Homework #6
Introduction to physical oceanography

1. Planetary vs relative vorticity: Read section 4.2.1 "Vorticity" (p 85-90) in the Open University book ("ocean circulation" 2nd edition, see reading list on course home page). Answer questions 4.3 and 4.4 there. Note that "relative vorticity" is $\zeta \equiv \frac{\partial v}{\partial x} - \frac{\partial u}{\partial y}$, and "planetary vorticity" is $f = 2\Omega \sin\theta$.

2. *Western boundary currents:* Read about western boundary currents in open university book (section 4.2.2, p 90-98) answer questions 4.6 and 4.7 there.

3. *Western boundary currents:* Read Knauss sections "the general circulation: a first look" and "The general circulation: western boundary currents" on pages 128-133. Write the actual equations corresponding to the symbolic equation (6.29) there, as presented in class, and explain the physical significance of each term.