Erratum: Steady state thermodynamics for homogeneous chemical systems [J. Chem. Phys. 101, 10 866 (1994)]

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A few typographical errors appear. Below Eq. (25) should read $A^r = A^s/\gamma$ and $B^r = B^s/\gamma$. Also, in front of the right-hand side of Eqs. (32) and (34) a minus sign was missed, and below Eq. (34) should read $\Delta\Pi \geqslant 0$.

Erratum: Preparation and decay of alignment in N_2 ($v=1$) [J. Chem. Phys. 101, 4682 (1994)]

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It has come to our attention that an arithmetic error was made in calculating the alignment moments for two models used to describe the collisional decay of alignment in N_2 ($v=1$).[1] For the model in which the final m-state populations in $J=4$ are distributed starting from an initial m-state distribution in $J=6$ (given correctly in the paper) according to a strict transition in which the classical angle θ between the N_2 angular momentum vector and the quantization axis is changed by the minimum amount, the quadrupole alignment should be -0.72 (this number was incorrectly computed as -0.56). For the model in which the final m-state populations in $J=4$ are apportioned according to the relative change in θ (as described in Ref. 1), the correct quadrupole alignment is -0.69 (vs -0.59 reported). A correct version of Fig. 8 of Ref. 1 is also given here (Fig. 1).

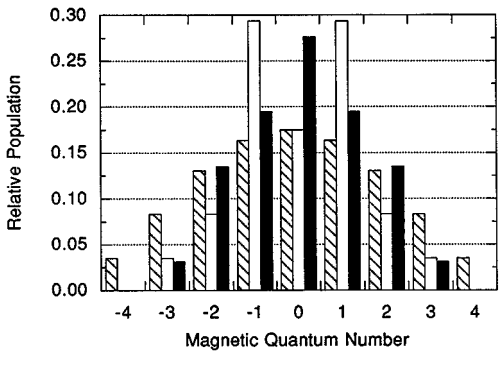

FIG. 1. Magnetic state quantum number distributions for several different cases: the hatched bars are the distribution initially produced by S branch Raman excitation into $J=6$ and collisionally transferred into $J=4$ assuming $\Delta m=0$, and yields a quadrupole alignment of $A_0^{(2)}=-0.40$. The open bars assume that each J,m state of $J=6$ transfers to the m state of $J=4$ that causes the smallest change in the classical angle theta: this yields $A_0^{(2)}=-0.72$. The solid bars transfer population inversely proportional to the magnitude of $\Delta\theta$ and yields $A_0^{(2)}=-0.69$. The measured alignment of $J=4$ is $A_0^{(2)}=-0.56$.

The measured quadrupole alignment was -0.56, and we stated that the experimental result agreed better with a $\Delta\theta=0$ model than with a $\Delta m=0$ model (which predicts a quadrupole alignment of -0.40). While this conclusion still holds, it is considerably weakened in light of the corrected model results. These two errors do not affect any of the measurements reported, nor the basic conclusion that the data do not agree with a $\Delta m=0$ selection rule.

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[1] G. O. Sitz and R. L. Farrow, J. Chem. Phys. **101**, 4682 (1994).