Physical Oceanography
Problem 6
Due: October 12, 2015

The map below shows streamlines for flow in the atmosphere (30°S – 30°N). The streamlines are colorized to indicate wind speed.

Using the map, estimate a value for each of the four kinematic properties discussed in class (shear, curvature, diffluence and stretching). Choose your own location at which to make each estimate, but try to choose a location that you believe will give a “big” value.

Indicate the location(s) you have selected on the map. Explain how you made your estimates in sufficient detail so that your logic can be followed.

Assume that the flow is from West to East on all streamlines. Note: the angle $\psi$ is in radians.