

$$\begin{aligned}
&= -(\zeta + f) \left(\frac{\partial u}{\partial x} \frac{\partial w}{\partial y} - \frac{\partial v}{\partial y} \frac{\partial w}{\partial x} \right) + \left(\frac{\partial u}{\partial z} \frac{\partial w}{\partial y} - \frac{\partial v}{\partial y} \frac{\partial w}{\partial z} \right) + \left(\frac{\partial u}{\partial x} \frac{\partial p}{\partial y} - \frac{\partial v}{\partial y} \frac{\partial p}{\partial x} \right) + \left(\frac{\partial F_y}{\partial x} \right. \\
&\quad \left. \frac{\partial \rho}{\partial t} + \nabla \cdot \frac{\partial \rho}{\partial z} \right) \left\{ \iint \frac{1}{2} \frac{q'^2}{\partial_y q} dy dz - \int \left[\frac{1}{2} \frac{f_0}{N^2} \frac{b'^2}{\partial_y b} \right] dy \right\} = 0 \\
&\psi' = \text{Re} \Psi e^{i(kx + ly + mz - \omega t)} \qquad m = (\omega + \Omega \cos \vartheta) n \\
&L_v \sim \tilde{\omega} \left(\frac{v^3}{\epsilon} \right)^{1/4} \qquad B = \frac{\vec{v}^2}{2} + c_p T + gz = \text{const} \qquad \text{Bu} = \left(\frac{Ro}{Fr} \right)^2 \\
&\psi' = \text{Re} \Psi e^{i(kx + ly + mz - \omega t)} \qquad f_0(\vec{u}_1 - \vec{u}_2) = g' \vec{k} \times \nabla \eta \qquad N^2 = -\frac{g}{\tilde{\rho}} \frac{\partial \tilde{\rho}}{\partial z} \\
&dQ_q = \beta y + \left[\alpha^2 + \frac{\partial}{\partial z} \left(\frac{f_0^2}{N^2} \frac{\partial p}{\partial z} \right) \right] \psi \qquad \frac{D}{Dt} \oint \vec{v} \cdot d\vec{r} = \mathcal{E}(k) = \mathcal{K} \epsilon^{2/3} k^{-5/3} \\
&\qquad \qquad \qquad f = 2\omega \sin \phi \qquad \frac{D}{Dt} \oint \vec{v} \cdot d\vec{r} = \mathcal{E}(k) = \mathcal{K} \epsilon^{2/3} k^{-5/3} \\
&\mathcal{F} = -\overline{u'v'j} + \frac{f_0}{N^2} \overline{v'b'k} \qquad Ek = \left(\frac{A}{f(H^2)} \right) \theta = T \left(\frac{p_\sigma}{p} \right) = \theta(0) - \frac{\theta_0 \Omega^2 y^4}{2gHa^2} \\
&\frac{D}{Dt} (\zeta + f) = -(\zeta + f) \left(\frac{\partial u}{\partial x} \frac{\partial w}{\partial y} - \frac{\partial v}{\partial y} \frac{\partial w}{\partial x} \right) + \left(\frac{\partial u}{\partial z} \frac{\partial w}{\partial y} - \frac{\partial v}{\partial y} \frac{\partial w}{\partial z} \right) + \left(\frac{\partial u}{\partial x} \frac{\partial p}{\partial y} - \frac{\partial v}{\partial y} \frac{\partial p}{\partial x} \right) + \left(\frac{\partial F_y}{\partial x} \right. \\
&\quad \left. \frac{\partial \rho}{\partial t} + \nabla \cdot \frac{\partial \rho}{\partial z} \right) \left\{ \iint \frac{1}{2} \frac{q'^2}{\partial_y q} dy dz - \int \left[\frac{1}{2} \frac{f_0}{N^2} \frac{b'^2}{\partial_y b} \right] dy \right\} = 0 \\
&N^2 = -\frac{g}{\tilde{\rho}} \frac{\partial \tilde{\rho}}{\partial z} \left(\frac{v^3}{\epsilon} \right)^{1/4} \qquad L_v \sim \tilde{\omega} \left(\frac{v^3}{\epsilon} \right)^{1/4} \qquad \frac{D}{Dt} \oint \vec{v} \cdot d\vec{r} = \mathcal{E}(k) = \mathcal{K} \epsilon^{2/3} k^{-5/3} \\
&\qquad \qquad \qquad \frac{D}{Dt} \oint \vec{v} \cdot d\vec{r} = \mathcal{E}(k) = \mathcal{K} \epsilon^{2/3} k^{-5/3} \qquad \frac{D}{Dt} \oint \vec{v} \cdot d\vec{r} = \mathcal{E}(k) = \mathcal{K} \epsilon^{2/3} k^{-5/3}
\end{aligned}$$