CCI ASSIGNMENT – 1 Name: RAHUL VARMA

Roll No: S20200010212

Location:

Narsipatnam (Latitude: 17.6664° N, Longitude: 82.6105° E).

Data is taken from: <https://power.larc.nasa.gov/data-access-viewer>.

Data Taken on 08 – 09 – 2022.

Data Taken from 1990 – 2020 (Year).

Climatic parameters:

1) Temperature.

2) Precipitation (Rain Fall).

3) Solar Radiation (3 types).

TEMPERATURE (°C):

Temperature vs Year Graph:

Trend Line for the graph is represented in Black Dashed line.

Average Temperature for the graph is represented in red line (26.04226 °C).

Observation’s:

1. By Observing the graph one can notice that value Changes from one year to another year
2. In 1990 the value is 25.81 °C and in 1995 value dropped to 25.47 °C.
3. It’s like fluctuating from one year to another this is called as Climate variability (year to year fluctuation).
4. Linear Trend line is plotted for the data and it is pointing upwards.
5. It means that the temperature is increasing in Linear Trend.
6. Linear Trend exist in the data which is called as Climate change (for long time).
7. The Maximum Value occurred in the year 2009 (26.82 °C) and minimum value in the year 1995 (25.47 °C).
8. Trend Line and Average Line clearly show that how the values are changing form year to year.

RAIN FALL (mm/day):

Rain Fall vs Year Graph:

Trend Line for the graph is represented in Black line.

Average Rain Fall for the graph is represented in red line (3.427097 mm/day).

Observation’s:

1. By Observing the graph one can notice that value Changes from one year to another year
2. In 1990 the value is 3.5 and in 2002 value dropped to 2.02 mm/day.
3. It’s like fluctuating from one year to another this is called as climate variability (year to year fluctuation).
4. Linear Trend line is plotted for the data and it is pointing upwards
5. It means that the Rain Fall is increasing in Linear Trend.
6. Linear Trend exist in the data which is called as climate change (for long time).
7. The Maximum Value occurred in the year 2010 (5.36 mm/day) and minimum value in the year 2002 (2.02 mm/day).
8. Trend Line and Average Line clearly show that how the values are changing form year to year.

SOLAR RADIATION (W/m^2): (1st type)

SOLAR RADIATION vs Year Graph with Trend Line:

This is CLRSKY\_SFC\_PAR\_TOT Solar Radiation.

Trend Line for the graph is represented in Black line.

Average SOLAR RADIATION for the graph is represented in red line (117.822 W/m^2).

Observation’s:

1. By Observing the graph one can notice that value Changes from one year to another year
2. In 1990 the value is 120.02 and in 2003 value raised to 121.62 W/m^2.
3. It’s like fluctuating from one year to another this is called as climate variability (year to year fluctuation).
4. Linear Trend line is plotted for the data and it is pointing down wards
5. It means that the SOLAR RADIATION is decreasing linearly.
6. Linear Trend exist in the data which is called as climate change (for long time).
7. The Maximum Value occurred in the year 2003 (121.62 W/m^2) and minimum value in the year 2018 (114.02 W/m^2).
8. Trend Line and Average Line clearly show that how the values are changing form year to year.

SOLAR RADIATION (W/m^2): (2nd type)

SOLAR RADIATION vs Year Graph with Trend Line:

This is ALLSKY\_SFC\_UVA Solar Radiation.

Trend Line pointing Down Ward.

SOLAR RADIATION (W/m^2): (3rd type)

SOLAR RADIATION vs Year Graph with Trend Line:

This is ALLSKY\_SFC\_UVB Solar Radiation.

Trend Line pointing Down Ward.

These are Three Types of Solar Radiation.

Black Dashed line represent Trend Line.

Red Line represent Average Value.

Note: For Solar Radiation, for my town the values are present from 2000 – 2020, 1990 – 1999 values are not given.

So, I Plotted for the given value from the Website.

🡨THE END🡪