

Excel Assignment #1 Atmospheric Sounding

Objectives: The proficient student will be able to...

- ...make high quality professional charts in Excel.
- ...use basic formulas in Excel.

Goal: Plot the density of the air according to height in the atmosphere.

Directions:

- Go to <http://weather.uwyo.edu/upperair/sounding.html> and set the type of plot to “Text: List” and then select a station. The data comes from weather balloons which are released twice a day from each of the National Weather Service offices and a few other places.
- Everyone’s data should be unique. There are many stations throughout North America and you can choose any day.
- Get the data from the web into Excel, such that all the data is in separate cells.
- Calculate the density for each altitude. Density is $\rho = \frac{P}{287.05T}$, where P is pressure and T is temperature in Kelvin (Temperature in Celsius +273.15). Pressure is in hPa and needs to be converted to Pa (Pascals). Note: 1 hPa = 100 PA.
- Make a chart which displays density and height in the atmosphere.
 - Make the chart professional looking.
 - In the title include the location where the data was collected.
- Turning the assignment in:
 - Filename: *YourFullName_Excel1.xlsx*
 - Save the file in your H: drive within the folder “SRT II Turn In”

Correctly turns in (<i>Note:If you lose these points you may lose all other points as well.</i>)	/2
Data retrieved from the internet and placed in Excel	/3
Temperature and pressure conversions	/2
Density calculation	/3
Chart (professional, titles, units, appropriate scale, etc.)	/5
Total	/15