Syntax Problem #14

Objectives

1. Practice writing and running Python code.
2. Read in remote data.
3. Use units with data.
4. Practice using array slicing.
5. Use MetPy to perform calculations.
6. Use datetime to work with dates and times.

Problem

1. Write a Python program that reads in upperair data from the University of Wyoming archive using the Siphon module. Specifically, get the data for Dodge City, KS on 6 May 2007 at 00 UTC.
2. Attach units to the data and calculate potential temperature and virtual potential temperature of the sounding data.
3. Print to standard output the pressure, temperature, dewpoint, potential temperature, and virtual potential temperature of each level in the sounding.

Notes:

- Siphon has great functionality to read a handful of remote datasets. Be sure to look over the documentation available at https://unidata.github.io/siphon/latest/index.html. Specifically, the functionality to get remote data from the Wyoming sounding archive is at https://unidata.github.io/siphon/latest/examples/upperair/Wyoming_Request.html#sphx-glr-examples-upperair-wyoming-request-py.
- Double check to make sure you have the correct output and conversion for temperature.
- Make sure documentation (e.g., comment block and comments throughout code) is present in your source code.
- Make output informative so that anyone running your program understands what is being produced without seeing the assignment.
- Name the program **`syntax14_<username>.py`** and place a copy in `/share/share/syntax_problems/`.