

Laboratory of Synoptic Meteorology

**Surface and level map
analysis pressure in the
upper atmosphere**

(Second Semester)

ASD / 2nd Stage

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Pressure level map analysis 500hpa

drawing of isotherms

The purpose of the experiment: Analysis of the 500 hpa pressure level map by drawing isoheight and isotherm lines to determine the warm and cold air masses.

The theoretical part : The pressure level of 500 hPa is considered one of the basic levels in weather analyzes, as it represents the center of gravity being located approximately in the middle of the troposphere.

This type of map is important in preparing for another type of weather maps, especially fish maps and western waves maps (long waves) to predict the movement of weather systems.

The practical part: When drawing a pressure level map of 500hPa, we follow the same rules in drawing contour lines at a pressure level of 850 mb and 700 mb with the following rules:

- 1- The pressure level is 500 hPa within the potential height (5900-5240)m, and the average height is 5000m.
- 2- The intervals between each line of my effort height and the last 60 m, are drawn in the form of continuous lines in black and the starting value of the line (5600m) . The values may start with the number 0 to the right, for example, 560 clean 0 to the right of the number to become 5600
- 3- Isothermal lines are drawn at this level for their importance in determining the areas of thermal agreement, and the period between a contour line and another is 5c°. Positive when we have a hurricane.

Discussion:

- 1- Locate the geographic locations of the high and low altitude centers on the map?**
- 2- Compare the location of the centers with those in the previous experience?**
- 3- What are the air masses that appeared and what are their value?**