Syntax Problem #15

Objectives

1. Use MetPy to interpolate point data to a grid
2. Practice plotting observations
3. Practice contouring and color-filling computer drawn contours.

Due by the end of class.

Problem

1. Interpolate the geopotential height and the wind speed for the 300-hPa level for 12 UTC 14 March 1993 from upperair observations using MetPy `interpolate_to_grid` function.
   - Use `interp_type='rbf', hres=1`
   - Remove any additional bad points (KVER already removed for you)
   - Drop any NaN in height and speed variables.
2. Plot the observations around a standard upperair station model and plot contours of geopotential height every 120 m and colorfill wind speed every 20 knots starting at 50 kt. Smooth data fields as desired.

A starter notebook is available in `/archive/courses/met330/syntax15_starter_notebook.ipynb`

Notes:

- Call image **300hPa_Obs_Gridded_Contours.png**
- 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 understand what is being produced without seeing the assignment.
- Name the program **syntax15_<username>.py** and place a copy in `/archive/courses/met330/syntax_problems`