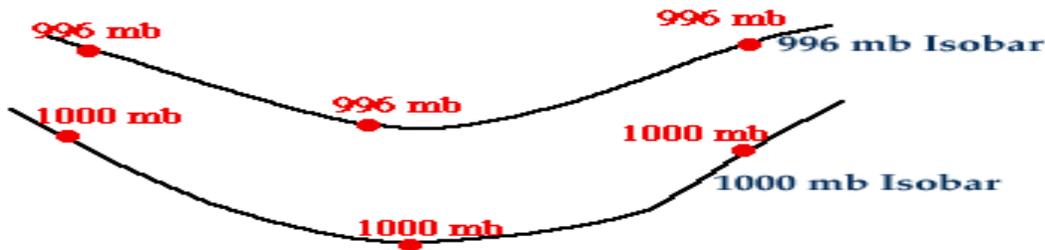


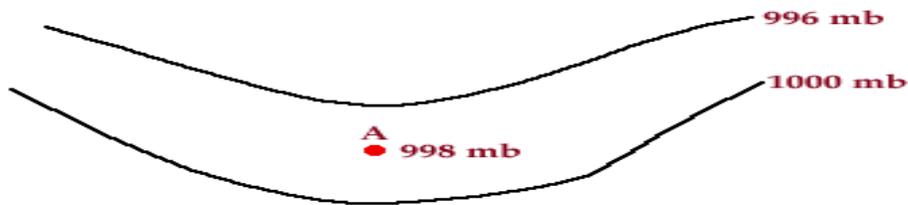
Isobars are lines of constant pressure.

A line drawn on a weather map connecting points of equal pressure is called an isobar. The isobars are generated from mean sea level pressure reports and the pressure values are given in millibars.

The diagram below shows a pair of isobars. At every point along the top isobar, the pressure is 996 mb and at every point along the bottom isobar the pressure is 1000 mb.



Any point in between these two isobars will have a pressure somewhere between 996 mb and 1000 mb. Point A, for example, has a pressure of 998 mb and is therefore located between the 996 mb isobar and the 1000 mb isobar.

