NIST ATOMIC TRANSITION PROBABILITY TABLES

J.R. Fuhr and W.L. Wiese

These tables substantially update and enlarge our earlier tables in this *Handbook*. The new tables contain critically evaluated atomic transition probabilities for about 9000 selected lines of all elements for which reliable data are available on an absolute scale. The material is largely for neutral and singly ionized spectra, but also includes a number of prominent lines of more highly charged ions of important elements.

Many of the data are obtained from comprehensive compilations of the Data Center on Atomic Transition Probabilities at the National Institute of Standards and Technology (formerly the National Bureau of Standards). Specifically, data have been taken from three recent comprehensive critical compilations on C, N and O,[1] on Sc through Mn,[2] and Fe through Ni.[3] Material from earlier compilations for the elements H through Ne[4] and Na through Ca[5] was supplemented by more recent material taken directly from the original literature. For the highly charged ions, some of the data were derived from studies of the systematic behavior of transition probabilities.[6-8] Most of the original literature is cited in the above tables and in recent bibliographies[9,10]; for lack of space, individual literature references are not cited here.

The wavelength range for the neutral species is normally the visible spectrum or shorter wavelengths; only the very prominent near infrared lines are included. For the higher ions, most of the strong lines are located in the far UV. The tabulation is limited to electric dipole — including intercombination — lines and comprises essentially the fairly strong transitions with estimated uncertainties of 50% or less. With the exception of hydrogen, helium, and the alkalis, most transitions are between states with low principal quantum numbers.

The transition probability, A, is given in units of 10^8 s^{-1} and is listed to as many digits as is consistent with the indicated accuracy. The power of 10 is indicated by the E notation (i.e., E-02 means 10^{-2}). Generally, the estimated uncertainties of the A-values are ±25 to 50% for two-digit numbers, ±10 to 25% for three-digit numbers and ±1% or better for four- and five-digit numbers.

Each transition is identified by the wavelength, λ, in angstroms; and the statistical weights, g_i and g_k, of the lower (i) and upper (k) states [the product $g_k A$ (or $g_i f$) is needed for many applications]. Whenever the wavelengths of individual lines within a multiplet are extremely close, only an average wavelength for the multiplet as well as the multiplet A-value are given, and this is indicated by an asterisk (*) to the left of the wavelength. This also has been done when the transition probability for an entire multiplet has been taken from the literature and values for individual lines cannot be determined because of insufficient knowledge of the coupling of electrons. The wavelength data have been taken either from recent compilations or from the original literature cited in bibliographies published by the Atomic Energy Levels Data Center[11,12] at the National Institute of Standards and Technology. Wavelength values are consistent with those given in the table "Line Spectra of the Elements", which appears elsewhere in this *Handbook*.

The transition probabilities for hydrogen and hydrogen-like ions are known precisely. Because of the hydrogen degeneracy, a "transition" is actually the sum of all fine-structure transitions between the principal quantum numbers listed in the transition column; therefore, the special hydrogen table which appears below gives weighted average A-values.

In addition to the transition probability A, the atomic oscillator strength f and the line strength S are often used in the literature. The conversion factors between these quantities are (for electric-dipole transitions):

$$g_i f = 1.499 \times 10^{-8}\ \lambda^2\ g_k A = 303.8\ \lambda^{-1} S$$

where λ is in angstroms, A is in 10^8 s^{-1}, and S is in atomic units, which are $a_0^2 e^2 = 7.188 \times 10^{-59}$ m^2 C^2.

After the special table for hydrogen, the tables for other elements appear in alphabetical sequence by element name (not symbol). Within each element, the tables are ordered by increasing ionization stage (e.g., Al I, Al II, etc.).

REFERENCES

1. Wiese, W.L., Fuhr, J.R., and Deters, T.M., *Atomic Transition Probabilities of Carbon, Nitrogen and Oxygen, J. Phys. Chem. Ref. Data, Monograph 7*, 1996.
2. Martin, G.A., Fuhr, J.R., and Wiese, W.L., *Atomic Transition Probabilities—Scandium through Manganese, J. Phys. Chem. Ref. Data, 17, Suppl.* 3, 1988.
3. Fuhr, J.R., Martin, G.A., and Wiese, W.L., *Atomic Transition Probabilities—Iron through Nickel, J. Phys. Chem. Ref. Data, 17, Suppl.* 4, 1988.
4. Wiese, W.L., Smith, M.W., and Glennon, B.M., *Atomic Transition Probabilities (H through Ne—A Critical Data Compilation)*, National Standard Reference Data Series, National Bureau of Standards 4, Vol. I, U.S. Government Printing Office, Washington, D.C., 1966.
5. Wiese, W.L., Smith, M.W., and Miles, B.M., *Atomic Transition Probabilities (Na through Ca—A Critical Data Compilation)*, National Standard Reference Data Series, National Bureau of Standards 22, Vol. II, U. S. Government Printing Office, Washington, D.C., 1969.
6. Wiese, W.L. and Weiss, A.W., *Phys. Rev.*, 175, 50, 1968.
7. Smith, M.W. and Wiese,M.L., *Astrophys. J., Suppl. Ser.*, 23, No. 196, 103, 1971.
8. Martin, G.A., and Wiese,W.L., *J. Phys. Chem. Ref. Data*, 5, 537, 1976.
9. Fuhr, J.R., Miller, B.J., and Martin, G.A., *Bibliography on Atomic Transition Probabilities (1914 through October 1997)*, National Bureau of Standards Special Publication 505, 1978; Miller, B.J., Fuhr, J.R., and Martin, G.A., *Bibliography on Atomic Transition Probabilities (November 1977 through February 1980)*, National Bureau of Standards Special Publication 505, Supplement 1, 1980.
10. Wiese, W.L., Reports on Astronomy, *Trans. Int. Astron. Union*, 18A, 116—123, 1982; 19A, 122—138, 1985.; 20A, 117—123, 1988, Reidel, D., Ed., Kluwer, Dordrecht, Holland.
11. Moore, C.E., *Bibliography on the Analyses of Optical Atomic Spectra*, National Bureau of Standards Special Publication 306—Section 1, 1968; Sections 2—4, 1969.

