Erratum: "*Does ħ Play a Role in Multidimensional Spectroscopy? Reduced Hierarchy Equations of Motion Approach*", J. Phys. Chem. A **115**, 4009 (2011)

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pp. 4011

Before

$$\frac{\partial}{\partial t}W^{(n)}_{j_1,j_2,\ldots,j_K} = -\left[\hat{L}_{qm}+\hat{\Xi}'+n\gamma+\sum_{k=1}^{K}j_k\nu_k\right]W^{(n)}_{j_1,j_2,\ldots,j_K} +\hat{\Phi}\left[W^{(n+1)}_{j_1,j_2,\ldots,j_K}+\sum_{k=1}^{K}W^{(n)}_{j_1,\ldots,(j_k+1),\ldots,j_K}\right] +n\hat{\Theta}_0 W^{(n-1)}_{j_1,j_2,\ldots,j_K}+\sum_{k=1}^{K}j_k\hat{\Theta}_k W^{(n)}_{j_1,\ldots,(j_k-1),\ldots,j_K} \tag{6}$$

Corrected

$$\frac{\partial}{\partial t}W^{(n)}_{j_1,j_2,\ldots,j_K} = -\left[\hat{L}_{qm}+\hat{\Xi}'+n\gamma+\sum_{k=1}^{K}j_k\nu_k\right]W^{(n)}_{j_1,j_2,\ldots,j_K} +\hat{\Phi}\left[W^{(n+1)}_{j_1,j_2,\ldots,j_K}+\sum_{k=1}^{K}W^{(n)}_{j_1,\ldots,(j_k+1),\ldots,j_K}\right] +n\gamma\hat{\Theta}_0 W^{(n-1)}_{j_1,j_2,\ldots,j_K}+\sum_{k=1}^{K}j_k\nu_k\hat{\Theta}_k W^{(n)}_{j_1,\ldots,(j_k-1),\ldots,j_K} \tag{6}$$

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Before

$$\hat{\Phi} \equiv -(V_{\mathrm{LL}}+V_{\mathrm{SL}}q)\frac{\partial}{\partial p} \tag{9}$$

right

$$\hat{\Phi} \equiv +(V_{\mathrm{LL}}+V_{\mathrm{SL}}q)\frac{\partial}{\partial p} \tag{9}$$

Before

$$\hat{\Theta}_0 \equiv \zeta\gamma(V_{\mathrm{LL}}+V_{\mathrm{SL}}q)\left[p+\frac{m\hbar\gamma}{2}\cot\left(\frac{\beta\hbar\gamma}{2}\right)\frac{\partial}{\partial p}\right] \tag{10}$$

Corrected

$$\hat{\Theta}_0 \equiv \zeta(V_{\mathrm{LL}}+V_{\mathrm{SL}}q)\left[p+\frac{m\hbar\gamma}{2}\cot\left(\frac{\beta\hbar\gamma}{2}\right)\frac{\partial}{\partial p}\right] \text{(remove } \gamma\text{)} \tag{10}$$

Before

$$\hat{\Theta}_k \equiv -\frac{m\zeta}{\beta}\frac{2(\beta\hbar\gamma)^2}{(2\pi k)^2-(\beta\hbar\gamma)^2}(V_{\rm LL}+V_{\rm SL}q)\frac{\partial}{\partial p} \tag{11}$$

right

$$\hat{\Theta}_k \equiv +\frac{m\zeta}{\beta}\frac{2(\beta\hbar\gamma)^2}{(2\pi k)^2-(\beta\hbar\gamma)^2}(V_{\rm LL}+V_{\rm SL}q)\frac{\partial}{\partial p} \tag{11}$$

Before

$$\hat{\Xi}' \equiv \frac{m\zeta}{\beta}\left[1-\frac{\beta\hbar\gamma}{2}\cot\left(\frac{\beta\hbar\gamma}{2}\right)-\sum_{k=1}^{K}\frac{2(\beta\hbar\gamma)^2}{(2\pi k)^2-(\beta\hbar\gamma)^2}\right](V_{\rm LL}+V_{\rm SL}q)^2\frac{\partial^2}{\partial p^2} \tag{12}$$

Corrected

$$\hat{\Xi}' \equiv -\frac{m\zeta}{\beta}\left[1-\frac{\beta\hbar\gamma}{2}\cot\left(\frac{\beta\hbar\gamma}{2}\right)-\sum_{k=1}^{K}\frac{2(\beta\hbar\gamma)^2}{(2\pi k)^2-(\beta\hbar\gamma)^2}\right](V_{\rm LL}+V_{\rm SL}q)^2\frac{\partial^2}{\partial p^2} \tag{12}$$

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Before

$$\hat{\Xi}' \equiv \frac{m\zeta}{\beta}\hbar^2\left[1-\frac{\beta\hbar\gamma}{2}\cot\left(\frac{\beta\hbar\gamma}{2}\right)-\sum_{k=1}^{K}\frac{2(\beta\hbar\gamma)^2}{(2\pi k)^2-(\beta\hbar\gamma)^2}\right] \times\hat{V}^{\times}(\hat{q})\hat{V}^{\times}(\hat{q})+i\frac{m\zeta}{\beta\hbar^2}\frac{\beta\hbar\gamma}{2}\hat{V}^{\circ}(\hat{q})\hat{V}^{\times}(\hat{q}) \tag{A.5}$$

Corrected

$$\hat{\Xi}' \equiv \frac{m\zeta}{\beta\hbar^2}\left[1-\frac{\beta\hbar\gamma}{2}\cot\left(\frac{\beta\hbar\gamma}{2}\right)-\sum_{k=1}^{K}\frac{2(\beta\hbar\gamma)^2}{(2\pi k)^2-(\beta\hbar\gamma)^2}\right] \times\hat{V}^{\times}(\hat{q})\hat{V}^{\times}(\hat{q})+i\frac{m\zeta}{\beta\hbar^2}\frac{\beta\hbar\gamma}{2}\hat{V}^{\circ}(\hat{q})\hat{V}^{\times}(\hat{q}) \tag{A.5}$$

Before

$$S(\omega)=\frac{\mu^2}{2}\frac{\zeta\ \gamma^2\omega(\gamma^2+\omega^2)}{(\omega_0^2-\omega^2)^2(\gamma^2+\omega^2)^2+\zeta^2\gamma^4\omega^2}. \tag{B.2}$$

Corrected

$$S(\omega)=\frac{\mu^2}{2}\frac{\zeta\ \gamma^2\omega(\gamma^2+\omega^2)}{(\omega_0^2+\zeta\gamma\omega^2/(\gamma^2+\omega^2)-\omega^2)^2(\gamma^2+\omega^2)^2+\zeta^2\gamma^4\omega^2}. \tag{B.2}$$