**ATM350 Homework 2: Due *Tuesday, March 12*, start of class**

I**n your ATM350 directory, create a directory named *hw2* and set its permissions such that it is readable, writable, and executable only by you. Then cd into that directory. When scripts are called for, *be sure that you test them* before you are finished! They should all be well-documented with effective use of echo statements and comment lines, and all should end with the proper exit line as used in class.**

1. Write a script named **latest\_metars\_3cities.csh** that outputs *to the terminal* the latest METAR for three cities *that are user-specified on the command line*. You must use one ***foreach*** loop in this script, and be sure to use *comment lines* and ***echo*** statements in your script so that it is clear what each step is for.

-*Note: To run the script, the user should type:*

latest\_metars\_3cities.csh city1 city2 city3

1. Write a script named **sun.csh** that searches an entire state's forecast discussions from the current date the program is run, and outputs each line containing the word "sun" into a text file named sun\_{state}\_{date}.txt (e.g., sun\_MN\_190304.txt).  Your script should:
2. Use the **date** command in order to create a variable from which to name your text file (i.e., do not “hard-code” the date)
3. Set a variable for the two-letter state abbreviation that you will use in the weather program and also to name your text file (i.e., do not “hard-code” the state)
4. Make use of **piping** (|) the output of the weather command to the **grep** command in order to do a case-insensitive search for the string "sun”.
5. Write a script that will use a while loop and a foreach loop that writes out the following products from **weather**:

GFS short-range MOS

GFS long-range MOS

NAM MOS

LAMP MOS

FLATMETAR

for a *user-specified site*, and a *user-specified number of days ago* (which can be any number from 1 to 7) for hours 0, 6, 12, and 18 UTC for that particular date. Output should be written to a file of the form ccc\_yymmdd\_mosmetar.txt, where ccc is the three-digit city id. Do not "hard code" the city id nor the date. Use shell variables to do so.

# Hint: look up how to use the date command, with the –d option, to get a date *x number of days ago*.

# Hint: use a **while** and a **foreach** loop to loop over the hours and weather products, respectively.

1. In the directory **/spare11/atm350/common/hw2**, there is a file called **fixme.csh** that needs some debugging! Copy the script to your directory and edit the script so it runs to completion without errors.
2. Using the **date** command, and **if/else if statements**, write a script that outputs to the terminal all of the lines with the string “snow” from the latest forecast discussion for a user-specified site if the current month is November through March, and “rain” if the current month is April through October.