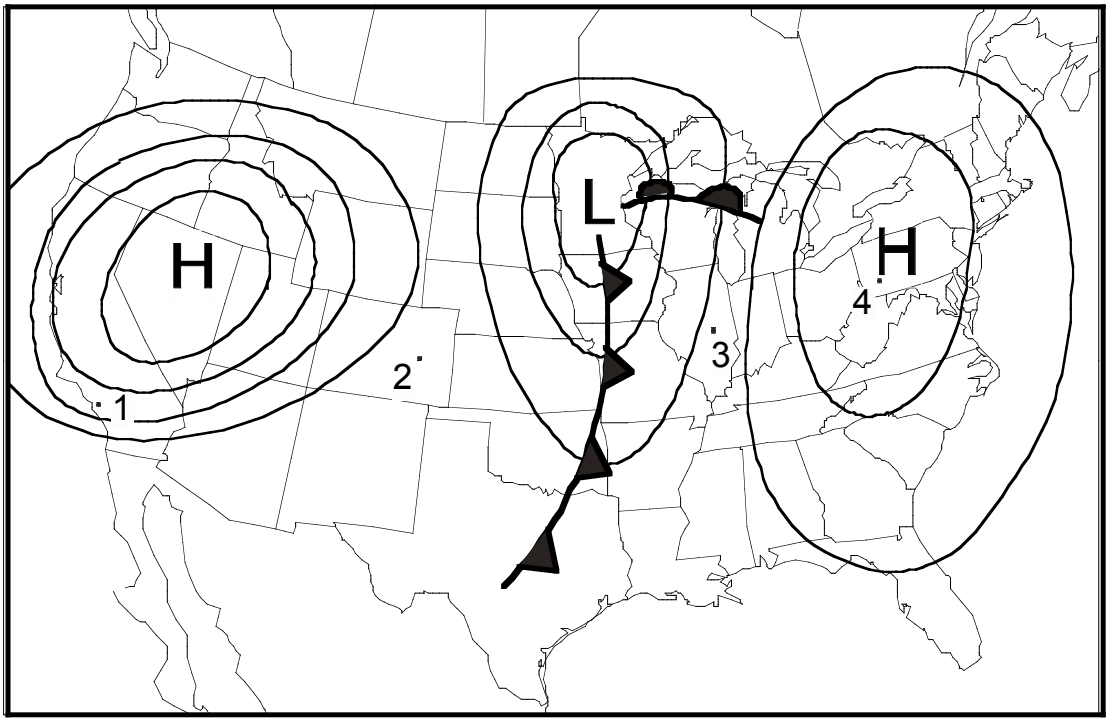
# Evaluating the Potential for Air Pollution Episodes

You are part of a team of meteorologists employed by the National Weather Service. Part of your task is to issue high pollution episode alerts for the U.S. The map below shows the major weather features affecting the United States during a day in April. Using what you have learned in ATMOS 100, together with the soundings attached, rank the cities according to their potential (on this day) for a high pollution episode.




For each city listed below, determine if the numbered environmental conditions are present. If a particular condition is met, assign a value of "2", if the condition is not met, a value of "0", and if the condition may be met, assign a "1". Total up the points for each city to determine which cities are most likely to experience a high pollution episode.

Yes = 2 Maybe = 1 No = 0

| | 1. Los Angeles, CA | 2. Denver, CO | 3. Champaign, IL | 4. Pittsburgh, PA |
|---|---|---|---|---|
| 1. sources of air pollution | | | | |
| 2. high pressure | | | | |
| 3. light winds | | | | |
| 4. strong subsidence inversion | | | | |
| 5. shallow mixing layer | | | | |
| 6. valley or basin (topography) | | | | |
| 7. clear skies | | | | |
| 8. sunlight (for smog formation) | | | | |
| Total: | | | | |



