

wvl	ori	ion	transition configuration			wl (A)	Int	
46	538	26 1s	2S1/2	-	2p	2P3/2	1.778	9.61E+09 Ly α 1
53	184	25 1s3p	3P2	-	2p3p	1D2	1.7782	5.63E+08
128	197	25 1s3s	1S0	-	2p3s	1P1	1.7795	8.21E+08
130	199	25 1s3p	1P1	-	2p3p	1D2	1.7795	1.57E+09
188	536	26 1s	2S1/2	-	2s	2S1/2	1.7833	4.13E+08
194	537	26 1s	2S1/2	-	2p	2P1/2	1.7834	4.97E+09 Ly α 2
349	151	25 1s2s	1S0	-	2s2p	1P1	1.7872	3.90E+09
350	152	25 1s2p	3P2	-	2p2p	1D2	1.7873	2.45E+09
360	153	25 1s2s	3S1	-	2s2p	3P2	1.7881	7.65E+08
365	154	25 1s2p	3P1	-	2p2p	3P2	1.7888	1.81E+09
381	157	25 1s2p	1P1	-	2p2p	1D2	1.792	7.59E+09
382	158	25 1s2s	3S1	-	2s2p	3P1	1.7922	6.60E+08
384	159	25 1s2p	3P2	-	2p2p	3P2	1.7926	2.93E+09
387	162	25 1s2p	1P1	-	2p2p	3P2	1.7973	1.04E+09
392	146	25 1s2	1S0	-	1s.2p	1P1	1.8504	5.44E+12 w
393	141	24 1s2.2p	2P1/2	-	1s.2p2(1S)	2S1/2	1.8523	1.55E+10
394	145	25 1s2	1S0	-	1s.2p	3P2	1.8554	1.41E+12 x
395	132	24 1s2.2s	2S1/2	-	1s.2s(1S).2p	2P3/2	1.8563	1.04E+11
396	142	24 1s2.2p	2P3/2	-	1s.2p2(1S)	2S1/2	1.8567	3.91E+11
397	129	24 1s2.2s	2S1/2	-	1s.2s(3S).2p	2P1/2	1.8571	1.05E+12 t
398	139	24 1s2.2p	2P1/2	-	1s.2p2(3P)	2P3/2	1.8577	1.33E+10
401	144	25 1s2	1S0	-	1s.2p	3P1	1.8595	1.46E+12 y
402	126	24 1s2.2s	2S1/2	-	1s.2s(3S).2p	2P3/2	1.861	1.77E+12 q
404	140	24 1s2.2p	2P3/2	-	1s.2p2(3P)	2P3/2	1.8622	8.35E+11
405	136	24 1s2.2p	2P1/2	-	1s.2p2(3P)	2P1/2	1.8628	1.62E+10
406	134	24 1s2.2p	2P1/2	-	1s.2p2(1D)	2D3/2	1.8631	2.22E+12 k
407	125	24 1s2.2s	2S1/2	-	1s.2s(1S).2p	2P1/2	1.8636	9.96E+11 r
409	138	24 1s2.2p	2P3/2	-	1s.2p2(1D)	2D5/2	1.8659	3.36E+12 j
410	109	23 1s2.2s.2p	3P0	-	1s.2s.2p2	3S1	1.8666	2.25E+09
411	137	24 1s2.2p	2P3/2	-	1s.2p2(3P)	2P1/2	1.8673	4.85E+09
412	135	24 1s2.2p	2P3/2	-	1s.2p2(1D)	2D3/2	1.8676	2.62E+11
413	110	23 1s2.2s.2p	3P1	-	1s.2s.2p2	3S1	1.8677	2.16E+10
414	143	25 1s2	1S0	-	1s.2s	3S1	1.8682	2.09E+12 z
415	114	23 1s2.2s.2p	3P2	-	1s.2s.2p2	1D2	1.8682	1.16E+11
416	120	23 1s2.2s.2p	1P1	-	1s.2s.2p2	1S0	1.8697	4.79E+10
417	130	24 1s2.2p	2P1/2	-	1s.2p2(3P)	4P3/2	1.8699	8.15E+08
