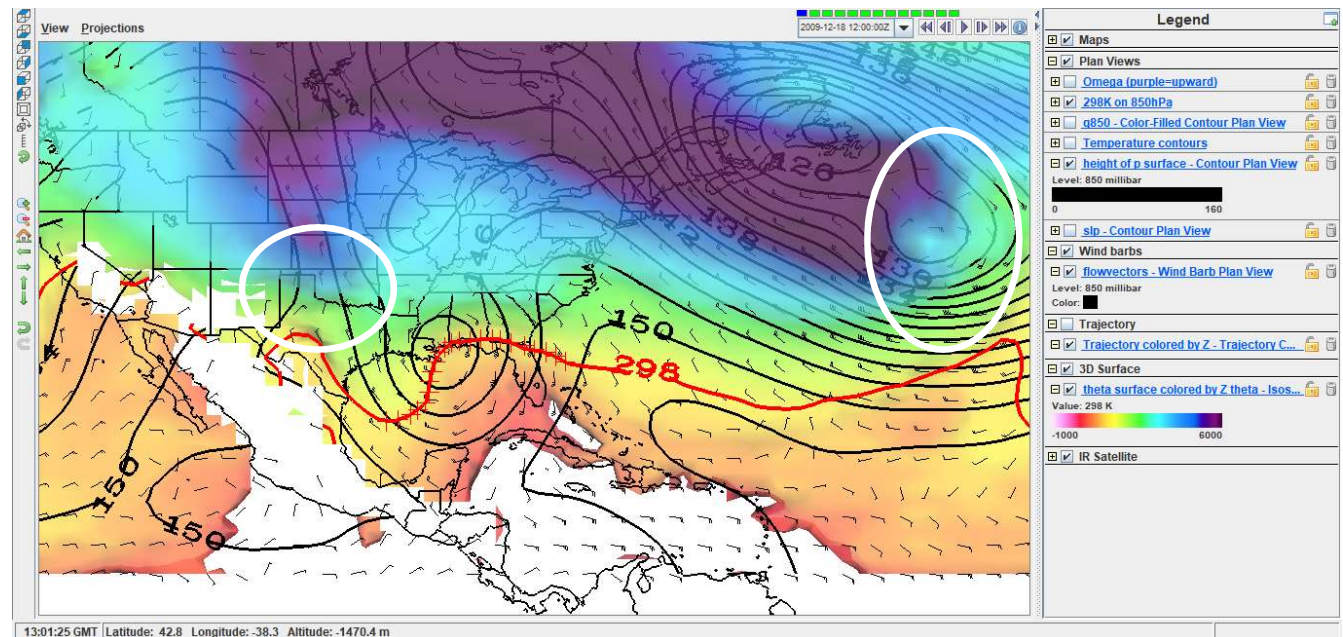


Homework (jupyter notebook + IDV)

Ivenis Pita

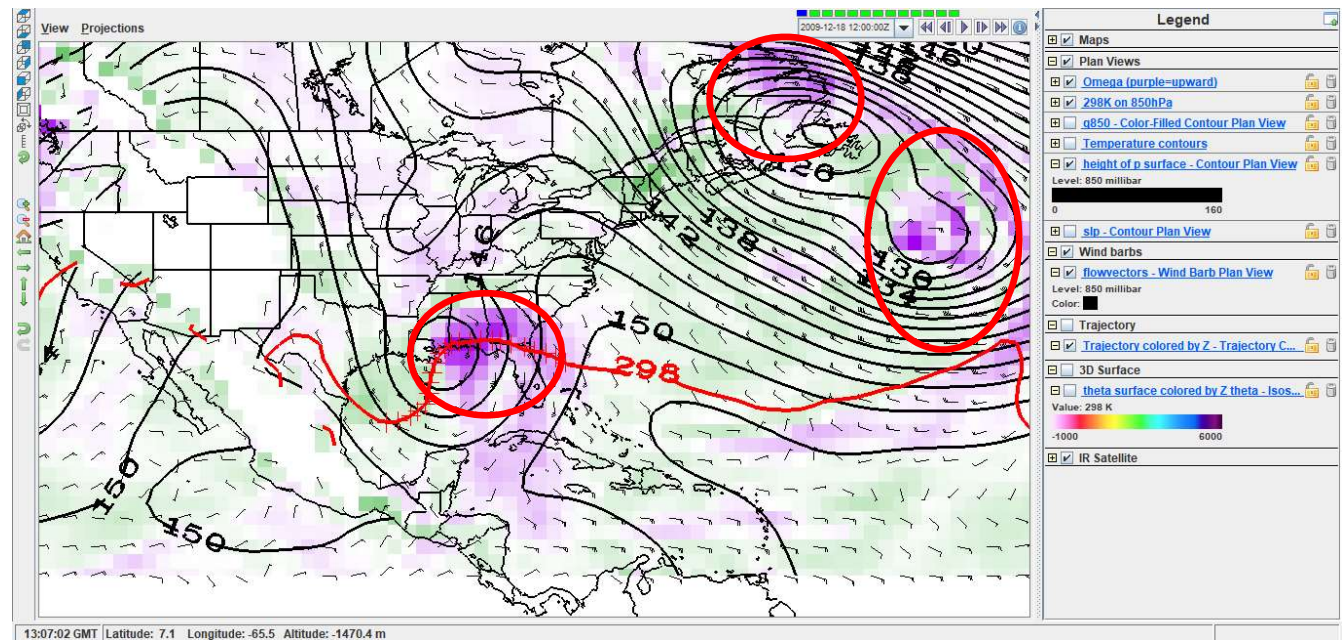
Exercise a) Do areas of ascent match expectations? Explain.