12. Hagan, L. and Martin, W.C., *Bibliography on Atomic Energy Levels and Spectra (July 1968 through June 1971)*, National Bureau of Standards Special Publication 363, 1972; Hagan, L., *Bibliography on Atomic Energy Levels and Spectra (July 1971 through June 1975)*, National Bureau of Standards Special Publication 363, Supplement 1, 1977; Zalubas, R. and Albright, A., *Bibliography on Atomic Energy Levels and Spectra (July 1975 through June 1979)*, National Bureau of Standards Special Publication 363, Supplement 2, 1980; Musgrove, A. and Zalubas, R., *Bibliography on Atomic Energy Levels and Spectra (July 1979 through December 1983)*, National Bureau of Standards Special Publication 363, Supplement 3, 1985.
13. Younger, S.M. and Weiss, A., *J. Res. Natl. Bur. Stand.*, 79A, 629, 1975.

Transition Probabilities for Allowed Lines of Hydrogen

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}	λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}	λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
Hydrogen				3664.68	8	1568	4.022E-06	8598.40	18	392	9.211E-05
H I				3666.10	8	1458	4.826E-06	8665.02	18	338	1.343E-04
912.768	2	1800	5.167E-06	3667.68	8	1352	5.830E-06	8750.48	18	288	2.021E-04
912.839	2	1682	6.122E-06	3669.46	8	1250	7.096E-06	8862.79	18	242	3.156E-04
912.918	2	1568	7.297E-06	3671.48	8	1152	8.707E-06	9014.91	18	200	5.156E-04
913.006	2	1458	8.753E-06	3673.76	8	1058	1.078E-05	9229.02	18	162	8.905E-04
913.104	2	1352	1.057E-05	3676.36	8	968	1.347E-05	9545.97	18	128	1.651E-03
913.215	2	1250	1.286E-05	3679.35	8	882	1.700E-05	10049.4	18	98	3.358E-03
913.339	2	1152	1.578E-05	3682.81	8	800	2.172E-05	10938.1	18	72	7.783E-03
913.480	2	1058	1.952E-05	3686.83	8	722	2.809E-05	12818.1	18	50	2.201E-02
913.641	2	968	2.438E-05	3691.55	8	648	3.685E-05	16407.2	32	288	1.620E-04
913.826	2	882	3.077E-05	3697.15	8	578	4.910E-05	16806.5	32	242	2.556E-04
914.039	2	800	3.928E-05	3703.85	8	512	6.658E-05	17362.1	32	200	4.235E-04
914.286	2	722	5.077E-05	3711.97	8	450	9.210E-05	18174.1	32	162	7.459E-04
914.576	2	648	6.654E-05	3721.94	8	392	1.303E-04	18751.0	18	32	8.986E-02
914.919	2	578	8.858E-05	3734.37	8	338	1.893E-04	19445.6	32	128	1.424E-03
915.329	2	512	1.200E-04	3750.15	8	288	2.834E-04	21655.3	32	98	3.041E-03
915.824	2	450	1.657E-04	3770.63	8	242	4.397E-04	26251.5	32	72	7.711E-03
916.429	2	392	2.341E-04	3797.90	8	200	7.122E-04	27575	50	288	1.402E-04
917.181	2	338	3.393E-04	3835.38	8	162	1.216E-03	28722	50	242	2.246E-04
918.129	2	288	5.066E-04	3889.05	8	128	2.215E-03	30384	50	200	3.800E-04
919.351	2	242	7.834E-04	3970.07	8	98	4.389E-03	32961	50	162	6.908E-04
920.963	2	200	1.263E-03	4101.73	8	72	9.732E-03	37395	50	128	1.388E-03
923.150	2	162	2.143E-03	4340.46	8	50	2.530E-02	40511.5	32	50	2.699E-02
926.226	2	128	3.869E-03	4861.32	8	32	8.419E-02	43753	72	288	1.288E-04
930.748	2	98	7.568E-03	6562.80	8	18	4.410E-01	46525	50	98	3.253E-03
937.803	2	72	1.644E-02	8392.40	18	800	1.517E-05	46712	72	242	2.110E-04
949.743	2	50	4.125E-02	8413.32	18	722	1.964E-05	51273	72	200	3.688E-04
972.537	2	32	1.278E-01	8437.96	18	648	2.580E-05	59066	72	162	7.065E-04
1025.72	2	18	5.575E-01	8467.26	18	578	3.444E-05	74578	50	72	1.025E-02
1215.67	2	8	4.699E+00	8502.49	18	512	4.680E-05	75004	72	128	1.561E-03
3662.26	8	1800	2.847E-06	8545.39	18	450	6.490E-05	123680	72	98	4.561E-03
3663.40	8	1682	3.374E-06								

For hydrogen-like ions of nuclear charge Z, the following scaling laws hold:

$$A_Z = Z^4 A_{\text{Hydrogen}};\ f_Z = f_H;\ S_Z = Z^{-2} S_H$$
(For wavelengths, $\lambda_Z = Z^{-2}\lambda_H$)

For very highly charged hydrogen-like ions, starting at about Z>25, relativistic corrections[13] must be applied.

