

Atom	Obs. wavelength (nm)	NIST wavelength (nm)	Electronic State (i)	Electronic State (k)
Ar	358.262	360.652	$3s^2 3p^5 (^2 P^{\circ}_{3/2}) 4s$	$3s^2 3p^5 (^2 P^{\circ}_{3/2}) 6p$
Ar	697.623	696.543	$3s^2 3p^5 (^2 P^{\circ}_{3/2}) 4s$	$3s^2 3p^5 (^2 P^{\circ}_{1/2}) 4p$
Ar	764.453	763.511	$3s^2 3p^5 (^2 P^{\circ}_{3/2}) 4s$	$3s^2 3p^5 (^2 P^{\circ}_{3/2}) 4p$
Ar	812.310	811.531	$3s^2 3p^5 (^2 P^{\circ}_{3/2}) 4s$	$3s^2 3p^5 (^2 P^{\circ}_{3/2}) 4p$
Ne	586.454	585.249	$2s^2 2p^5 (^2 P^{\circ}_{1/2}) 3s$	$2s^2 2p^5 (^2 P^{\circ}_{1/2}) 3p$
Ne	615.552	616.359	$2s^2 2p^5 (^2 P^{\circ}_{1/2}) 3s$	$2s^2 2p^5 (^2 P^{\circ}_{1/2}) 3p$
Ne	641.515	640.225	$2s^2 2p^5 (^2 P^{\circ}_{3/2}) 3s$	$2s^2 2p^5 (^2 P^{\circ}_{3/2}) 3p$
Ne	725.670	724.517	$2s^2 2p^5 (^2 P^{\circ}_{3/2}) 3s$	$2s^2 2p^5 (^2 P^{\circ}_{3/2}) 3p$
Xe	467.993	467.123	$5p^5 (^2 P^{\circ}_{3/2}) 6s$	$5p^5 (^2 P^{\circ}_{3/2}) 7p$
Xe	823.840	823.163	$5p^5 (^2 P^{\circ}_{3/2}) 6s$	$5p^5 (^2 P^{\circ}_{3/2}) 6p$
Xe	882.874	881.941	$5p^5 (^2 P^{\circ}_{3/2}) 6s$	$5p^5 (^2 P^{\circ}_{3/2}) 6p$
Xe	918.044	916.265	$5p^5 (^2 P^{\circ}_{3/2}) 6s$	$5p^5 (^2 P^{\circ}_{3/2}) 6p$