Python prediction code:

1. Do a WRF run with hourly outfiles
2. From command line, navigate to the testing folder of the prediction code (cd Desktop/Prediction\_Code/Testing/)
3. Type “source activate testing”
4. Edit the WRFDriver.py file so that the WRF file being read and the path being looked at are accurate for your run, and the starting lat, long, max altitude, and elevation are set properly. Under #Write File, change the first string after “np.savetxt(“ to a suitable name for the text file of points.
5. Next edit WRFPrediction.py so that the mass of the balloon, payload mass, and radius of balloon are accurate.
6. With the testing environment still active, type “python WRFDriver.py” which will begin the prediction process, and start printing latitude, longitudes, and altitudes to the screen.
7. Once this process is complete, a text file with the name you set in step 4 will be created in the /Desktop/Prediction\_Code/Testing directory.
8. Open the text file and add a new column that precedes the first column (latitude) called ‘PtID’. Set the first row of PtID to s432, the second to s433, etc. (I think these values are arbitrary, so don’t worry about what they mean).
9. Save the spreadsheet as a .csv
10. Open Google Earth Pro
11. File -> Import… -> myfilename.csv
12. Next -> Next -> Finish
13. A window pops up asking if you want to apply a style template, select yes.
14. Create a new template
15. Under the Height tab (top, far right), select “set height from field”
16. From the Select height field dropdown, select “Altitude\_m”
17. For the mapping method, select continuous and make sure the Height units are set to meters
18. Under continuous mapping options, set minimum and maximum height (on the right) to match the values for min and max altitude (you can then save the template to be used again later)
19. Google Earth will automatically zoom into the region where the points occur. On the left, under temporary places, you .csv should be present, but not active. Check the box next to it to visualize the balloon trajectory
20. Trajectories can be exported to a .kml by File -> Save Place as