Erratum: “Communication: Molecular near-infrared transitions determined with sub-kHz accuracy” [J. Chem. Phys. 147, 091103 (2017)]

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Citation: The Journal of Chemical Physics **148**, 029902 (2018);
View online: https://doi.org/10.1063/1.5021048
View Table of Contents: http://aip.scitation.org/toc/jcp/148/2
Published by the American Institute of Physics

Erratum: "Communication: Molecular near-infrared transitions determined with sub-kHz accuracy" [J. Chem. Phys. 147, 091103 (2017)]

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(Received 30 December 2017; accepted 4 January 2018; published online 11 January 2018)

https://doi.org/10.1063/1.5021048

There is a mistake in the uncertainty budget of the positions of the R(9) and R(10) lines in the 3-0 band of $^{12}C^{16}O$.[1] The recoil shift is present in normal absorption spectroscopy but is canceled in saturation spectroscopy.[2] The recoil-induced doublet results in a symmetric spectral broadening of about 6 kHz, two-orders of magnitude less than the transient-time broadening, in the Lamb dip of the CO lines at 1.57 μm. There is no shift to the line centers due to the recoil effect. The corrected positions of the R(9) and R(10) lines are 191 360 212 764.0(5) kHz and 191 440 612 665.1(5) kHz, respectively. They are also given in revised Table I. All discussions presented in this paper remain unaltered by these frequency corrections.

TABLE I. Uncertainty budget, R(9) and R(10) lines in the $V = 3$–0 band of $^{12}C^{16}O$ (unit: kHz).

Source	Frequency	Uncertainty
Statistical	191 360 212 763.7 (R9)	0.1
	191 440 612 664.8 (R10)	0.1
Comb frequency		0.4
Locking servo		0.05
EOM frequency		0.001
AOM frequency		0.05
Pressure shift		0.2
Line profile asymmetry		0.2
2nd order Doppler	+0.26	0.01
Total	191 360 212 764.0 (R9)	0.5
	191 440 612 665.1 (R10)	0.5

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