ATM 311 Convective Storm Matrix

Refer to the UCAR COMET module on the convective storm matrix, as shown in class, and in the link below (*note: you will have to create an account, which is very quick and easy…and worth it for all of the great COMET modules available!)*: https://www.meted.ucar.edu/convectn/csmatrix

Note that the lower numbers on each hodograph indicate the magnitude of the wind shear, while the upper number indicates the depth (above ground level) in km of the shear layer.

1. Which simulation (e.g., N3) produces one of the strongest right-moving supercells? Describe the environment (shear and instability) associated with this simulation.

2. Which simulation produces dominant left-moving supercells? Again, describe the environment (shear and instability) associated with this simulation.

3. Pick a simulation where convection completely (or nearly completely) dissipates by the end of the simulation. Why does this particular buoyancy/shear environment result in short-lived convection? For this answer, be sure to also note which simulation you've chosen.