Things that were worked on:

1. Everything is working on Cheyenne, I finally set up my environment and got the correct packages imported.
2. I ran my scripts to be graphed on the WXT and Sonic files, some of them began to fail so they needed adjustments.

* A lot of this was due to the larger size of WXT data, so the correct years needed to be parsed out in order to graph alongside the sonic.

1. Got the full 2014-2021 WXT record graphed, as well as the Sonic’s, and was able to plot them against one another (once again, the trends show Sonic reports higher wind readings pretty much all the time)
2. Took daily averages of both records, and plotted those.
3. Began looking through the radiosonde data to find some files from different stations with no missing values.
4. Practiced using that algorithm on some of the station values so I can start to formulate the correct format to use when coding this up.
5. Atmospheric Research - A small amount of time spent on this project actually goes into researching various things that attribute to high wind speeds here in Colorado - i.e air pressure differences that drive fast winds, and the main thing we are studying in this project - chinook winds. I like to draw diagrams and remind myself of the science behind some of this stuff!

* <https://www.weather.gov/bou/highwind#:~:text=The%20two%20main%20causes%20of,Range%20and%20other%20mountain%20ranges>

Things to do:

1. Run the Wind Roses script.

* Full data
* Tenth percentile data

1. There’s some errors I’m running into with the WXT file in regards to parsing out the data to be used for daily averages. That needs some more work and I need to figure out where the code is going wrong.
2. Need to find corresponding radiosonde data still, as well as continue practicing the mathematical calculations by hand in order to correctly do it in Python.

Questions:

1. Sometimes Cheyenne runs into issues with being down which tends to delay some of the graphing and progress on the code - as I have to restart it multiple times. Is there a way, or maybe a certain time, that I can use it when it’s not going down?

Log directly on to [Casper](https://www2.cisl.ucar.edu/resources/computational-systems/casper) (link embedded). Sometimes Cheyenne is done, but the front end nodes (Casper) are OK. If both are down, you can only wait.

1. What if 3 records of the same day from different stations don’t line up? (i.e they have missing data?) How can we handle something like that when doing the calculations?

I am assuming you are talking about the radiosonde data. If there is missing data for any of the stations you need for the calculations, let’s just skip that day for now. Choose days that have no missing data for all of our stations.