

## Lab: Isobars and Wind

### Background

1. What is air pressure?
2. List at least 3 units that are used to measure air pressure.
3. What are isobars?

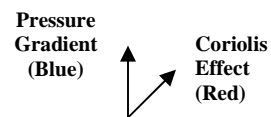
### Instructions

1. The attached map shows atmospheric pressure across the U.S measured in millibars (1,000 millibars = 1 bar). Study the map and determine what the lowest and highest pressures are in millibars for this day in the United States.

Highest Pressure:

Lowest Pressure:

2. If there is only one record for the lowest value, draw a circle around it. Do the same for the highest value. This is a center of low pressure or high pressure.
3. Draw the following isobar lines in pencil for the following pressures: 996, 1000, 1004, 1008, 1012, 1016, 1020. Mark your final isobars in black pen once you are confident that you have drawn them correctly.
4. Draw blue arrows between the isobar lines to show the direction of the pressure gradient. Draw at least 20 blue arrows equally spaced over the entire map.
5. At each of the 20 blue arrows, draw red arrows to show the direction the wind is likely to be deflected because of the Coriolis Effect.
6. Create a legend for your map that shows what the black, blue, and red lines represent.
7. Label centers of low pressure with an “L” in blue and centers of high pressure with a “H” in red.
8. Label an area of the United State where strong winds are expected and an area where light winds are expected.



### Conclusions

1. Wind blows from areas of \_\_\_\_\_ pressure to areas of \_\_\_\_\_ pressure.
2. In which direction do winds blow around centers of low pressure?
3. In which direction do winds blow around centers of high pressure?
4. What part of the United States would you expect to find sunny, warm weather?
5. What part of the United States would you expect to find cool, wet weather?