
ERRATA

**Precision Spectroscopy of High- L , $n = 10$ Rydberg Helium: An Improved Test of
Relativistic, Radiative, and Retardation Effects
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The systematic correction for "time dilation" was incorrectly applied. The proper correction to the average of up-shifted and down-shifted line centers is $-\frac{1}{2}\beta^2\bar{\nu}$, rather than $+\frac{1}{2}\beta^2\bar{\nu}$ as reported. All reported measurements should therefore be reduced by $\beta^2\bar{\nu}$, where $\beta=0.00266$, giving mean fine-structure intervals (in MHz) of 491.0052(5), 157.0524(2), 60.8159(2), and 27.1747(5) for the $\bar{G}-\bar{H}$, $\bar{H}-\bar{I}$, $\bar{I}-\bar{K}$, and $\bar{K}-\bar{L}$ intervals, respectively. This change does not alter the conclusions drawn from the comparison with calculations in the long-range-interaction (LRI) picture, where significant discrepancies already existed. However, the comparison with calculations in the standard atomic theory (SAT) picture is substantially changed. The correct experimental results, for all of the intervals, now show significant discrepancies with the SAT predictions, both with and without the V''_{ret} adjustments. The theoretical entries in Table IV, showing the net relativistic contributions to the fine-structure intervals, are not changed, but the experimental results and the resulting comparisons with theory are changed as follows.

TABLE IV. Relativistic contributions to helium $n = 10$ fine structure, in MHz.

	$G-H$	$H-I$	$I-K$	$K-L$
Expt.	6.9448(5)	4.8577(2)	3.5771(2)	2.7400(5)
$(E-T)_{\text{LRI}}$	0.0048(5)	0.0000(2)	-0.0005(2)	-0.0012(5)
$(E-T)_{\text{SAT}}$	-0.0023(5)	-0.0008(2)	-0.0006(2)	...