Corrigendum

In Chapter 2, Equations (2.3) and (2.4) should be
\[
\begin{align*}
\partial_t U + (\nabla \cdot V u) - \partial_x (p \phi_y) + \partial_y (p \phi_y) &= F_U \\
\partial_t V + (\nabla \cdot V v) - \partial_y (p \phi_y) + \partial_y (p \phi_y) &= F_V
\end{align*}
\]

In Chapter 2, Governing Equations, the correct equation (2.33) should be:
\[
F_{V_{cor}} = -\left( f + u \frac{\partial m}{\partial y} - v \frac{\partial m}{\partial x} \right) U + \varepsilon W \sin \alpha_r - \frac{v W}{r_e}
\]

In Chapter 3, Model Discretization, the correct equations (3.12) and (3.26) are:
\[
\begin{align*}
\delta_x \phi'' + \frac{1}{\mu_d} \left[ m \Omega'_{\nu r} + \Delta \phi - \frac{v W}{r_e} \right] &= R_\phi t^r \\
\delta_x \phi'' + \frac{1}{\mu_d} \left[ m \Omega'_{\nu r} + \Delta \phi - \frac{v W}{r_e} \right] &= R_\phi t^r
\end{align*}
\]

Also in Chapter 3, page 18, the correct equation for \( V \) component of the Coriolis and curvature term is
\[
F_{V_{cor}} = -(f'_{y} + u'_{x} \delta_y m - v'_{y} \delta_x m_y) U_{xy} + \varepsilon W' y \sin \alpha_r - \frac{v W'}{r_e}
\]

In Chapter 4, Turbulent Mixing and Model Filters, the term \( D \) in equation (4.6) has been corrected to:
\[
D = \frac{1}{2} \left[ D_{11}^2 + D_{22}^2 + D_{33}^2 \right] + (D_{12}^{xy})^2 + (D_{13}^{x\nu})^2 + (D_{23}^{y\eta})^2
\]