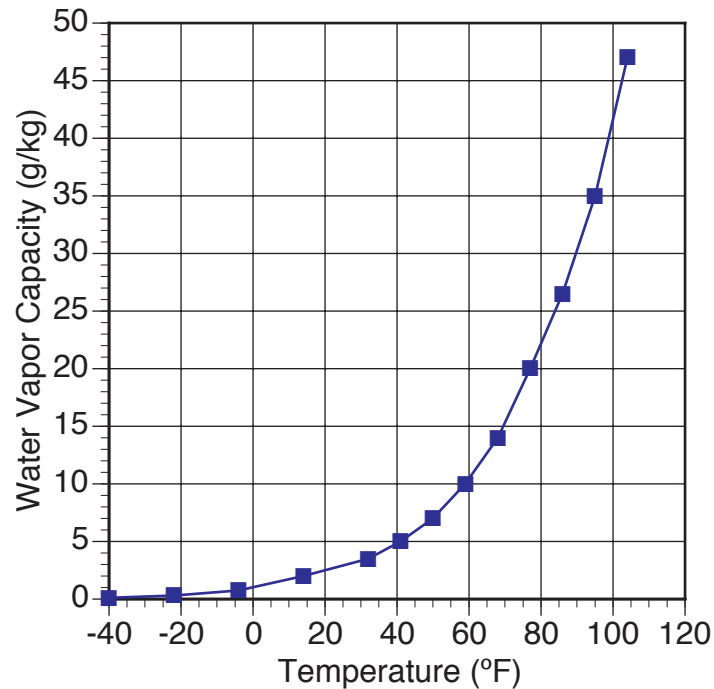


Laboratory Key #7 - Atmospheric Sciences - Part 1

1. No, the tilt does not change. If it did, we would not have seasons.
2.

Northern Hemisphere	Winter Dec 21-22	Spring Mar 21-22	Summer Jun 21-22	Fall Sep 22-23
Southern Hemisphere	Jun 21-22	Sep 22-23	Dec 21-22	Mar 21-22
3.

Equator =	90°	60° N =	30°
30° N =	60°	90° N =	0°
4. The sun is lowest in the horizon in the winter, the coldest time of the year.
5. Length of day is greatest in the summer; least in the winter
6. The length of day and night is roughly equal during the spring and the fall (equinoxes).
7. ~27° F
8. ~110° F
9. if the sun is higher in the sky and the day is longer it is hotter;
if the sun is lower in the sky and the day is shorter it is colder;
10. all except Dec, Jan, Feb
11. All months can exceed 90° in Laredo
12. see figure on the top of page 2
13. as temperature decreases, water vapor capacity decreases
14. as temperature increases, relative humidity decreases
15. 100 %
16. condenses to a liquid or sublimates to a solid
17. the temperature at which water vapor content equals water vapor capacity and relative humidity equals 100%
18. 105° F @ 15:00; 79° F @ 5:00



19. ~95% @ 5:00; ~40% @ 15:00
20. they are an inverse relationship
21. no, it gets close early in the morning
22. yes, dew point temperature rarely varies much throughout a day
23. true, as temperature increases, relative humidity decreases and vice versa
24. High pressure
25. 29° F @ 22:00
26. no, the lowest temperature typically occurs early in the morning
27. after 18:00, when precipitation starts
28. begins at 18:00 and continues after midnight
29. Snow
30. humidity goes up, dew point stays fairly constant
31. an inverse relationship

32. Low pressure

on 8/22/06 @ 16:00 hours

Temperature = 105° F
Dew Point T. = 79° F

on 12/24/04 @ 22:00 hours

Temperature = 29° F
Dew Point T. = 29° F