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Erratum

Multisite spin hopping analysis of multilevel dissipative quantum tunneling and coherence at finite temperatures [Physica A 175 (1991) 485]

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The theory presented in this article [1] has recently been generalized to describe dissipative rotational tunneling systems [2]. During this work the authors of Ref. [2] have noticed a number of annoying misprints in Section 3.4 (Vibrational relaxation: fluctuations) of Ref. [1]. I am indebted, in particular, to Daniel Braun for bringing these errors to my attention. The corrected formulae are listed below:

$$\dot{\rho}_{\pm n, \pm m}^{(2,1)} = -\frac{i}{2\hbar} \langle \pm n | [\xi, [F(t), \rho]_+] | \pm m \rangle, \quad (3.19)$$

$$\dot{\rho}_{\pm n, \pm m}^{(2,2)} = 0, \quad (3.20)$$

$$\dot{\rho}_{\pm n, \mp m}^{(2,1)} = -\frac{i}{2\hbar} \langle \pm n | [\xi, [F(t), \rho]_+] | \mp m \rangle. \quad (3.21)$$

The above formulae now correctly account for the symmetrization implied in the noise term in the quantum Liouville equation (2.19) of Ref. [1]. As a consequence, one further has

$$\frac{1}{2} i \hbar \langle [\xi, [F(t), \rho]_+] \rangle = D_{pp}(t) [\xi, [\xi, \rho]] - 2D_{px}(t) [p, [\xi, \rho]]. \quad (3.24)$$

Finally:

$$\dot{\rho}_{+n, +n} = -\frac{1}{2} i \Delta_n (\rho_{+n, -n} - \rho_{-n, +n}) + \sum_m W_{nm} \rho_{+m, +m}. \quad (3.27)$$

Apart from the fact that Eq. (3.27) is repeated in Part III [3] (as Eq. (2.3)) and in Part IV [4] (as Eq. (2.6)), the above corrections have no further consequences for the subsequent formulae in this series of four articles.

References

- [1] H. Dekker, *Physica A* 175 (1991) 485.
- [2] D. Braun and U. Weiss, *Z. Phys. B* 92 (1993) 507.
- [3] H. Dekker, *Physica A* 178 (1991) 289.
- [4] H. Dekker, *Physica A* 179 (1991) 81.