PHYS 650

Homework 2

Data and resources for this homework are available in the PHYS 650 Assignments Folder.

1- From the radiosonde file provided, generate a Skew-T plot/diagram. You can use this available, Python resource:

https://unidata.github.io/MetPy/latest/api/generated/metpy.plots.SkewT.html

2- Determine the Environmental Lapse Rate ($\Gamma e = - \Delta T/\Delta z$) for this sounding?

3- Given that the Dry and Moist Adiabatic Lapse Rate are 10°C/1km and 6 °C/1km, respectively, how would categorize the static stability of the atmosphere at the time of the sounding?

4- What is the planetary boundary layer height for this sounding? Follow the analysis by Wang et al. (2014): Atmos. Meas. Tech., 7, 1701–1709.