Erratum:

The Geometric Phase in Quantum Systems

Updated February 2006

• Page 46, Eq. (3.91): $\omega$ must change to $\Omega$. The corrected Eq. (3.91) reads:

$$\text{CALSS B: } \tau = \frac{2\pi}{\Omega}.$$ 

• Page 47, Eq. (3.97): $\frac{\omega}{\Omega}$ must change to $\frac{\Omega}{\omega}$. The corrected Eq. (3.97) reads:

$$\psi(T) = U(T)\psi(0) = e^{-i\alpha_k}\psi(0) = e^{-i2\pi k\frac{\Omega}{\omega}}\psi(0).$$

• Page 49, Eq. (3.107): $\frac{\omega}{\Omega}$ must change to $\frac{\Omega}{\omega}$. The corrected Eq. (3.107) reads:

$$\alpha_k^{\text{dyn}} = k2\pi\left(\frac{\Omega}{\omega} + \cos \tilde{\theta}\right).$$

• Page 49, first displayed equation below Eq. (3.108): $\omega$ must change to $\Omega$. This equation should read:

$$\frac{\Omega}{b} \approx 1 - \nu \cos \theta,$$

• Page 50, first displayed equation below Eq. (3.112): The $\omega$ in the denominator must change to $\Omega$. This equation should read:

$$F_{\phi\kappa} = dA = -k \frac{(1 - \frac{\omega}{b} \cos \theta)}{(\frac{\Omega}{b})^3} \sin \theta \, d\theta \wedge d\varphi.$$

• Page 50, Eq. (3.113): The $\omega$ in the denominator must change to $\Omega$. This equation should read:

$$F_{\phi\kappa} = -\frac{k}{r^2} \frac{(1 - \frac{\omega}{b} \cos \theta)}{(\frac{\Omega}{b})^3} \vec{R}(\theta, \varphi).$$

• Page 51, first displayed equation below Eq. (3.116): $\frac{\omega}{\Omega}$ must change to $\frac{\Omega}{\omega}$. This equation should read:

$$\alpha_k^{\text{dyn}}(t) := \int_0^t \langle \psi(t')|h(t')|\psi(t')\rangle \, dt' = \omega tk \left(\frac{\Omega}{\omega} + \cos \tilde{\theta}\right).$$

• Page 51, 4th Paragraph starting in this page, Line 4: $\omega$ must change to $\Omega$. This line should read:

"period $\tau = \frac{2\pi}{\Omega}$ with $\Omega$ given by (3.73). A Special case of Class B cyclic evo-"
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