Transition Probabilities for Other Elements

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
Aluminum			
Al I			
2263.5	2	4	6.6E-01
2269.1	4	6	7.9E-01
2269.2	4	4	1.3E-01
2367.1	2	4	7.2E-01
2373.1	4	6	8.6E-01
2373.4	4	4	1.4E-01
2568.0	2	4	2.3E-01
2575.1	4	6	2.8E-01
2575.4	4	4	4.4E-02
2652.5	2	2	1.33E-01
2660.4	4	2	2.64E-01
3082.2	2	4	6.3E-01
3092.7	4	6	7.4E-01
3092.8	4	4	1.2E-01
3944.0	2	2	4.93E-01
3961.5	4	2	9.8E-01
6696.0	2	4	1.69E-02
6698.7	2	2	1.69E-02
7835.3	4	6	5.7E-02
7836.1	6	8	6.2E-02
Al II			
1047.9	1	3	3.6E-01
1048.6	3	5	4.8E-01
1539.8	3	5	8.8E+00
1670.8	1	3	1.46E+01
1719.4	1	3	6.79E+00
1764.0	5	5	9.8E+00
1772.8	1	3	9.5E+00
1777.0	5	7	1.7E+01
*1819.0	15	15	5.6E+00
1855.9	1	3	8.32E-01
1858.0	3	3	2.48E+00
1862.3	5	3	4.12E+00
1931.0	3	1	1.08E+01
1990.5	3	5	1.47E+01
2816.2	3	1	3.83E+00
4663.1	5	3	5.3E-01
6226.2	1	3	6.2E-01
6231.8	3	5	8.4E-01
6243.4	5	7	1.1E+00
6335.7	5	3	1.4E-01
6823.4	3	3	3.4E-01
6837.1	5	3	5.7E-01
6920.3	3	1	9.6E-01
7042.1	3	5	5.9E-01
7056.7	3	3	5.8E-01
7471.4	5	7	9.4E-01
Al III			
*560.36	2	6	4.0E-01
695.83	2	4	7.4E-01
696.22	2	2	7.2E-01
*1352.8	10	14	4.40E+00
1379.7	2	2	4.59E+00
1384.1	4	2	9.1E+00
1605.8	2	4	1.22E+01
1611.8	4	4	2.42E+00
1611.9	4	6	1.45E+01
1854.7	2	4	5.40E+00
1862.8	2	2	5.33E+00
*1935.9	10	14	1.22E+01
3601.6	6	4	1.34E+00
3601.9	4	4	1.49E-01
3612.4	4	2	1.5E+00
Al X			
39.925	1	3	2.22E+03
51.979	1	3	4.8E+03
55.227	1	3	5.2E+03
55.272	3	5	7.2E+03
55.376	5	7	9.5E+03
59.107	3	5	4.6E+03
332.78	1	3	5.6E+01
394.83	3	1	8.3E+01
395.36	3	5	1.2E+01
397.76	1	3	1.7E+01
400.43	3	3	1.3E+01
401.12	5	5	3.6E+01
403.55	3	1	4.9E+01
406.31	5	3	1.9E+01
670.06	3	5	9.8E+00
2535	1	3	3.8E-01
Al XI			
*36.675	2	6	1.5E+03
39.091	2	4	2.6E+03
39.180	4	6	3.1E+03
39.530	2	2	1.8E+02
39.623	4	2	3.7E+02
48.298	2	4	3.09E+03
48.338	2	2	3.08E+03
52.299	2	4	8.1E+03
52.446	4	6	9.6E+03
52.458	4	4	1.6E+03
54.217	2	2	4.8E+02
54.388	4	2	9.6E+02
*99.083	2	6	2.2E+02
103.6	2	4	4.2E+02
103.8	4	6	5.0E+02
*141.6	2	6	4.07E+02
150.31	2	4	8.5E+02
150.61	4	6	9.9E+02
157.0	2	2	1.3E+02
157.4	4	2	2.6E+02
*205.0	2	6	6.3E+01
*308.6	2	6	9.9E+01
*341.3	6	2	1.3E+02
550.05	2	4	8.55E+00
568.12	2	2	7.73E+00
1997	2	4	1.07E+00
2069	2	2	9.7E-01
*4761	2	6	2.55E-01
5172	2	4	3.95E-02
5551	4	6	3.85E-02
5687	4	4	6.0E-03
Argon			
Ar I			
1048.22	1	3	5.36E+00
1066.66	1	3	1.29E+00
3406.18	3	1	3.9E-03
3461.08	3	5	6.7E-04
3554.30	5	5	2.7E-03
3563.29	1	3	1.2E-03
3567.66	5	7	1.1E-03
3572.30	3	1	5.1E-03
3606.52	3	1	7.6E-03
3632.68	3	5	6.6E-04
3634.46	3	3	1.3E-03
3643.12	3	5	2.4E-04
3649.83	3	1	8.0E-03
3659.53	3	3	4.4E-04
3670.67	3	5	3.1E-04
3675.23	3	3	4.9E-04
3770.37	1	3	7.0E-04
3834.68	3	1	7.5E-03
3894.66	3	3	5.7E-04
3947.50	5	5	5.6E-04
3948.98	5	3	4.55E-03
4044.42	3	5	3.33E-03
4045.96	3	3	4.1E-04
4054.53	3	3	2.7E-04
4158.59	5	5	1.40E-02
4164.18	5	3	2.88E-03
4181.88	1	3	5.61E-03
4190.71	5	5	2.80E-03
4191.03	1	3	5.39E-03
4198.32	3	1	2.57E-02
4200.67	5	7	9.67E-03
4251.18	5	3	1.11E-03
4259.36	3	1	3.98E-02
4266.29	3	5	3.12E-03
4272.17	3	3	7.97E-03
4300.10	3	5	3.77E-03
4333.56	3	5	5.68E-03
4335.34	3	3	3.87E-03
4345.17	3	3	2.97E-03
4363.79	3	3	1.2E-04
4424.00	1	3	7.3E-05
4510.73	3	1	1.18E-02
4522.32	1	3	8.98E-04
4544.75	3	3	8.3E-04
4554.32	3	5	3.8E-04
4584.96	3	5	1.6E-03
4586.61	3	3	2.3E-03
4587.21	3	1	4.9E-03
4589.29	3	5	6.2E-05
4596.10	3	3	9.47E-04

