**January 15th, 2021**

* + 1. Kick off meeting w/ Christine, Jerry, Moon, and Aneesh to go over what we did during the Fall semester!

**February 5th, 2021**

1. Discussed formulas in Appendix A and B in [Forecast techniques](https://drive.google.com/drive/u/0/folders/1yPURESkLnNDcyARewoGZOy9gV3Y_qUld) for high wind events.

[See Jamboards 3-11](https://jamboard.google.com/d/1-eNwUhGbyPHSZySi0UEBq_t1VpjRFy5kc8cc25tGvDc/viewer?f=9)

1. Assign geopotential, wind, temperature at specific levels from radiosonde inputs into arrays
2. Compute empirical equations using (a)
3. Write logic code (worksheets) to assign values to 60% and /80% probabilities of a high wind event based on (b). End result will be two arrays (one for 60% and one for 80%) for each time slice of the radiosonde data
4. Test out code with a short time array (a few days), start with one value on appendix worksheets (DZ70D). Use test days with no missing data.
5. Copied mlw files (SONIC) over to Cheyenne: /glade/scratch/shields/for\_moon

**February 26th,2021**

1. Final wind juypter notebook for wind plots:
2. <https://github.com/MuntahaPasha/ATOC-4900-Anemometer-Project/blob/main/Jupyter%20Notebooks/FinalWindData.ipynb>
3. Seems like the degree labelling is off by 90degrees, Moon will check.
4. Goal for end of semester is to ingest radiosonde and parse into variables
5. Aneesh will share some plots and synoptic fields to plot from reanalysis that will be “practice” for when we identify dates/timestamps of high wind events from radiosonde data.

**March 5th, 2021**

1. Windroses are corrected.
2. Moon continues to work on ingesting the radiosonde data and parsing the variables.

**March 19th, 2021**

1. Discussed logic in code to parse radiosonde data.
2. Data is ingested but still needs to be parsed correctly.

**April 1st, 2020**

1. Moon showed us an ingested radiosonde sample in python.
2. Moon will move over to Cheyenne and start ingesting the data en mass, next up will be parsing the data into the various variables and computing the empirical equations for each date.

**April 19th, 2020**

1. Radiosonde plan:
   1. Compute timeseries of a) probabilities of wind events based on the worksheet formulas, and b) each variable within the formulas.
   2. Determine which thresholds for each part of the equation are the dominant ones.
   3. **Compute the trends of (1) and relate to the anemometer**
   4. Synoptic plots showing the climate change signal (if there is one).

**Radiosonde data currently available for:**

Lander WY (USM00072576), LND

Salt Lake City UT (USM00072572), SLC

Grand Junction CO (USM00072476), GJT

**Focus on these formulas:**

1. DZ70D = Z70SLC + Z70GJT - 2 \* Z70LND
2. T4030 = T40 - T30

**Key: DZ = difference (height), unit will be meters**

Z70 = 700mb height level value

T40 = Temperature at 400mb

T30 = Temperature at 300mb

1. End work date for Moon? June 4th.

**May 10th, 2021**

In the next few weeks…

1. Update the anemometer plots with the latest wind data, will email Gary for an updated timeseries.
2. Have a functional python script to ingest radiosonde data and…
   1. calculate the two formulas:
      1. DZ70D = Z70SLC + Z70GJT - 2 \* Z70LND
      2. T4030 = T40 - T30 (for each of the three stations)
   2. OK, to just use a small sample of timeslices where no data is missing.
   3. Add a timeseries plot of 2a and 2b to your python script. This script will be a template for future programmers.