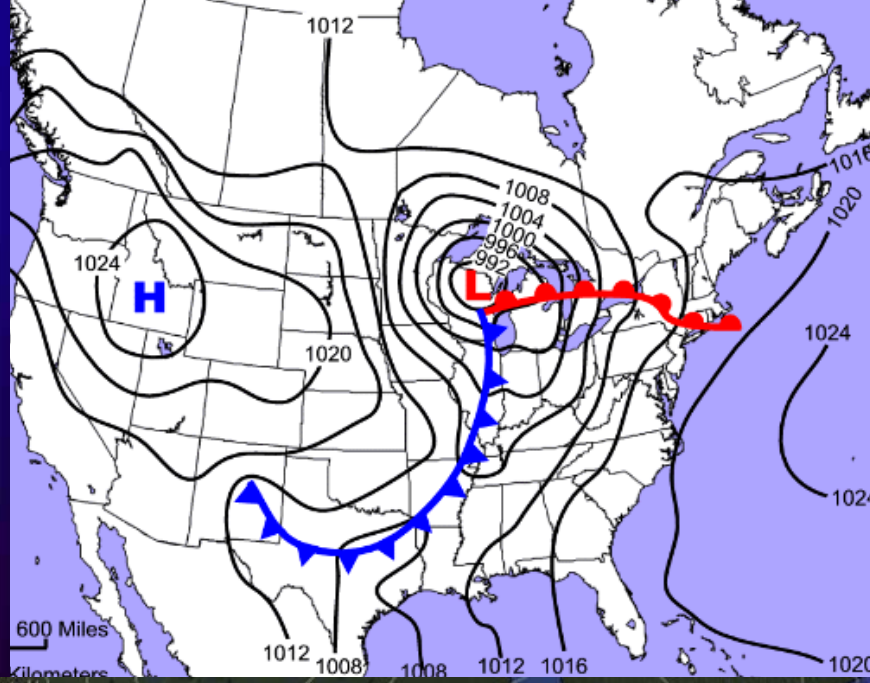
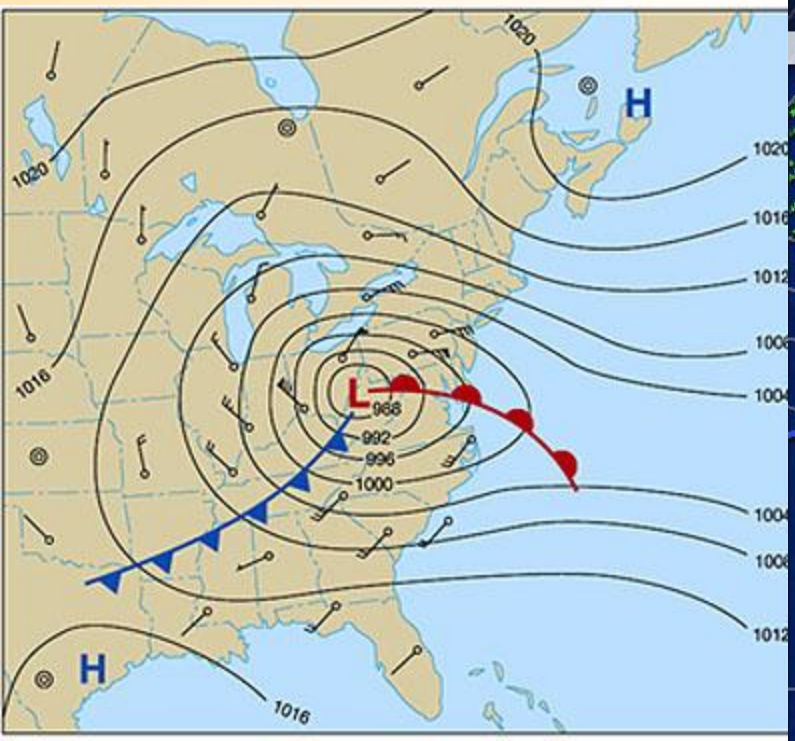

Lows move:
480 miles/day (summer)
720 miles/day (winter)
DIRECTION OF MOVEMENT
CIRRUS
CIRROSTRATUS