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}	λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}	λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
4628.44	3	5	3.83E-04	5473.46	5	3	2.0E-03	6025.15	5	3	9.0E-03
4642.15	3	5	9.6E-04	5490.12	5	5	8.5E-04	6043.22	5	7	1.47E-02
4647.49	3	3	1.2E-03	5492.09	3	1	5.6E-03	6052.73	3	5	1.9E-03
4702.32	3	3	1.09E-03	5495.87	7	9	1.69E-02	6064.76	5	7	5.8E-04
4746.82	3	1	3.6E-03	5506.11	5	7	3.6E-03	6081.25	3	3	7.5E-04
4752.94	3	3	4.5E-03	5524.96	7	7	1.7E-03	6085.86	3	3	9.0E-05
4768.68	3	5	8.6E-03	5528.97	1	3	1.2E-03	6090.79	1	3	3.0E-03
4798.74	7	9	8.8E-04	5534.49	5	3	2.7E-03	6098.81	3	3	5.2E-03
4835.97	7	9	9.3E-04	5540.87	7	5	4.1E-04	6101.16	3	3	3.3E-03
4836.70	3	5	1.02E-03	5552.77	3	3	7.9E-04	6104.58	3	1	3.4E-03
4876.26	3	5	7.8E-03	5558.70	3	5	1.42E-02	6105.64	3	5	1.21E-02
4886.29	7	9	1.2E-03	5559.66	3	5	2.2E-03	6113.46	3	5	4.7E-04
4887.95	3	3	1.3E-02	5572.54	5	7	6.6E-03	6119.66	3	3	5.1E-04
4894.69	3	1	1.8E-02	5574.22	3	5	4.6E-04	6121.86	3	5	1.3E-04
4921.04	5	7	5.9E-04	5581.87	7	5	5.6E-04	6127.42	5	3	1.1E-03
4937.72	7	5	3.6E-04	5588.72	5	5	1.5E-03	6128.73	3	5	8.6E-04
4956.75	7	9	1.8E-03	5597.48	5	7	4.2E-03	6145.44	5	7	7.6E-03
4989.95	5	7	1.1E-03	5606.73	3	3	2.20E-02	6155.24	5	3	5.1E-03
5032.03	7	5	8.2E-04	5618.01	3	3	2.1E-03	6165.12	5	5	9.89E-04
5048.81	3	5	4.6E-03	5620.92	3	1	3.6E-03	6170.17	5	5	5.0E-03
5054.18	3	3	4.5E-03	5623.78	5	5	1.4E-03	6173.10	3	5	6.7E-03
5056.53	3	1	5.7E-03	5635.58	3	5	9.6E-04	6179.41	5	3	6.6E-04
5060.08	7	9	3.7E-03	5637.33	1	3	9.1E-04	6212.50	5	7	3.9E-03
5070.99	5	3	2.6E-03	5639.12	1	3	2.1E-03	6215.94	5	5	5.7E-03
5073.08	3	5	5.9E-04	5641.39	3	5	8.7E-04	6230.93	5	5	1.2E-04
5078.03	7	7	4.7E-04	5648.69	5	3	1.2E-03	6243.40	3	1	1.3E-03
5087.09	5	7	1.6E-03	5650.70	3	1	3.20E-02	6244.73	3	5	2.0E-04
5104.74	3	5	8.7E-04	5659.13	5	5	2.6E-03	6248.41	3	5	6.8E-04
5118.21	5	7	2.7E-03	5681.90	5	7	2.0E-03	6278.65	5	7	2.0E-04
5127.80	5	5	3.3E-04	5683.73	5	5	2.0E-03	6296.87	3	5	9.0E-03
5151.39	3	1	2.39E-02	5700.87	5	7	5.9E-03	6307.66	5	5	6.0E-03
5152.30	3	5	1.1E-03	5712.51	1	3	8.7E-04	6309.14	3	3	7.6E-04
5162.29	3	3	1.90E-02	5739.52	3	5	8.7E-03	6364.89	3	1	5.6E-03
5177.54	7	5	2.4E-03	5772.11	5	7	2.0E-03	6369.58	5	3	4.2E-03
5192.72	7	7	1.2E-04	5773.99	5	5	1.1E-03	6384.72	3	3	4.21E-03
5194.02	3	1	7.8E-03	5783.54	3	5	8.1E-04	6416.31	3	5	1.16E-02
5210.49	7	7	1.1E-03	5789.48	5	5	4.6E-04	6431.56	5	3	5.1E-04
5214.77	5	3	2.1E-03	5790.40	5	3	3.4E-04	6466.55	1	3	1.5E-03
5216.28	5	3	1.3E-03	5802.08	5	3	4.2E-03	6481.14	1	3	9.4E-04
5221.27	7	9	8.8E-03	5843.77	3	5	3.3E-04	6513.85	3	3	5.4E-04
5241.09	5	5	1.3E-03	5882.62	3	1	1.23E-02	6538.11	7	7	1.1E-03
5246.24	5	7	1.2E-03	5888.58	7	5	1.29E-02	6596.12	7	5	2.3E-04
5249.20	5	5	7.9E-04	5916.58	5	3	5.9E-04	6598.68	5	5	3.6E-04
5252.79	5	7	5.4E-03	5927.11	7	7	3.7E-04	6604.02	7	5	2.8E-03
5254.47	3	5	3.6E-03	5928.81	5	3	1.1E-02	6604.85	5	7	1.3E-04
5286.07	5	7	9.6E-04	5940.86	1	3	1.2E-03	6632.09	3	3	5.3E-04
5290.00	5	3	9.0E-04	5942.67	5	5	1.8E-03	6656.88	3	3	3.1E-04
5309.52	5	5	1.2E-03	5943.89	7	5	3.6E-04	6660.68	3	1	7.8E-03
5317.73	5	7	2.6E-03	5949.26	3	3	1.5E-03	6664.05	5	5	1.5E-03
5373.50	3	5	2.7E-03	5964.48	1	3	7.7E-04	6677.28	3	1	2.36E-03
5393.27	5	5	9.6E-04	5968.32	3	3	1.8E-03	6684.73	3	5	3.9E-04
5410.48	5	7	2.0E-03	5971.60	3	1	1.1E-02	6698.47	3	3	2.5E-04
5421.35	7	5	6.0E-03	5981.90	5	7	1.2E-04	6698.88	5	3	1.6E-03
5439.99	3	3	1.9E-03	5987.30	7	7	1.2E-03	6719.22	1	3	2.4E-03
5442.24	7	7	9.3E-04	5988.13	3	5	6.1E-04	6722.88	5	7	3.2E-04
5451.65	3	5	4.7E-03	5994.66	3	5	2.6E-04	6752.84	3	5	1.93E-02
5457.42	5	3	3.6E-03	5999.00	5	5	1.4E-03	6754.37	3	3	2.1E-03
5459.65	7	7	3.8E-04	6005.73	5	3	1.4E-03	6756.10	5	5	3.6E-03
5467.16	5	5	7.6E-04	6013.68	7	5	1.4E-03	6766.61	5	3	4.0E-03