- Greater gradient of Θ surfaces.
- Adiabatic motion is happening at the circled locations.



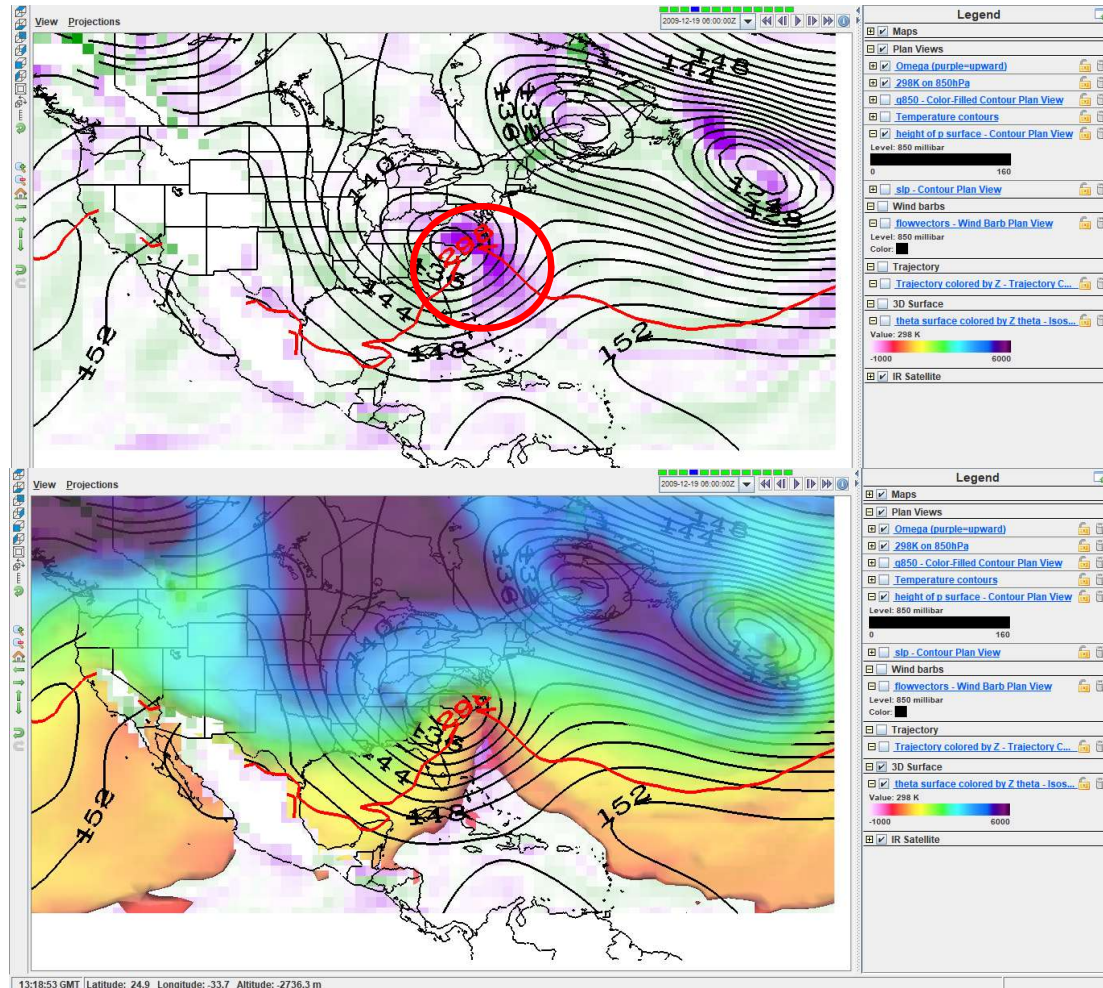
where do you expect upward motion, adiabatically?

