Take Home Final

OCEA/EART 172/272: Geophysical Fluid Dynamics

Due at the end of our class exam time: Monday June 8, 3pm (hard deadline)

1. Cushman-Roisin Analytical Problem 11-4 and 11-5. Hint: Calculate displacements Δz and consider the relevant non-dimensional number for the importance of the Coriolis Force.
2. Cushman-Roisin Analytical Problem 13-2.
3. Cushman-Roisin Analytical Problem 13-4.
4. Cushman-Roisin Analytical Problem 15-1. Note: Application of the ideal gas law ($p = \rho RT$) to the thermal wind equations results in the form given in Eq 15.52, where $\alpha = \frac{1}{T}$. This is the form that you should use.
5. Cushman-Roisin Analytical Problem 15-4.