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}	λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}	λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
6779.93	1	3	1.21E-03	8014.79	5	5	9.28E-02	13622.4	3	5	7.3E-02
6818.29	3	1	2.0E-03	8037.23	1	3	3.59E-03	13678.5	3	5	6.2E-02
6827.25	5	3	2.4E-03	8046.13	3	1	1.12E-02	14093.6	1	3	4.3E-02
6851.88	3	5	6.7E-04	8053.31	5	3	8.6E-03	14739.1	5	7	8.8E-04
6871.29	3	3	2.78E-02	8066.60	5	5	1.4E-03	15046.4	1	3	5.2E-02
6879.59	3	5	1.8E-03	8103.69	3	3	2.5E-01	15172.3	1	3	1.3E-02
6887.10	5	7	1.3E-03	8115.31	5	7	3.31E-01	15329.6	5	5	1.2E-03
6888.17	3	5	2.5E-03	8264.52	3	3	1.53E-01	15555.5	5	7	9.8E-05
6925.01	3	3	1.2E-03	8384.73	5	7	2.4E-03	15734.9	5	3	2.9E-04
6937.67	3	1	3.08E-02	8408.21	3	5	2.23E-01	15816.8	5	3	8.7E-04
6951.46	5	5	2.2E-03	8424.65	3	5	2.15E-01	15989.3	1	3	1.9E-02
6960.23	5	5	2.4E-03	8490.30	3	5	9.6E-04	16122.7	5	3	3.9E-04
6965.43	5	3	6.39E-02	8521.44	3	3	1.39E-01	16180.0	5	5	1.2E-03
6992.17	3	1	7.5E-03	8605.78	5	5	1.04E-02	16264.1	3	3	3.0E-04
7030.25	7	5	2.67E-02	8620.46	1	3	9.2E-03	16520.1	3	5	2.6E-03
7067.22	5	5	3.80E-02	8667.94	1	3	2.43E-02	16739.8	3	5	3.1E-03
7068.73	5	3	2.0E-02	8761.69	3	5	9.5E-03	16940.4	5	5	2.5E-02
7086.70	1	3	1.5E-03	8784.61	3	1	2.4E-03	20317.0	1	3	1.6E-03
7107.48	5	5	4.5E-03	8799.08	5	3	4.6E-03	20616.5	5	5	3.9E-03
7125.83	3	3	6.0E-03	8962.19	3	3	1.6E-03	20812.0	5	7	7.6E-04
7147.04	5	3	6.25E-03	9075.42	3	1	1.2E-02	21332.2	3	3	3.2E-04
7158.83	3	1	2.1E-02	9122.97	5	3	1.89E-01	21534.9	3	5	1.1E-03
7162.57	1	3	5.8E-04	9194.64	3	3	1.76E-02	22039.2	3	1	1.2E-03
7206.98	5	3	2.48E-02	9224.50	3	5	5.03E-02	22077.4	5	3	1.4E-03
7229.93	5	5	6.6E-04	9291.53	3	1	3.26E-02	23133.4	3	3	1.7E-03
7265.17	3	3	1.7E-03	9354.22	3	3	1.06E-02	23844.8	9	7	1.1E-02
7270.66	7	7	1.1E-03	9657.78	3	3	5.43E-02	23967.5	3	1	3.6E-03
7272.93	3	3	1.83E-02	9784.50	3	5	1.47E-02				
7285.44	5	3	1.2E-03	10470.05	1	3	9.8E-03	**Ar II**			
7311.72	3	3	1.7E-02	10478.0	3	3	2.44E-02	2317.7	6	4	1.4E-01
7316.01	3	3	9.6E-03	10950.7	5	3	3.96E-03	2891.6	4	2	1.82E-01
7350.78	3	1	1.2E-02	11078.9	5	5	8.3E-03	2942.9	4	4	5.3E-01
7353.32	5	7	9.6E-03	11393.7	3	1	2.22E-02	2979.1	2	2	4.16E-01
7372.12	7	9	1.9E-02	11441.8	5	3	1.39E-02	3033.5	2	4	9.9E-02
7383.98	3	5	8.47E-02	11467.5	3	5	3.69E-03	3139.0	6	6	5.2E-01
7392.97	5	3	7.2E-03	11488.11	3	3	1.9E-03	3169.7	4	6	4.9E-01
7412.33	3	5	3.9E-03	11668.7	5	5	3.76E-02	3181.0	6	4	3.7E-01
7422.26	3	5	6.6E-04	11719.5	5	3	9.52E-03	3212.5	4	4	5.2E-02
7425.29	5	7	3.1E-03	12026.6	1	3	4.2E-03	3221.6	6	6	1.8E-02
7435.33	5	5	9.0E-03	12112.2	7	7	3.1E-02	3226.0	4	4	2.1E-02
7436.25	7	5	2.7E-03	12139.8	3	3	4.5E-02	3243.7	4	2	1.06E+00
7471.17	3	3	2.2E-04	12343.7	5	7	2.0E-02	3249.8	2	4	6.3E-01
7484.24	3	5	3.4E-03	12402.9	3	3	1.1E-01	3263.6	2	4	1.55E-01
7503.84	3	1	4.45E-01	12439.2	3	5	4.9E-02	3281.7	2	2	4.2E-01
7510.42	5	5	4.5E-03	12456.1	5	3	8.9E-02	3430.4	6	8	6.2E-02
7514.65	3	1	4.02E-01	12487.6	7	5	1.1E-01	3454.1	6	4	3.14E-01
7618.33	3	5	2.9E-03	12554.4	7	5	1.2E-03	3466.3	8	6	3.0E-02
7628.86	3	5	2.9E-03	12702.4	3	3	7.1E-02	3476.7	6	6	1.25E+00
7635.11	5	5	2.45E-01	12733.6	5	5	1.1E-02	3491.2	4	4	1.79E+00
7670.04	5	3	2.8E-03	12746.3	3	3	2.0E-02	3491.5	6	8	2.31E+00
7704.81	5	7	6.3E-04	12802.7	5	5	5.7E-02	3509.8	2	2	2.55E+00
7723.76	5	3	5.18E-02	12933.3	3	1	1.0E-01	3514.4	4	6	1.36E+00
7724.21	1	3	1.17E-01	12956.6	3	3	7.4E-02	3520.0	6	6	5.2E-01
7798.55	3	5	8.7E-04	13008.5	5	3	8.9E-02	3521.3	8	8	2.27E-01
7868.20	1	3	3.50E-03	13214.7	3	1	8.1E-02	3535.3	2	4	5.7E-01
7891.08	5	5	9.5E-03	13273.1	5	7	1.5E-01	3548.5	4	4	8.7E-01
7916.45	3	3	1.2E-03	13313.4	3	5	1.3E-01	3550.0	6	6	2.6E-02
7948.18	1	3	1.86E-01	13504.0	5	7	1.1E-01	3556.9	2	2	5.0E-02
8006.16	3	5	4.90E-02	13599.2	5	5	2.2E-02	3559.5	6	8	2.88E+00

