$$\sigma \sim \frac{U}{L_d} = \Lambda \frac{f_0}{N}$$

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

$$\frac{\partial p}{\partial z} = -\rho g$$

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

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

$$p = \rho RT$$

$$\frac{D\vec{v}}{Dt} = -\frac{\nabla p}{\rho} + \nu \nabla^2 \vec{v} + \vec{F}$$

$$c_p = c_v + R$$

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

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

$$\frac{\partial \rho}{\partial t} + \nabla \cdot (\rho \vec{v}) = 0$$

$$dQ = c_p\, dT - \alpha\, dp$$

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

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

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

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

$$\omega = \bar{u}k - \frac{\beta k}{\kappa^2}$$

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

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

$$\frac{D}{Dt}\left(\frac{\vec{\omega}_a \cdot \nabla \theta}{\rho}\right) = 0$$

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

$$\vec{F}_{Co} = -2\vec{\Omega} \times \vec{v}_R$$

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

$$C = \oint \vec{v} \cdot d\vec{l}$$

$$Ro = \frac{U}{fL}$$

$$\theta = T\left(\frac{p_0}{p}\right)^{R/c_p}$$

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

$$\frac{D}{Dt}(\zeta + f) = -(\zeta + f)\nabla \cdot \vec{v}$$

$$\frac{1}{\rho^2}\left(\frac{\partial \rho}{\partial x}\frac{\partial p}{\partial y} - \frac{\partial \rho}{\partial y}\frac{\partial p}{\partial x}\right)$$

$$\left(\frac{\partial u}{\partial z}\frac{\partial w}{\partial y} - \frac{\partial v}{\partial z}\frac{\partial w}{\partial x}\right)$$

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

$$dT = T\, d\eta - p\, d\alpha + \sum \mu\, dS$$

$$\frac{\partial p}{\partial z} = -\rho g$$