- Upward motion = circled locations.
- Match on the left one.
- Northern Florida has an upward motion as well.



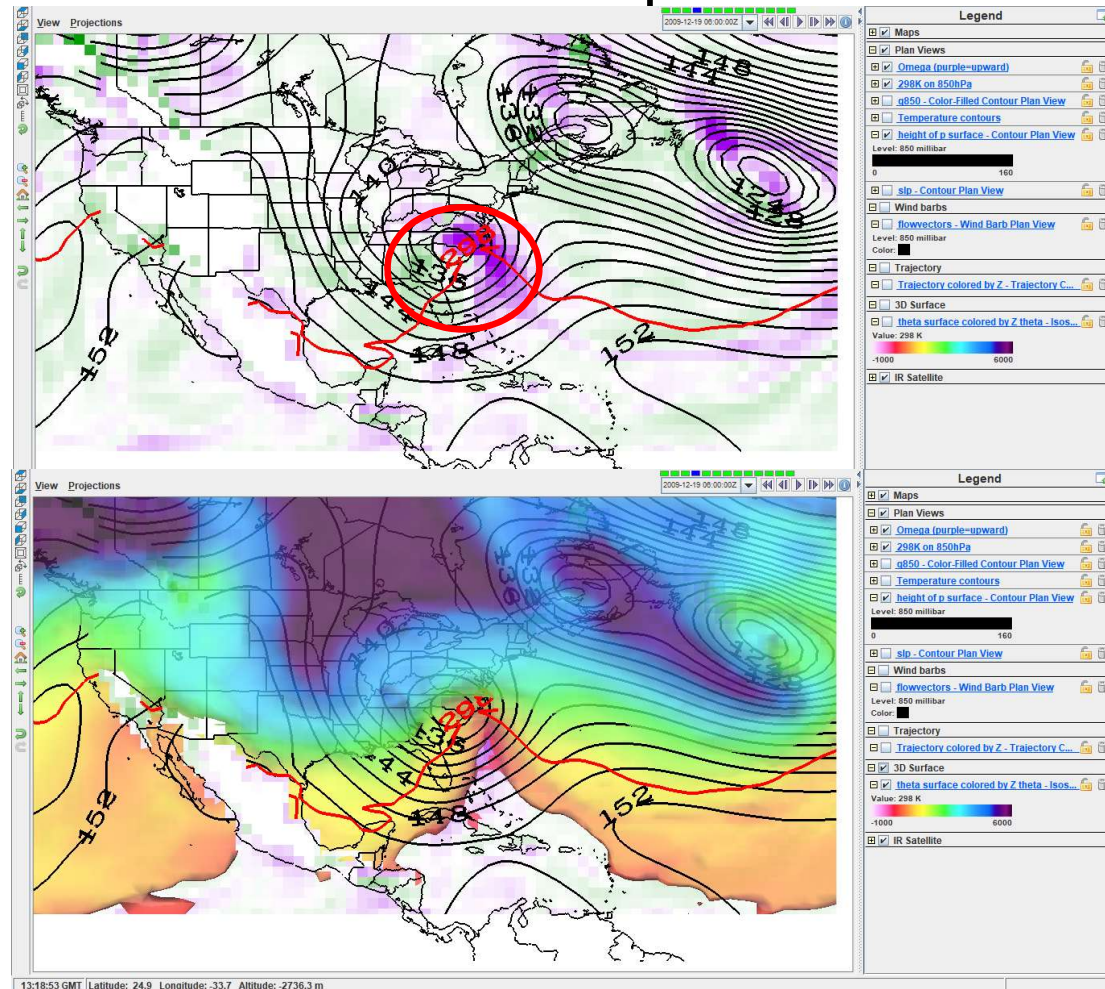
Exercise b) How well does 850-hPa omega along the thick red 850-hPa–298-K intersection line agree with the isentropic reasoning?