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
3565.0	2	4	5.5E-01
3576.6	6	8	2.75E+00
3581.6	2	4	1.76E+00
3582.4	4	6	2.53E+00
3588.4	8	10	3.03E+00
3605.9	4	6	4.4E-02
3656.0	6	6	7.6E-02
3682.5	4	2	1.7E-02
3709.9	4	4	4.7E-02
3717.2	6	8	5.2E-02
3729.3	6	4	4.80E-01
3746.9	4	6	2.1E-02
3763.5	8	6	1.78E-01
3766.1	4	4	7.4E-02
3777.5	2	2	1.1E-02
3780.8	8	8	7.7E-01
3786.4	8	6	1.5E-02
3799.4	6	4	1.7E-01
3808.6	6	6	1.0E-02
3826.8	6	6	2.81E-01
3841.5	4	2	2.69E-01
3844.7	6	8	4.8E-02
3845.4	6	4	1.6E-02
3850.6	4	4	3.87E-01
3868.5	4	6	1.4E+00
3872.1	4	4	1.5E-01
3875.3	4	2	8.2E-02
3880.3	2	2	2.32E-01
3891.4	2	2	4.3E-02
3892.0	6	4	6.3E-02
3900.6	4	6	7.2E-02
3911.6	2	4	7.7E-02
3914.8	4	4	3.7E-02
3928.6	2	4	2.44E-01
3931.2	2	4	2.0E-02
3932.5	4	4	9.3E-01
3944.3	8	6	4.1E-02
3952.7	4	4	2.08E-01
3958.4	6	4	3.8E-02
3968.4	6	6	4.8E-02
3979.4	4	2	9.8E-01
3988.2	6	6	4.1E-02
3992.1	4	6	1.6E-02
4013.9	8	8	1.05E-01
4031.4	4	2	7.5E-02
4035.5	4	6	4.4E-02
4038.8	6	8	1.2E-02
4042.9	4	4	4.06E-01
4045.7	4	4	1.6E-02
4052.9	2	4	6.7E-01
4065.1	4	4	1.1E-02
4072.0	6	6	5.8E-01
4079.6	6	4	1.19E-01
4082.4	6	6	2.9E-02
4112.8	4	4	1.1E-02
4128.6	8	6	1.4E-02
4131.7	4	2	8.5E-01
4178.4	6	4	1.2E-02
4202.0	2	4	2.1E-02
4228.2	4	6	1.31E-01
4237.2	4	4	1.12E-01
4266.5	6	6	1.64E-01
4277.5	6	4	8.0E-01
4282.9	4	2	1.32E-01
4300.6	6	6	5.7E-02
4331.2	4	4	5.74E-01
4332.0	4	2	1.92E-01
4348.1	6	8	1.17E+00
4352.2	2	2	2.12E-01
4362.1	4	6	5.5E-02
4370.8	4	4	6.6E-01
4371.3	6	4	2.21E-01
4376.0	4	2	2.05E-01
4379.7	2	2	1.00E+00
4383.8	4	4	1.1E-02
4400.1	4	4	1.60E-01
4401.0	8	6	3.04E-01
4412.9	6	8	6.1E-02
4420.9	2	4	3.1E-02
4426.0	4	6	8.17E-01
4430.2	2	4	5.69E-01
4431.0	6	6	1.09E-01
4460.6	4	6	1.5E-02
4474.8	4	2	2.90E-01
4481.8	6	6	4.55E-01
4491.0	6	4	4.6E-02
4530.5	6	4	2.1E-02
4545.1	4	4	4.71E-01
4579.4	2	2	8.0E-01
4589.9	4	6	6.64E-01
4598.8	4	4	6.7E-02
4609.6	6	8	7.89E-01
4637.2	6	6	7.1E-02
4657.9	4	2	8.92E-01
4726.9	4	4	5.88E-01
4732.1	6	4	6.7E-02
4735.9	6	4	5.80E-01
4764.9	2	4	6.4E-01
4806.0	6	6	7.80E-01
4847.8	4	2	8.49E-01
4879.9	4	6	8.23E-01
4889.0	2	2	1.9E-01
4904.8	6	8	3.7E-02
4933.2	4	4	1.44E-01
4965.1	2	4	3.94E-01
4972.2	2	2	9.7E-02
5009.3	4	6	1.51E-01
5017.2	4	6	2.07E-01
5017.6	4	4	1.1E-02
5062.0	2	4	2.23E-01
5141.8	6	8	8.1E-02
5145.3	4	6	1.06E-01
5176.2	6	6	1.7E-02
6103.5	2	2	1.7E-02
6114.9	10	8	2.00E-01
6138.7	6	4	1.2E-02
6172.3	8	6	2.00E-01
6243.1	8	6	3.0E-02
6483.1	4	2	1.06E-01
6638.2	6	4	1.37E-01
6639.7	4	2	1.69E-01
6643.7	10	8	1.47E-01
6666.4	2	2	8.8E-02
6684.3	8	6	1.07E-01
6756.6	4	4	2.0E-02
6863.5	6	6	2.5E-02
7233.5	2	4	3.7E-02
7380.4	4	4	5.6E-02
7589.3	6	4	1.07E-01
Ar III			
769.15	5	3	6.0E+00
871.10	5	3	1.59E+00
875.53	3	1	3.74E+00
878.73	5	5	2.79E+00
879.62	3	3	9.2E-01
883.18	1	3	1.22E+00
887.40	3	5	9.0E-01
3024.1	5	7	2.6E+00
3027.2	5	5	6.4E-01
3054.8	3	5	1.9E+00
3064.8	3	3	1.0E+00
3078.2	1	3	1.4E+00
3285.9	5	7	2.0E+00
3301.9	5	5	2.0E+00
3311.3	5	3	2.0E+00
3336.1	7	9	2.0E+00
3344.7	5	7	1.8E+00
3352.1	7	7	2.2E-01
3358.5	3	5	1.6E+00
3361.3	5	5	3.0E-01
3472.6	5	7	2.0E-01
3480.6	7	7	1.6E+00
3499.7	3	3	1.3E+00
3500.6	3	5	2.6E-01
3502.7	5	3	4.3E-01
3503.6	5	5	1.2E+00
3511.7	7	5	2.6E-01
Ar IV			
840.03	4	2	2.73E+00
843.77	4	4	2.70E+00
850.60	4	6	2.63E+00
Ar VI			
292.15	2	2	6.9E+01
294.05	4	2	1.36E+02
Ar VII			
*250.41	9	3	2.78E+02
*477.54	9	15	9.92E+01
585.75	1	3	7.83E+01
*637.30	9	9	6.7E+01
Ar VIII			
158.92	2	4	1.1E+02
159.18	2	2	1.11E+02