ALTOSTRATUS
NIMBOSTRATUS
CUMULUS
CUMULONIMBUS
CLOUDS
STRATUS
STRATOCUMULUS
WARM SECTOR
Cold Front
Warm Front
0 100 200 300 400 500 600 700 800 900 1000 1100 1200
Typical Scale - Nautical Miles


1012
1008
1004
1000
996
992
1024
1020
1016
600 Miles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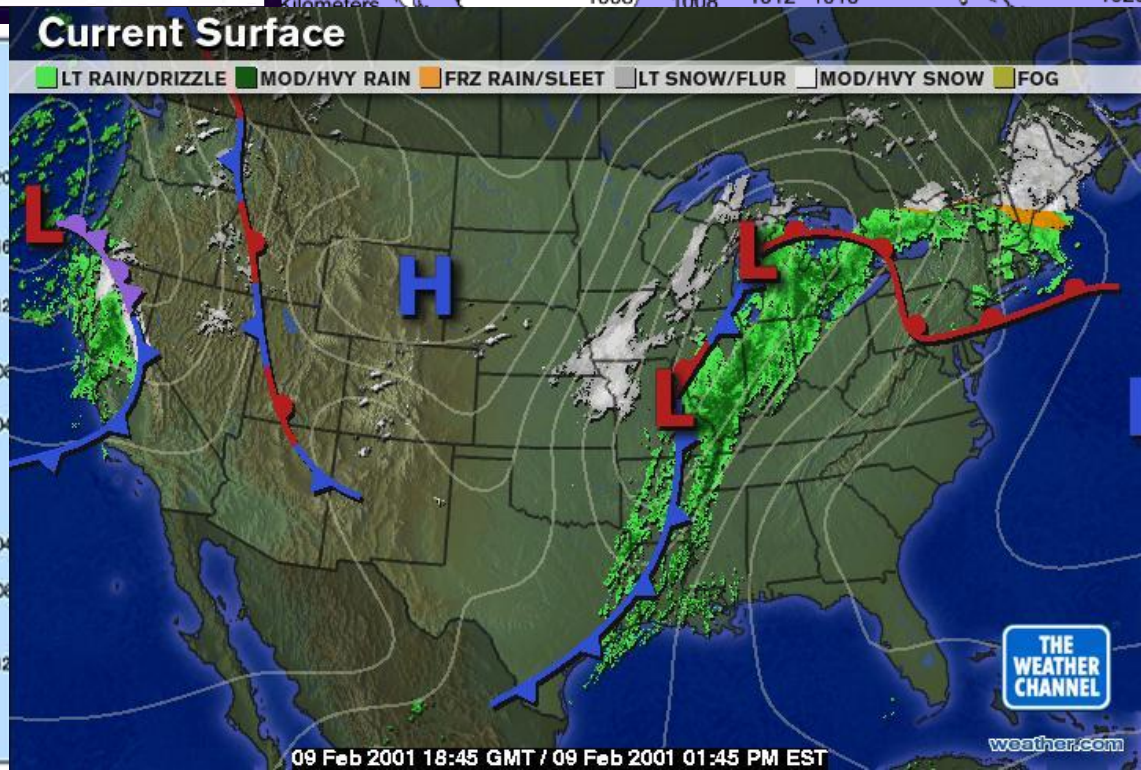
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MOD/HVY