- Part of the upward motion agrees with the 298 K isoline
- The gradient of Θ with height is more visible in the east of northern FL.
- 12/19/2019 0600



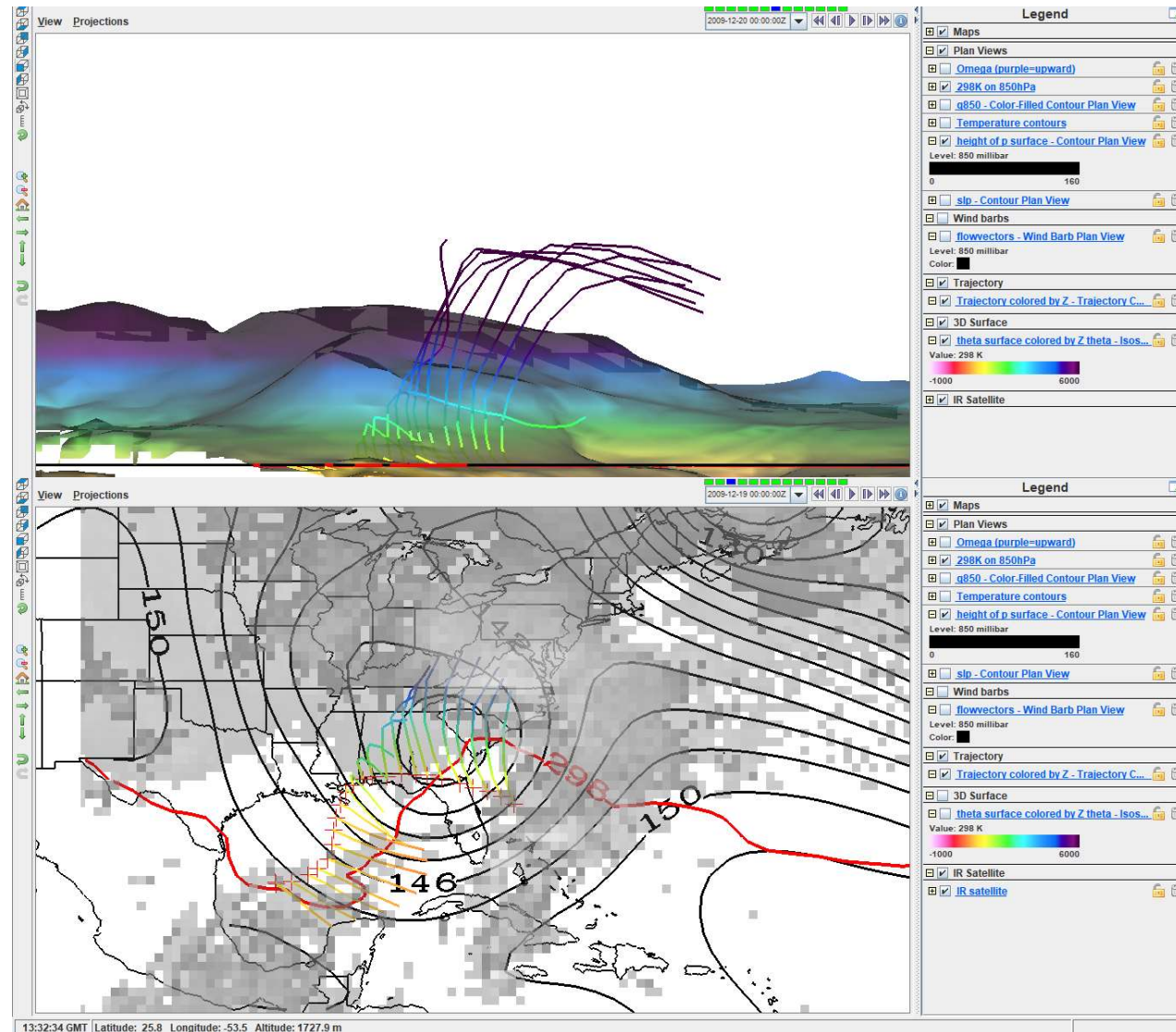
Are there places and times where the omega is opposite in sign to that from isentropic reasoning?