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
229.44	2	2	1.12E+02
230.88	4	2	2.21E+02
337.09	4	4	1.2E+01
337.26	6	4	1.0E+02
338.22	4	2	1.1E+02
519.43	2	4	6.3E+01
526.46	4	6	7.2E+01
526.87	4	4	1.2E+01
700.24	2	4	2.55E+01
713.81	2	2	2.4E+01
Ar IX			
48.739	1	3	1.69E+03
Ar XIII			
162.96	5	3	3.4E+02
*163.08	9	3	5.3E+02
184.90	5	5	1.66E+02
186.38	1	3	8.8E+01
*207.89	9	9	9.5E+01
*245.10	9	15	3.7E+01
Ar XIV			
180.29	2	4	4.5E+01
183.41	2	2	1.69E+02
187.95	4	4	1.97E+02
191.35	4	2	7.5E+01
194.39	2	2	4.6E+01
203.35	4	2	7.8E+01
Ar XV			
25.05	1	3	1.7E+04
221.10	1	3	9.55E+01
*265.3	9	9	8.1E+01
Ar XVI			
*23.52	2	6	1.43E+04
*24.96	6	10	4.4E+04
353.88	2	4	1.5E+01
389.11	2	2	1.1E+01
1268	2	4	1.9E+00
1401	2	2	1.4E+00
2975	2	4	9.0E-02
3514	4	6	6.5E-02
Arsenic			
As I			
1890.4	4	6	2.0E+00
1937.6	4	4	2.0E+00
1972.6	4	2	2.0E+00
2288.1	6	4	2.8E+00
2344.0	2	4	3.5E-01
2349.8	4	2	3.1E+00
2369.7	4	4	6.0E-01
2370.8	4	6	4.2E-01
2456.5	6	4	7.2E-02
2492.9	4	2	1.2E-01
2745.0	2	4	2.6E-01
2780.2	4	4	7.8E-01
2860.4	2	2	5.5E-01
2898.7	4	2	9.9E-02
Barium			
Ba I			
2409.2	1	3	8.6E-04
2414.1	1	3	1.5E-03
2420.1	1	3	2.3E-03
2427.4	1	3	5.6E-03
2432.5	1	3	7.2E-03
2438.8	1	3	1.4E-03
2444.6	1	3	4.5E-03
2452.4	1	3	8.1E-04
2473.2	1	3	4.6E-03
2500.2	1	3	1.5E-02
2543.2	1	3	4.1E-02
2596.6	1	3	1.2E-01
2646.5	1	3	1.1E-02
2702.6	1	3	2.5E-02
2739.2	1	3	9.1E-03
2785.3	1	3	2.8E-02
3071.6	1	3	4.1E-01
3501.1	1	3	1.9E-01
3889.3	1	3	8.8E-03
3909.9	3	5	4.9E-01
3935.7	5	7	4.7E-01
3937.9	5	5	1.1E-01
3993.4	7	9	5.5E-01
3995.7	7	7	8.8E-02
4132.4	1	3	7.1E-03
4239.6	5	3	2.4E-01
4242.6	3	5	5.6E-02
4264.4	1	3	1.5E-01
4283.1	5	7	6.4E-01
4323.0	3	5	1.5E-01
4325.2	5	7	7.1E-02
4332.9	3	3	1.5E-01
4350.3	3	5	6.0E-01
4402.5	3	5	2.7E-01
4406.8	5	5	1.0E-01
4431.9	1	3	1.2E+00
4467.1	5	7	6.6E-02
4489.0	5	7	4.2E-01
4493.6	5	5	3.6E-01
4505.9	3	3	1.1E+00
4523.2	5	5	9.6E-01
4573.9	3	1	1.21E+00
4579.6	5	5	7.0E-01
4591.8	5	5	1.6E-02
4599.7	3	1	4.07E-01
4605.0	3	1	7.7E-02
4619.9	1	3	9.3E-02
4628.3	5	3	6.0E-02
4673.6	7	5	6.5E-02
4691.6	5	3	1.6E+00
4700.4	3	3	2.4E-01
4726.4	5	3	4.6E-01
5519.1	3	5	5.0E-01
5535.5	1	3	1.19E+00
5777.6	5	7	6.5E-01
5784.0	3	5	2.1E-01
5800.2	5	5	9.9E-02
5805.7	7	7	1.1E-02
5826.3	5	3	5.6E-01
5907.6	3	5	1.5E-02
5971.7	5	5	1.8E-01
5997.1	3	3	2.7E-01
6019.5	3	1	1.4E+00
6063.1	5	3	5.7E-01
6083.4	3	1	1.1E-01
6110.8	7	5	5.5E-01
6129.2	3	1	6.0E-02
6341.7	5	7	1.9E-01
6450.9	3	5	1.1E-01
6482.9	5	7	4.4E-01
6498.8	7	7	8.6E-01
6527.3	5	5	5.9E-01
6595.3	3	3	3.9E-01
6675.3	5	3	1.9E-01
6693.8	7	5	2.8E-01
6865.7	5	5	2.3E-02
7059.9	7	9	7.1E-01
7120.3	3	5	2.1E-01
7195.2	1	3	2.4E-01
7280.3	5	7	5.3E-01
7392.4	3	3	5.0E-01
7417.5	7	5	2.5E-02
7488.1	7	7	1.0E-01
7528.2	5	5	2.7E-02
7672.1	3	5	3.1E-01
7780.5	5	5	1.3E-01
7905.8	5	3	6.3E-01
7911.3	1	3	2.98E-03
8147.7	5	5	6.3E-02
9645.6	7	5	1.1E-01
9704.3	3	1	1.6E-01
9821.5	3	1	5.5E-02
10370.3	3	5	1.3E-02
10649.1	5	5	2.7E-02
11075.7	3	3	3.6E-05
11303.1	5	3	1.2E-03
11373.8	3	1	1.3E-01
14158.4	9	7	2.0E-03
14723.2	3	5	8.6E-03
14999.9	5	3	2.8E-03
17123.7	7	7	3.3E-03
17187.1	3	1	2.7E-02
20563.9	5	7	2.6E-03
Ba II			
1413.4	6	8	1.7E-02
1417.1	4	6	3.8E-02
1444.9	4	6	8.1E-02
1461.5	6	8	8.7E-02
1487.0	4	6	1.4E-01
1503.9	6	8	1.5E-01
1554.4	4	6	2.6E-01
1572.7	6	8	2.4E-01