RAIN
FRZ RAIN/SLEET
LT SNOW/FLUR
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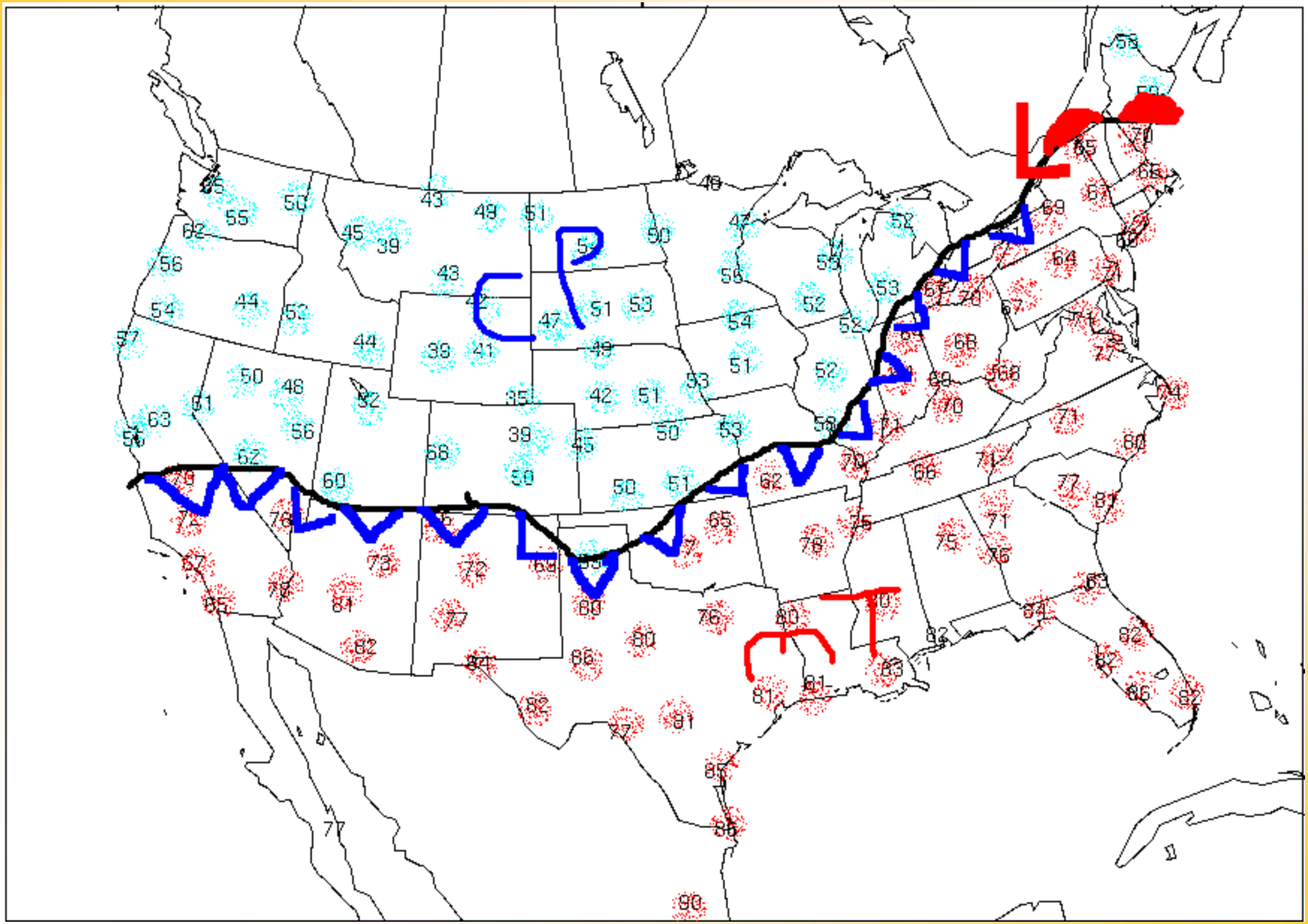
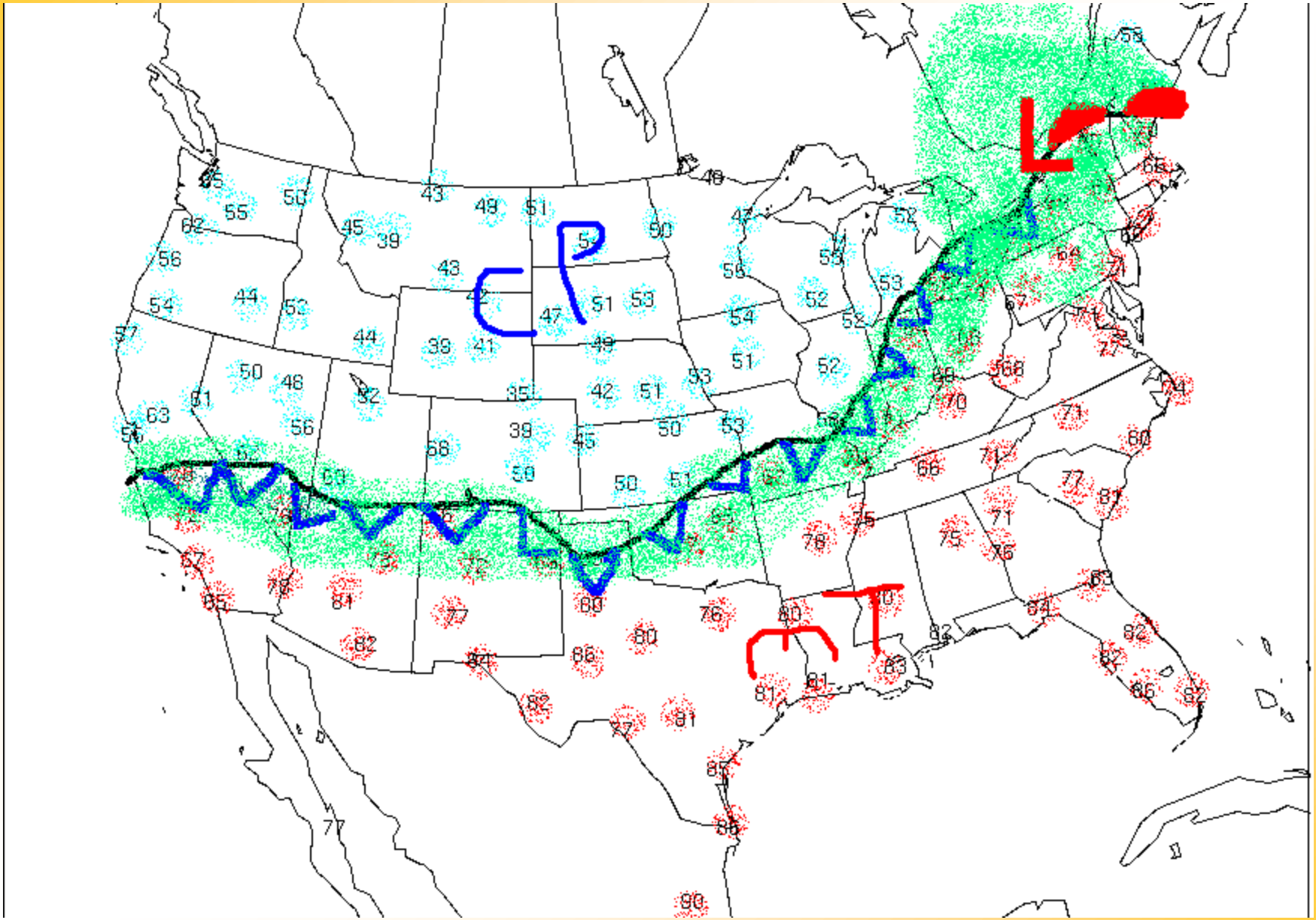