418	96	23 1s2.2s2	1S0	-	1s.2s2.2p	1P1	1.8704	1.14E+12 β (1)
419	111	23 1s2.2s.2p	3P2	-	1s.2s.2p2	3S1	1.8709	4.47E+10
420	105	23 1s2.2s.2p	3P0	-	1s.2s.2p2	3D1	1.8712	8.64E+09
421	119	23 1s2.2s.2p	1P1	-	1s.2s.2p2	1P1	1.872	1.54E+10
422	127	24 1s2.2p	2P1/2	-	1s.2p2(3P)	4P1/2	1.8723	1.71E+10
423	106	23 1s2.2s.2p	3P1	-	1s.2s.2p2	3D1	1.8723	3.19E+11
424	133	24 1s2.2p	2P3/2	-	1s.2p2(3P)	4P5/2	1.8728	5.70E+11 2
425	101	23 1s2.2s.2p	3P1	-	1s.2s.2p2	3D2	1.8736	5.49E+11 3
426	124	24 1s2.2s	2S1/2	-	1s.2s(3S).2p	4P3/2	1.8738	3.88E+11
427	131	24 1s2.2p	2P3/2	-	1s.2p2(3P)	4P3/2	1.8745	6.47E+10
428	123	24 1s2.2s	2S1/2	-	1s.2s(3S).2p	4P1/2	1.8749	1.75E+11
430	107	23 1s2.2s.2p	3P2	-	1s.2s.2p2	3D1	1.8755	8.65E+10
431	104	23 1s2.2s.2p	3P2	-	1s.2s.2p2	3D3	1.8758	7.07E+11 4
433	102	23 1s2.2s.2p	3P2	-	1s.2s.2p2	3D2	1.8769	4.11E+10
434	115	23 1s2.2s.2p	1P1	-	1s.2s.2p2	1D2	1.8781	2.51E+11 5
435	73	22 1s2.2s2.2	2P1/2	-	1s.2s2.2p2	2P3/2	1.8782	1.32E+09
436	79	22 1s2.2s2.2	2P3/2	-	1s.2s2.2p2	2S1/2	1.8794	9.48E+10 6
437	82	23 1s2.2s2	1S0	-	1s.2s2.2p	3P1	1.8797	6.39E+10
438	112	23 1s2.2s.2p	1P1	-	1s.2s.2p2	3S1	1.8808	1.01E+10
439	74	22 1s2.2s2.2	2P3/2	-	1s.2s2.2p2	2P3/2	1.8824	1.29E+11
440	62	22 1s2.2s2.2	2P1/2	-	1s.2s2.2p2	2P1/2	1.8825	1.25E+11
441	56	22 1s2.2s2.2	2P1/2	-	1s.2s2.2p2	2D3/2	1.8825	3.80E+11 7

442	68	22	1s2.2s2.2 2P3/2	-	1s.2s2.2p2	2D5/2	1.8851	4.04E+11	8
443	108	23	1s2.2s.2p 1P1	-	1s.2s.2p2	3D1	1.8854	3.21E+09	
446	63	22	1s2.2s2.2 2P3/2	-	1s.2s2.2p2	2P1/2	1.8867	2.64E+10	9
447	57	22	1s2.2s2.2 2P3/2	-	1s.2s2.2p2	2D3/2	1.8867	5.75E+10	
448	103	23	1s2.2s.2p 1P1	-	1s.2s.2p2	3D2	1.8868	7.51E+09	
449	88	23	1s2.2s.2p 3P0	-	1s.2s.2p2	5P1	1.8869	2.31E+09	
450	95	23	1s2.2s.2p 3P2	-	1s.2s.2p2	5P3	1.8873	3.53E+09	
452	89	23	1s2.2s.2p 3P1	-	1s.2s.2p2	5P1	1.888	5.16E+09	
454	93	23	1s2.2s.2p 3P2	-	1s.2s.2p2	5P2	1.8892	6.99E+09	
458	52	21	2s2.2p2 1D2	-	1s.2s2.2p3	1P1	1.8918	6.75E+09	
459	45	21	2s2.2p2 3P1	-	1s.2s2.2p3	3P2	1.892	3.09E+09	