- Yes, in the northern FL, right next to an Upward motion, there is a downward motion.
- 12/19/2019 0600



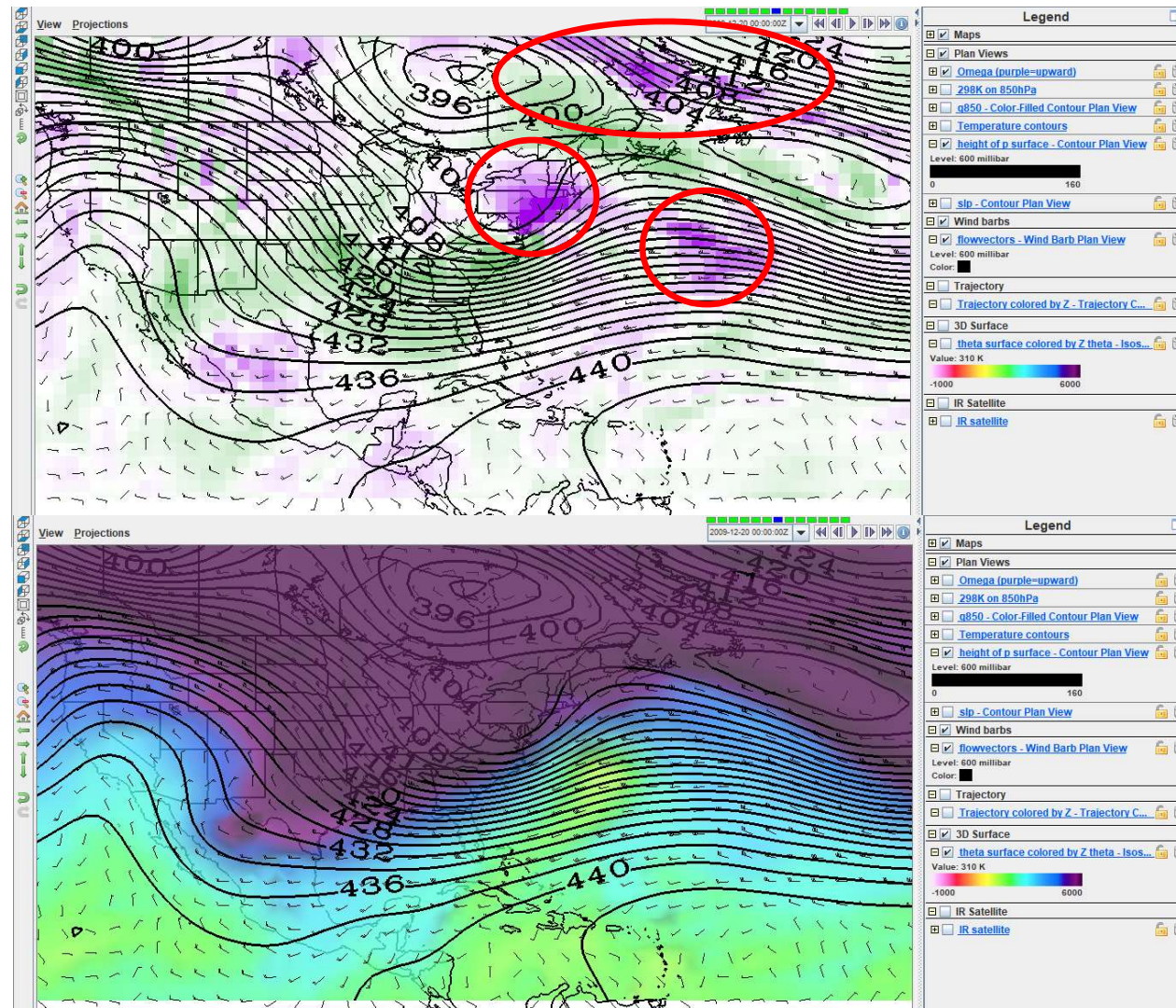
Exercise c)

- The particles were probably advected by the wind resulted from the storm and went upward and eastward.
- We can see the moment of the clouds going eastward.



