

Table 3.1. Broadening (fullhalfwidth γ/n) and shift $\Delta\omega/n$ of atomic alkali resonance lines by noble gases and N_2 . (All numbers are given in units of $10^{-20} \text{ cm}^{-1}/\text{cm}^{-3} \approx 10 \text{ MHz/torr}$ at $T = 300 \text{ K}$)

Transition	λ (nm)	Self-broadening	Helium width	Helium Shift	Neon width	Neon Shift	Argon width	Argon Shift	Krypton width	Krypton Shift	Xenon width	Xenon Shift	Nitrogen width	Nitrogen Shift
Li $2S-2P$	670.8	2.5×10^2	2.2	-0.08	1.5	-0.2	2.4	-0.7	2.9	-0.8	3.3	-1.0		
Na $3S_{1/2}-3P_{1/2}$	598.6	1.6×10^2	1.6	0.00	1.3	-0.3	2.9	-0.85	2.8	-0.6	3.0	-0.6	1.8	-0.8
$-3P_{3/2}$	598.0	2.7×10^2	3.0	-0.06	1.5	-0.75	2.3	-0.7	2.5	-0.7	2.5	-0.7		
K $4S_{1/2}-4P_{1/2}$	769.9	3.2×10^2	1.5	+0.24	0.9	-0.22	2.6	-1.2	2.4	-0.9	2.9	-1.0	2.6	-1.0
$-4P_{3/2}$	766.5	2.2×10^2	2.1	+0.13	1.2	-0.33	2.1	-0.8	2.5	-0.6	2.9	-1.0	2.6	-0.7
$-5P_{1/2}$	404.7	0.8×10^1	3.8	+0.74	1.6	0.0	7.2	-2.0	6.6	-2.0	6.6	-2.0		
Rb $5S_{1/2}-5P_{1/2}$	794.7	3.7×10^2	2.0	1.0	1.0	-0.04	2.0	-0.8	2.3	-0.8				
$-6P_{1/2}$	421.6	1.6×10^1												
$-10P_{1/2}$	315.5	0.4×10^1	5.0					-9.5				-6		
Cs $6S_{1/2}-6P_{1/2}$	894.3		2.0	+0.67	1.0	-0.29	2.0	-0.9	2.0	-0.27	2.1	-0.8	3.1	-0.7
$-7P_{1/2}$	459.0		8.8	+1.0	3.5	0.0	8.6	-1.6	-1.5	6.3	-1.7			

Note: The values differ quite substantially in the literature. Therefore some average values were used in Table 3.1.

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