460	121	24	1s2.2p 2P1/2	-	1s.2s2	2S1/2	1.8922	1.49E+11	10
462	41	21	2s2.2p2 3P1	-	1s.2s2.2p3	3S1	1.8935	5.01E+09	
463	48	21	2s2.2p2 1D2	-	1s.2s2.2p3	1D2	1.8942	2.67E+09	
464	30	21	2s2.2p2 3P0	-	1s.2s2.2p3	3D1	1.8946	1.36E+10	11
465	42	21	2s2.2p2 3P2	-	1s.2s2.2p3	3S1	1.8951	1.56E+09	
466	53	21	2s2.2p2 1S0	-	1s.2s2.2p3	1P1	1.8964	4.35E+09	
467	38	21	2s2.2p2 3P2	-	1s.2s2.2p3	3D3	1.8966	2.89E+09	
468	122	24	1s2.2p 2P3/2	-	1s.2s2	2S1/2	1.8968	1.48E+11	12
469	35	21	2s2.2p2 3P1	-	1s.2s2.2p3	3D2	1.897	8.18E+09	
474	32	21	2s2.2p2 3P2	-	1s.2s2.2p3	3D1	1.8988	2.34E+09	
478	39	21	2s2.2p2 1D2	-	1s.2s2.2p3	3D3	1.9012	9.92E+08	
485	23	20	2s2.2p3 2D5/2	-	1s.2s2.2p4	2P3/2	1.9051	1.26E+09	
487	9	20	2s2.2p3 4S3/2	-	1s.2s2.2p4	4P1/2	1.9051	4.31E+09	
488	4	20	2s2.2p3 4S3/2	-	1s.2s2.2p4	4P3/2	1.9057	2.42E+09	
490	97	23	1s2.2p2 3P1	-	1s.2s2.2p	1P1	1.907	7.78E+08	
492	14	20	2s2.2p3 2D3/2	-	1s.2s2.2p4	2D3/2	1.9075	2.66E+09	
495	0	20	2s2.2p3 4S3/2	-	1s.2s2.2p4	4P5/2	1.9083	5.46E+09	
496	98	23	1s2.2p2 3P2	-	1s.2s2.2p	1P1	1.9086	1.04E+10	
505	99	23	1s2.2p2 1D2	-	1s.2s2.2p	1P1	1.9135	3.00E+10	
506	83	23	1s2.2p2 3P0	-	1s.2s2.2p	3P1	1.9141	9.00E+09	
511	84	23	1s2.2p2 3P1	-	1s.2s2.2p	3P1	1.9167	4.97E+09	
514	85	23	1s2.2p2 3P2	-	1s.2s2.2p	3P1	1.9184	8.15E+09	
516	100	23	1s2.2p2 1S0	-	1s.2s2.2p	1P1	1.9215	2.63E+09	
522	76	22	1s2.2p3 2D5/2	-	1s.2s2.2p2	2P3/2	1.9299	1.23E+09	
524	70	22	1s2.2p3 2D3/2	-	1s.2s2.2p2	2D5/2	1.9316	3.07E+09	
525	80	22	1s2.2p3 2P1/2	-	1s.2s2.2p2	2S1/2	1.9321	1.67E+09	
526	71	22	1s2.2p3 2D5/2	-	1s.2s2.2p2	2D5/2	1.9328	9.96E+09	
527	65	22	1s2.2p3 2D3/2	-	1s.2s2.2p2	2P1/2	1.9333	2.49E+09	
528	59	22	1s2.2p3 2D3/2	-	1s.2s2.2p2	2D3/2	1.9333	2.88E+09	
529	81	22	1s2.2p3 2P3/2	-	1s.2s2.2p2	2S1/2	1.9343	1.26E+09	
530	60	22	1s2.2p3 2D5/2	-	1s.2s2.2p2	2D3/2	1.9345	4.73E+09	
531	77	22	1s2.2p3 2P3/2	-	1s.2s2.2p2	2P3/2	1.9374	1.10E+09	
533	61	22	1s2.2p3 2P1/2	-	1s.2s2.2p2	2D3/2	1.9398	1.64E+09	
534	72	22	1s2.2p3 2P3/2	-	1s.2s2.2p2	2D5/2	1.9403	1.05E+09	