# Syntax Problem #16

## Objectives
1. Practice writing and running Python code.
2. Use xarray to read a GOES data file.
3. Practice plotting a satellite image.
4. Use a MetPy colormap to enhane an image.

## Problem
1. Write a Python program that reads in the most current CONUS region GOES-16 data for mid-level water vapor (channel 9). Plot using the satellite projection from the netCDF file and use an appropriate colormap from MetPy to enhance the water vapor imagery.
2. Use `vmin = 180` and `vmax = 290` as the minimum and maximum brightness temperatures.

Call the image **water_vapor_<date_time>_<username>.png**. The date and time values in the name of the file should be from a datetime object.

*Notes*:
- 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 **syntax16_<username>.py** and place a copy in `/share/share/syntax_problems/`.