

LAB ASSIGNMENT #11

due Thursday, October 22nd
(10 points)

Learning Objectives-

Upon completion of this lab, you will be able to:

- Use Vis5D to visualize and investigate atmospheric datasets.
- Interrogate an atmospheric dataset to identify a noteworthy structure.
- Continue refining your ability to concisely describe and diagnose atmospheric phenomena.

- Assignment Description -

Create a Vis5D image that is interesting to you and provides useful diagnostic information about a weather feature of your choice (examples include: the thermally direct circulation in the jet exit region, the strong positive vorticity that characterizes the frontal boundary, vorticity adv by the thermal wind, etc.). It can be anything you want, so long as it provides insight into some aspect of a physical phenomenon we have discussed in class (ie a jet stream, front, or cyclone).

Make sure that the image is aesthetically appealing and the contours, angle of the projection, and fill patterns are as you want them. Once you've completed and saved the image, write up a paragraph-length description of the image and what it tells you about the structure or development of the cyclone. Be sure to use details and provide a dynamical description of what is going on. What interesting features do you see? How does it relate to the synoptic forcing in the environment?

If you choose to show a cross section, also include a horizontal image showing where the cross section was taken.

If a particular diagnostic looks like it may be important or large from your image, but you cannot plot it directly in VIS5D, provide a description of why you believe this forcing is strong from the image you have created. You may add hand analysis to your image to support your argument.

- Assessment -

Grading will be based on both the aesthetics of your image and the overall quality of your description.