Laboratory Key #8 - Atmospheric Sciences - Part 2

1. At the equator the tendency is for surface convergence.

2. The vertical movement of air at the equator is rising.

3. The atmospheric feature present at the equator is the ITCZ,

4. The circulation cell between the latitudes of 0 and 30^{o} is the Hadley cell.

5. The weather between the latitudes of 0 and 30^{o} moves East to West.

6. Laredo is ~ 29° N.

7. Laredo is between the Hadley and Ferrel circulation cells.

8. Around Laredo the tendency is for surface divergence.

9. Around Laredo the vertical movement of air is sinking.

10. The atmospheric feature present close to Laredo is the Sub-tropical High.

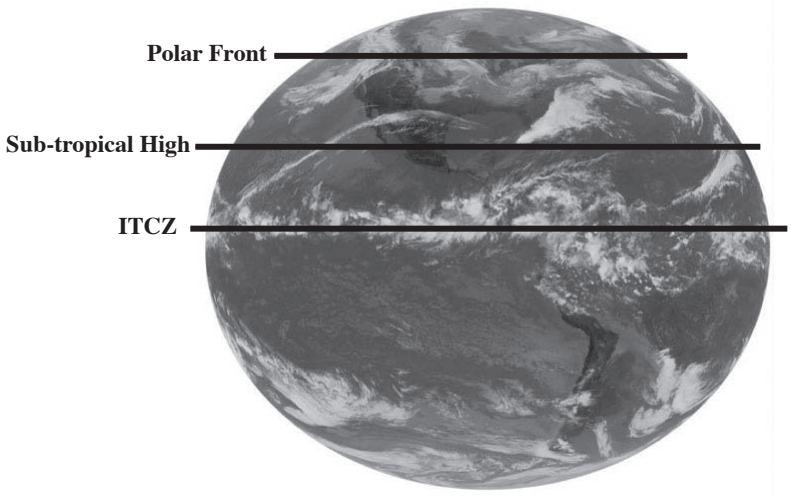
11. The weather between the latitudes of 30 and 60^{o} moves West to East.

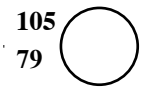
12. At 60^{o} latitude the tendency is for surface convergence.

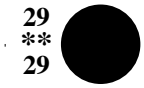
13. The vertical movement of air at 60^{o} latittude is rising

14. The atmospheric feature present at 60^{o} latitude is the Polar Front.

15. see figure below:



16. 

17. 

18. 8/22/06 the relative humidity was low; 12/24/04 the relative humidity was high.

19. see figure on page 3

20. see figure on page 3

21. In order; Cold Front, High Pressure, Warm Front, Warm Sector

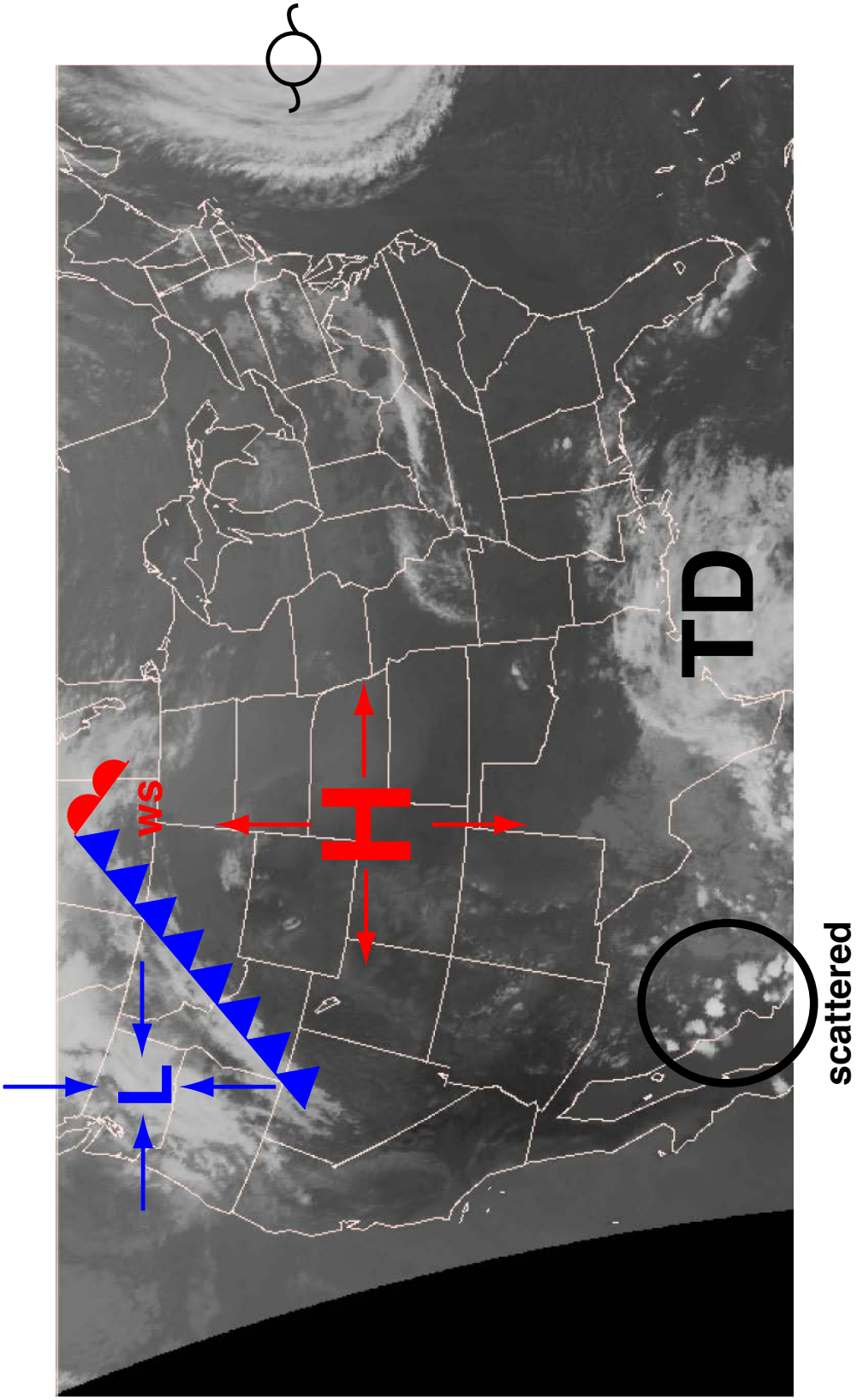
22. At this latitude it will move roughly west to east.

23. Yes, the mid-latitude cyclone is moving toward Chicago and will reach it within 2 days.

24. No, scattered thunderstorms only last for minutes or hours at the most.

25. isolated thunderstorms are patchey and short lived, thunderstorms at a cold front are intense lines of storms that can last for days

26. A tropical depression is an area that has begun to organize into a coherent low pressure zone with relatively weak winds less than 39 miles per hour. A tropical storm has winds between 39 to 74 miles per hour versus a hurricane with winds >74 miles per hour and as these systems intensify they become better organized.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