

WORKSHEET 5

temperature/pressure relation related with the weather

The main purpose of this worksheet is to show the relation between temperature/pressure and the weather.

In order to show this we choose two different meteorological station: [Manta \(airport\)](#) (00° 57.02' S lat., 80° 40.87' W long.) and [Latacuna \(airport\)](#) (00° 54' S lat., 78° 37' W long.)

For both cities we are going in the **Weather archive** and we extract from the database the mean monthly temperatures for some particular year. For beginning we chose 2017. The obtained recorded values will be noted in the table below.

| Month | Manta - mean monthly temperature [units - °C, °F,K] | Latacuna - mean monthly temperature [units - °C, °F,K] |
|-----------|---|--|
| January | | |
| February | | |
| March | | |
| April | | |
| May | | |
| June | | |
| July | | |
| August | | |
| September | | |
| October | | |
| November | | |
| December | | |

Task to carry out:

1. Identify by using google maps where are the two location. Which is the distance between them?
2. The students will plot the data using Excel software.
3. The students must discuss the plot obtained in term of values and variation
4. The students must explain the result.
5. From **Weather archive** the students will obtain the P0, atmospheric pressure at weather station level (millimeters of mercury) for both location, coresponding to the same time range, example: July of 2017. What are the value? how this result can be used to explain temperature dependence ?