$$= -(\zeta + f)\left(\frac{\partial u}{\partial x} + \frac{\partial v}{\partial y}\right) + \left(\frac{\partial u}{\partial z}\frac{\partial w}{\partial y} - \frac{\partial v}{\partial z}\frac{\partial w}{\partial x}\right) + \frac{1}{\rho^2}\left(\frac{\partial \rho}{\partial x}\frac{\partial p}{\partial y} - \frac{\partial \rho}{\partial y}\frac{\partial p}{\partial x}\right) + \left(\frac{\partial F_y}{\partial x}\right.$$

$$\frac{\partial}{\partial t}\left\{\iint \frac{1}{2}\frac{\overline{q'^2}}{\partial_y \overline{q}}\, dy\, dz - \int_C \left[\frac{1}{2}\frac{f_0}{N^2}\frac{\overline{b'^2}}{\partial_y \overline{b}}\right]_0^H dy\right\} = 0$$

$$m = (u + \Omega r\cos\vartheta) r$$

$$\vec{\omega} = \nabla \times \vec{v}$$

$$B = \frac{\vec{v}^2}{2} + c_p T + gz = \text{const}$$

$$Bu = \left(\frac{Ro}{Fr}\right)^2$$

$$\psi' = \mathrm{Re}\,\Psi e^{i(kx+ly+mz-\omega t)}$$

$$f_0(\vec{u}_1 - \vec{u}_2) = g'\vec{k} \times \nabla\eta$$

$$N^2 = -\frac{g}{\tilde{\rho}}\frac{\partial \tilde{\rho}}{\partial z}$$

$$\omega = \overline{u}k - \frac{\beta k}{K^2}$$

$$\frac{\partial \mathcal{A}}{\partial t} + \nabla \cdot \vec{\mathcal{F}} = \mathcal{D}$$

$$q = \beta y + \left[\nabla^2 + \frac{\partial}{\partial z}\left(\frac{f_0^2}{N^2}\frac{\partial}{\partial z}\right)\right]\psi$$

$$(U - c)\left(\tilde{\psi}_{yy} - k^2\tilde{\psi}\right) + (\beta - U_{yy})\tilde{\psi} = 0$$

$$\frac{D}{Dt}\oint \vec{v} \cdot d\vec{r}$$

$$\mathcal{E}(k) = \mathcal{K}\epsilon^{2/3}k^{-5/3}$$

$$\sigma \sim \frac{U}{L_d}$$

$$f = 2\omega\sin\phi$$

$$\theta = \theta(0) - \frac{\theta_0 \Omega^2 y^4}{2gHa^2}$$

$$\mathcal{F} = -\overline{u'v'}\vec{j} + \frac{f_0}{N^2}\overline{v'b'}\vec{k}$$

$$Ek = \left(\frac{A}{f_0 H^2}\right)$$

$$APE = \frac{R p_s^{-\kappa}}{2}\int_0^{p_s} p^{\kappa-1}\left(-g\frac{\partial \overline{\theta}}{\partial p}\right)\overline{\theta'^2}\, dp$$

$$L_v \sim \left(\frac{\nu^3}{\epsilon}\right)^{1/4}$$