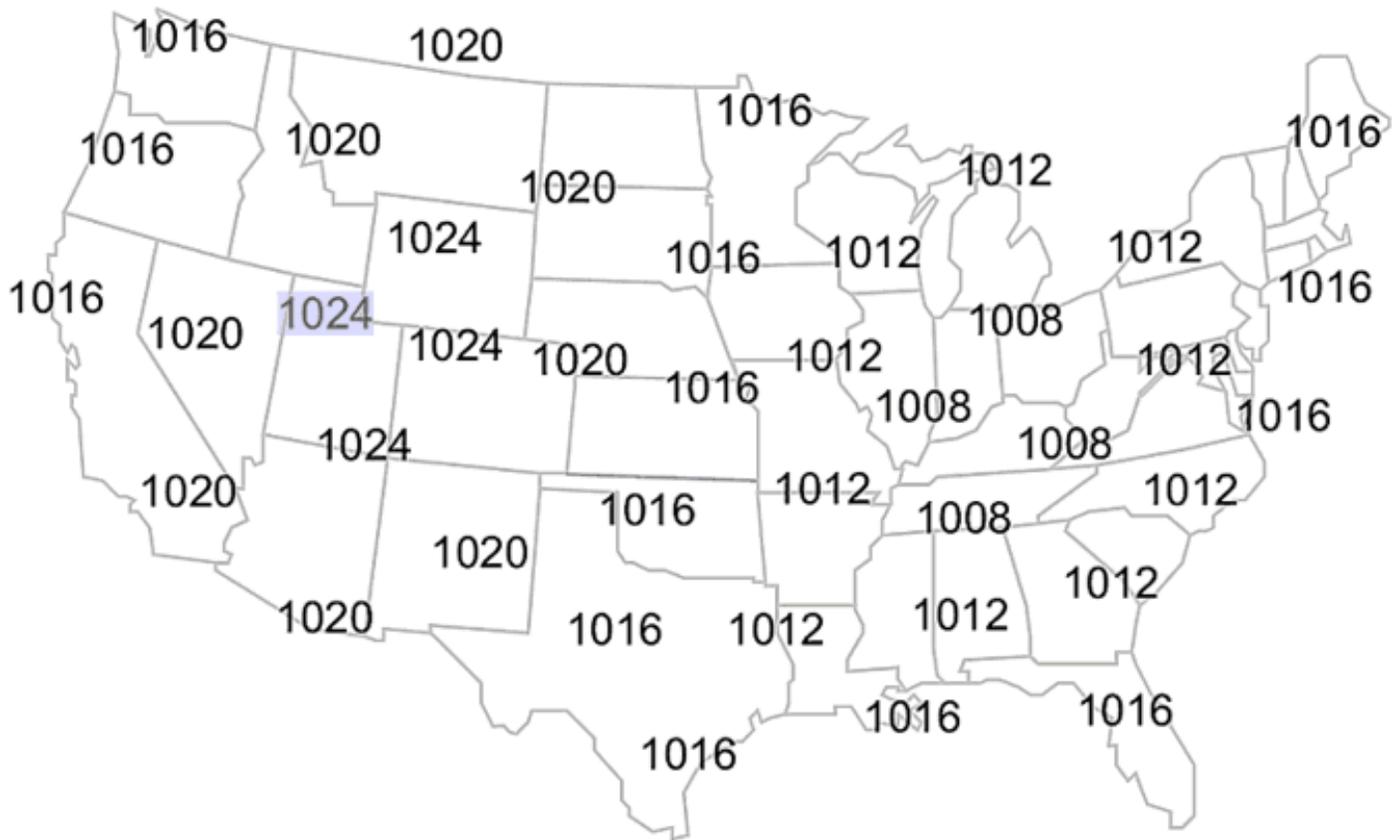


Meteorologists use isobars to show atmospheric pressure changes and areas of high and low air pressure.

Why is it important to know about areas of high and low air pressure?

Procedure:

1. Begin drawing from the 1024 millibars station pressure over Salt Lake City, Utah (highlighted in blue).
2. Draw a line to the next 1024 value located to the northeast (upper right).
3. Without lifting your pencil draw a line to the next 1024 value located to the south and then to the one located southwest, finally returning to the Salt Lake City value.
4. Remember, isobars are smooth lines with few, if any, kinks.
5. Repeat the procedure with the next isobar value. Remember, the value between isobars is 4 millibars.
6. Since there are no 1028 millibars values on the map, then your next line will follow the 1020 millibars reports.
7. Then continue with the remaining values until you have all the reports connected with an isobar.
8. Label each isobar with the appropriate value. Traditionally, only the last two digits are used for labels.
9. For example, the label on the 1024 mb isobar would be 24. A 1008 mb isobar would be labeled 08. A 992 mb isobar will be labeled 92.
10. These labels can be placed anywhere along the isobar but are typically placed around edges of the map at the end of each line.
11. For closed isobars (lines that connect) a gap is placed in the isobar with the value inserted in the gap.



Analysis

Isobars can be used to identify "Highs" and "Lows". The pressure in a high is *greater* than the surrounding air. The pressure in a low is *lower* than the surrounding air.

- Label the center of the high pressure area with a large blue "H".
- Label the center of the low pressure area with a large red "L".

High pressure regions are usually associated with dry weather because as the air sinks it warms and the moisture evaporates. Low pressure regions usually bring precipitation because when the air rises it cools and the water vapor condenses.

- Shade, in green, the state(s) you would expect to see rain or snow.
- Shade, in yellow, the state(s) you would expect to see clear skies.

In the northern hemisphere the wind blows clockwise around centers of high pressure. The wind blows counterclockwise around lows.

- Draw arrows around the "H" on your map to indicate the wind direction.
- Draw arrows around the "L" on your map to indicate the wind direction.