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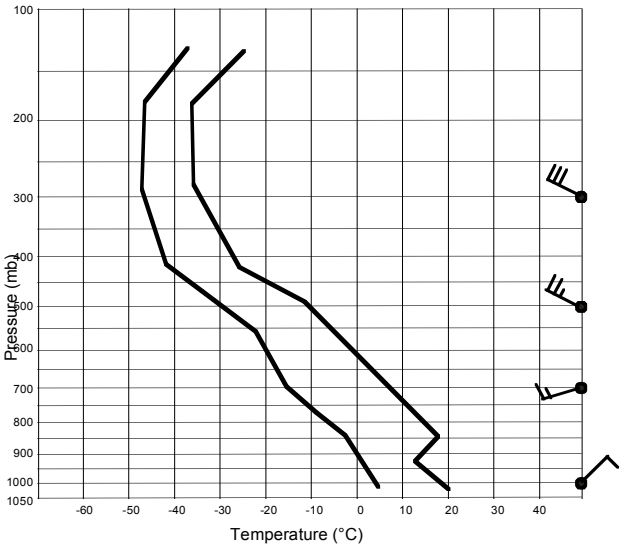
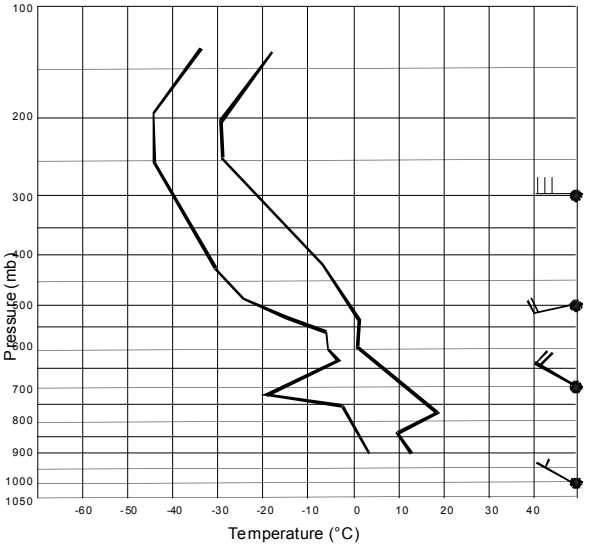
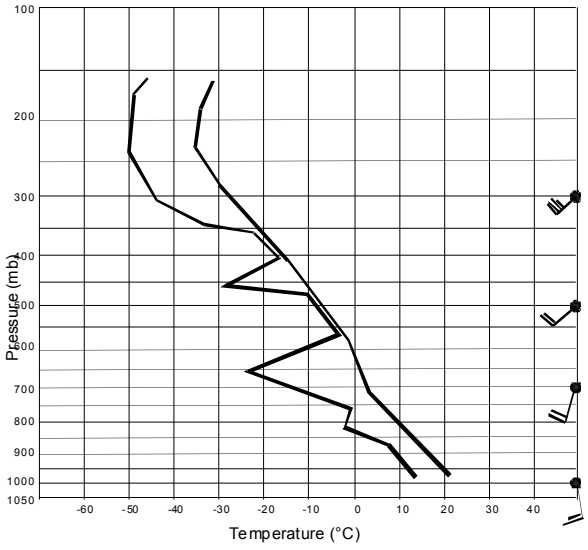
**Los Angeles, CA**



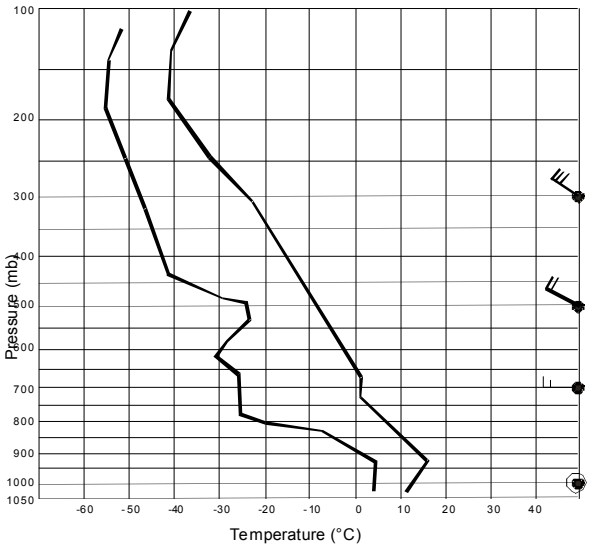

**Denver, CO**




**Champaign, IL**




**Pittsburgh, PA**



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