THE WEATHER CHANNEL
weather.com

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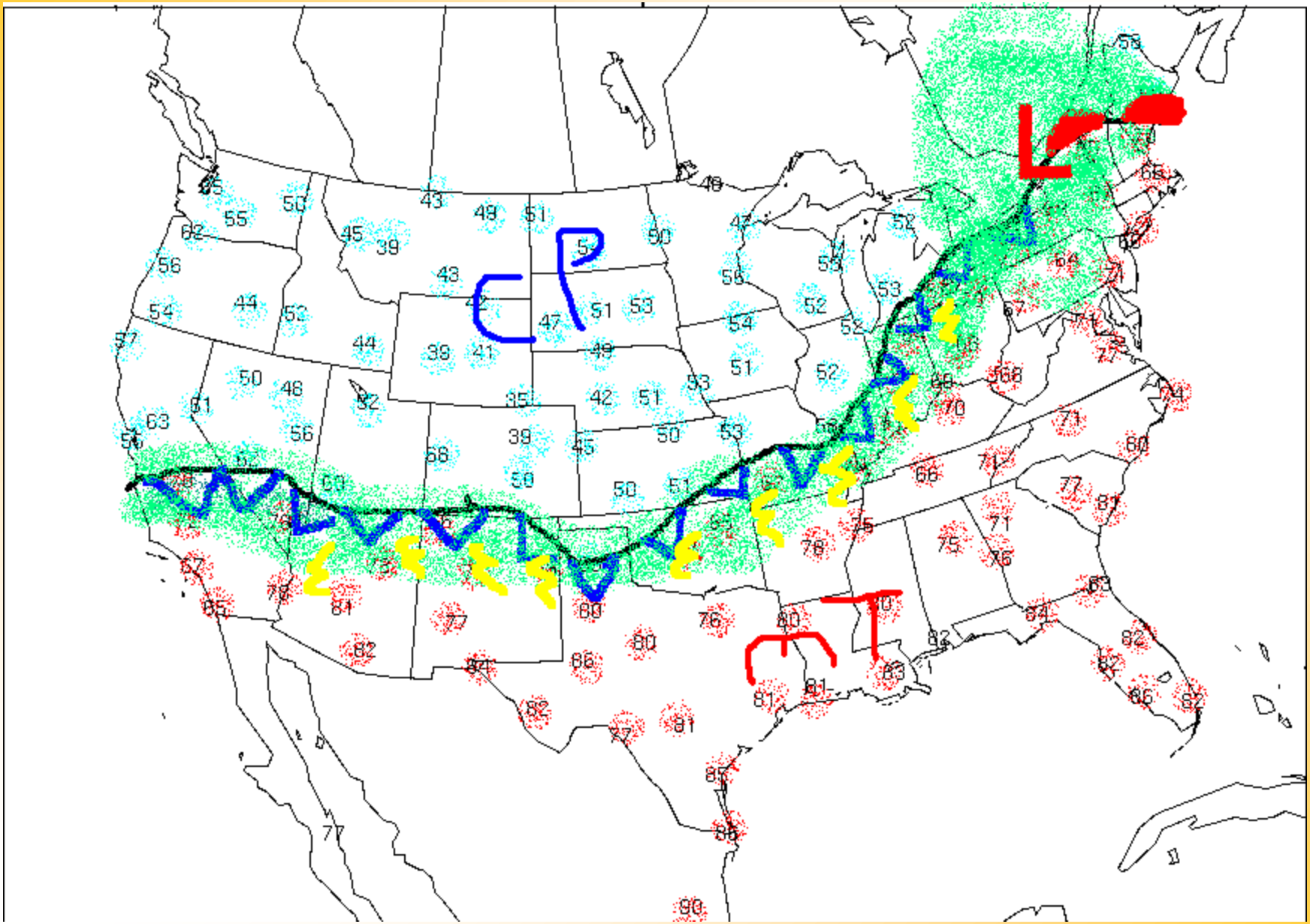
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