Meteorology 227 – Assignment #11
Due: 12/11/2015

Problem: We would like to analyze data from one of the new Iowa State University soil moisture network stations. These sites provide a large range of observations at hourly intervals. We would like to do some simple calculations using the data and make a couple of plots.

Assignment: Using my example in class as a template, write a Python script that will read the data from the soil moisture network station and plot the data.

In particular, use the tools available in the Python packages discussed in class to:

1. Find the average 2-m air temperature (TAir) and the average 4”, 12”, 24”, and 50” soil temperatures (TSoil, T12, T24, T50, respectively),
2. Find the variability (standard deviation) of these values,
3. Find the total observed rainfall (Rain_mm_Tot) over the times provided,
4. Make a simple plot of at least one of the variables.
5. Do something creative that we haven’t done in class.

You will be expected to at least use the following packages:

1. NumPy
2. Pandas
3. matplotlib