

ERRATUM

Pressure Effects of Foreign Gases on the Absorption Lines of Cesium, S. Y. Ch'en and Robert O. Garrett [Phys. Rev. 144, 59 (1966); 144 66 (1966); 155, 38 (1967)]. An error has recently been discovered which necessitates our making certain corrections in the values of relative densities of foreign gases reported in the first four papers in our series. Papers V and VI are not in error. The original calculation made the incorrect assumption that the relative density (r.d.) of foreign gas is identical to the pressure in atmospheres that the gas in question would have if the temperature were reduced to 0°C. Our recalculation of r.d. assumes, instead, that it is the ratio of the molar volume of the foreign gas at 1 atm and 0°C to that of the foreign gas under the experimental conditions. Figure 1 gives a correction curve to enable one to redraw any figure in the four papers. Corrections are negligibly small for r.d.'s less than 10, for all graphs in the four papers. Since higher r.d. points are the most severely affected, some of the slopes reported in the text of the four papers also need revision. Those slopes needing correction are included in Table I.

TABLE I. Revised slopes of linear portions of certain graphs in papers I-IV.

Spectral line	Shift ($\Delta\nu_m/\text{r.d.}$) (in $\text{cm}^{-1}/\text{r.d.}$)		Half-width ($\Delta\nu_{1/2}/\text{r.d.}$) (in $\text{cm}^{-1}/\text{r.d.}$)	
	Former	Revised	Former	Revised
Cs(1)/He $^2P_{1/2}$	0.60 ± 0.01	0.68 ± 0.01	0.77 ± 0.02	0.78 ± 0.02
$^2P_{3/2}$	0.72 ± 0.02	0.86 ± 0.02	0.70 ± 0.02	0.71 ± 0.02
Cs(2)/Ne $^2P_{1/2}$	1.19 ± 0.02	1.24 ± 0.02	No slope reported	
$^2P_{3/2}$	1.31 ± 0.02	1.38 ± 0.02	No slope reported	
Cs(1)/Ar $^2P_{1/2}$	-0.51 ± 0.01	-0.46 ± 0.01	0.53 ± 0.03	0.49 ± 0.03
$^2P_{3/2}$	-0.94 ± 0.01	-0.88 ± 0.01	0.84 ± 0.02	0.77 ± 0.02
Cs(2)/Ar $^2P_{1/2}$	-2.75 ± 0.02	-2.71 ± 0.02	1.86 ± 0.02	1.82 ± 0.02
$^2P_{3/2}$	-2.83 ± 0.02	-2.79 ± 0.02	2.00 ± 0.05	1.96 ± 0.05
Cs(1)/Kr $^2P_{1/2}$	-1.32 ± 0.01	-1.24 ± 0.01	0.86 ± 0.03	0.78 ± 0.03
$^2P_{3/2}$	-2.09 ± 0.01	-1.87 ± 0.01	1.92 ± 0.05	1.78 ± 0.05

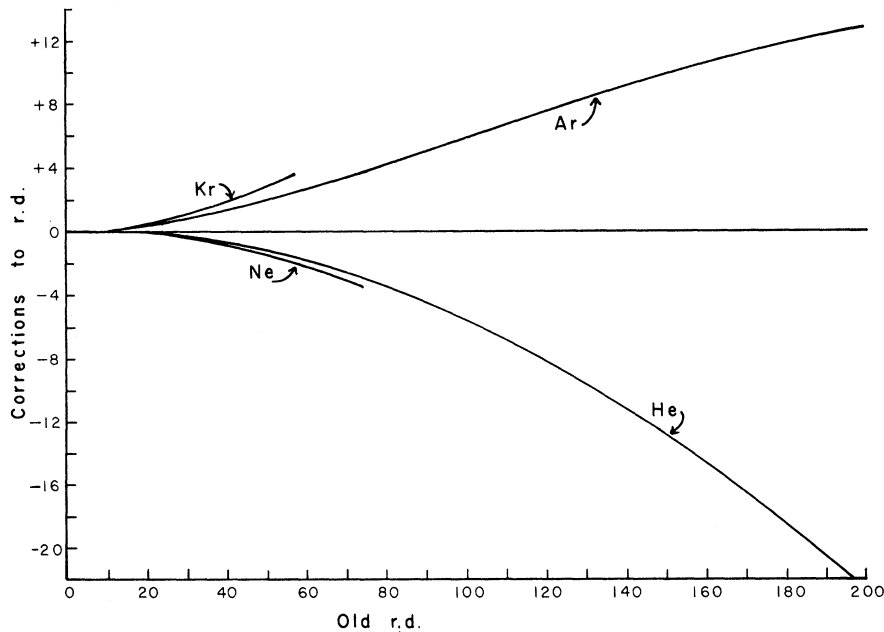


FIG. 1. Correction curves for relative density values in papers I-IV.