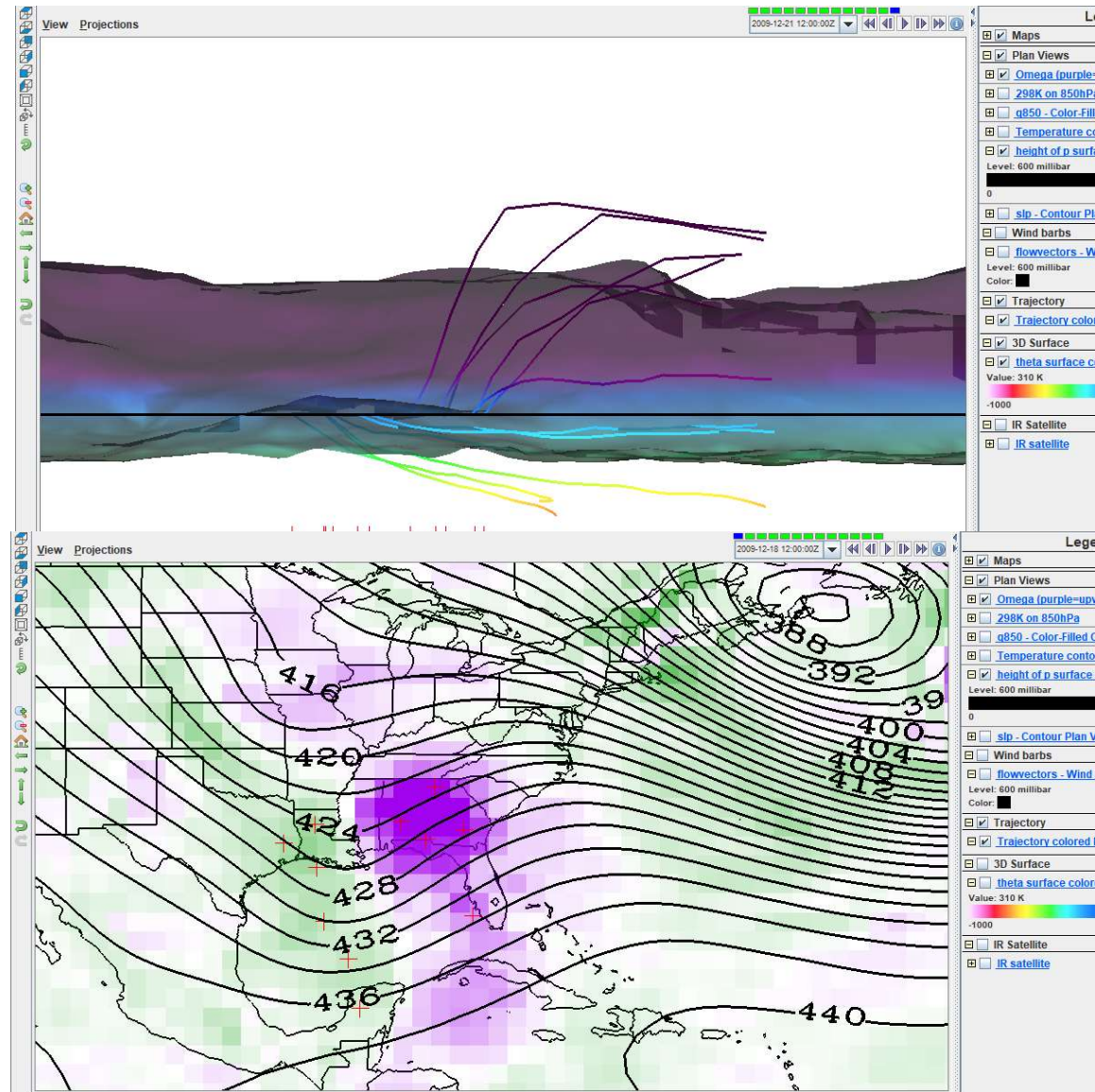
Changing altitude

- Main upward movement regions are shown by red circles.
- The isentropic surfaces still agrees in part with the areas of upward flow, however some other factor are influencing the vertical wind pattern. Such as advection. IR image shows intense clouds matching upward wind areas.



Creating trajectories

- Some particle in



Creating trajectories

- Particles followed the up/down wind pattern
- Downward wind – particles went down
- upward wind – particles went up
- Weak vertical wind – particles didnt change height

