ATM 317

Homework 3

Due: Wed. April 4

1. Using the equation for the local rate of change of eddy kinetic energy (KE') and the baroclinic conversion term. (5 pts)
    a. Draw the four-quadrant model of a jet streak. Be sure to include information about where you would expect warm and cold air masses.
    b. Determine the sign of the baroclinic conversion term in the jet entrance region (show your work).
    c. Determine the sign of the baroclinic conversion term in the jet exit region (show your work).
    d. If the local change of KE' was described by only the baroclinic conversion term, describe what happens to the KE' of a parcel as it travels though a jet streak