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
1573.9	6	6	1.6E-02
1630.4	2	2	1.7E-02
1674.5	4	6	2.2E-01
1694.4	6	8	2.1E-01
1697.2	6	6	1.7E-02
1761.8	4	4	3.9E-03
1771.0	4	2	3.4E-02
1786.9	6	4	4.4E-02
1892.7	2	4	9.0E-02
1904.2	4	6	1.1E-02
1906.8	2	2	5.1E-02
1924.7	6	8	3.1E-02
1954.2	4	6	1.3E-01
1955.1	4	4	1.8E-02
1970.2	4	2	6.7E-02
1985.6	2	4	2.5E-01
1999.5	2	4	1.0E-01
2009.2	2	2	8.6E-02
2052.7	4	6	2.0E-01
2054.6	4	4	2.9E-02
2080.0	4	2	1.0E-01
2153.9	2	4	5.3E-01
2200.9	2	2	2.0E-01
2232.8	4	6	2.9E-01
2235.4	4	4	4.4E-02
2286.0	4	2	1.3E-01
2528.5	2	4	7.1E-01
2634.8	4	6	7.6E-01
2641.4	4	4	1.2E-01
2647.3	2	2	2.0E-01
2771.4	4	2	4.0E-01
3816.7	4	6	2.3E-03
3842.8	6	8	2.2E-03
3891.8	2	4	1.67E+00
4024.1	6	4	5.3E-03
4057.5	8	6	1.2E-02
4130.7	4	6	1.80E+00
4166.0	4	4	3.7E-01
4216.0	2	4	5.8E-02
4287.8	2	2	2.4E-02
4325.7	4	6	5.9E-02
4329.6	4	4	8.8E-03
4405.2	4	2	3.9E-02
4470.7	6	4	1.4E-02
4509.6	8	6	1.2E-02
4524.9	2	2	7.2E-01
4554.0	2	4	1.17E+00
4708.9	2	4	9.7E-02
4843.5	4	6	9.3E-02
4847.1	2	2	4.1E-02
4850.8	4	4	1.4E-02
4900.0	4	2	7.75E-01
4934.1	2	2	9.55E-01
4997.8	4	2	6.1E-02
5185.0	2	4	1.8E-02
5361.4	4	6	4.8E-02
5391.6	6	8	5.2E-02
5413.6	6	6	8.4E-04
5421.1	6	6	1.9E-03
5428.8	6	4	2.3E-02
5480.3	8	6	1.8E-02
5784.2	2	4	2.0E-01
5853.7	4	4	4.8E-02
5981.3	4	6	1.6E-01
5999.9	4	4	2.6E-02
6135.8	2	2	8.5E-02
6141.7	6	4	3.7E-01
6363.2	6	4	2.9E-03
6372.9	4	4	6.7E-04
6378.9	4	2	9.9E-02
6457.7	6	4	3.0E-03
6496.9	4	2	3.32E-01
7556.8	6	4	1.6E-03
7678.2	8	6	6.6E-04
8710.7	6	8	8.0E-01
8737.7	4	6	9.3E-01
Beryllium			
Be I			
1491.8	1	3	1.3E-02
1661.5	1	3	2.0E-01
2348.6	1	3	5.55E+00
*2494.7	9	15	1.6E+00
*2650.6	9	9	4.24E+00
4572.7	3	5	7.9E-01
Be II			
1197.1	2	2	4.7E-01
1197.2	4	2	9.4E-01
1512.3	2	4	9.2E+00
1512.4	4	6	1.1E+01
1776.1	2	2	1.4E+00
1776.3	4	2	2.9E+00
*2453.8	2	6	1.42E-01
3046.5	2	4	4.8E-01
3046.7	4	6	5.9E-01
3130.4	2	4	1.14E+00
3131.1	2	2	1.15E+00
3241.6	2	2	1.41E-01
3241.8	4	2	2.8E-01
3274.6	2	4	1.9E-01
3274.7	2	2	1.9E-01
4360.7	2	4	9.2E-01
4361.0	4	6	1.1E+00
*5255.9	2	6	2.56E-02
5270.3	2	2	3.30E-01
5270.8	4	2	6.6E-01
6279.4	2	4	1.2E-01
6279.7	4	6	1.43E-01
6756.7	2	2	5.1E-02
6757.1	4	2	1.02E-01
7401.2	2	4	3.0E-02
7401.4	2	2	3.0E-02
Bismuth			
Bi I			
1954.5	4	6	1.2E+00
2021.2	4	4	6.0E-02
2061.7	4	6	9.9E-01
2110.3	4	2	9.1E-01
2177.3	4	2	2.6E-02
2228.3	4	4	8.9E-01
2230.6	4	6	2.6E+00
2276.6	4	4	2.5E-01
2515.7	4	6	4.3E-02
2627.9	4	4	4.7E-01
2696.8	4	6	6.4E-02
2780.5	4	2	3.09E-01
2798.7	6	6	3.6E-02
2898.0	4	2	1.53E+00
2938.3	6	4	1.23E+00
2989.0	4	4	5.5E-01
2993.3	4	6	1.6E-01
3024.6	6	6	8.8E-01
3067.7	4	2	2.07E+00
3076.7	4	4	3.5E-02
3397.2	6	4	1.81E-01
3402.9	6	6	1.6E-02
3510.9	6	4	6.8E-02
3596.1	2	4	1.98E-01
3888.2	2	2	6.9E-02
4121.5	2	2	1.64E-01
4308.5	2	4	1.6E-02
4493.0	2	4	1.5E-02
4722.5	4	2	1.17E-01
6134.8	4	4	1.8E-02
Boron			
B I			
1378.6	2	4	3.50E+00
1378.9	2	2	1.40E+01
1378.9	4	4	1.75E+01
1379.2	4	2	7.0E+00
1465.5	2	4	3.34E+00
1465.7	4	4	6.7E+00
1465.8	6	4	1.00E+01
1825.9	2	4	1.76E+00
1826.4	4	6	2.11E+00
2088.9	2	4	2.8E-01
2089.6	4	6	3.3E-01
2496.8	2	2	8.64E-01
2497.7	4	2	1.73E+00
Bromine			
Br I			
1488.5	4	4	1.2E+00
1540.7	4	4	1.4E+00
1574.8	2	4	2.0E-01
1576.4	4	6	2.1E-02
1633.4	2	4	8.1E-02
4365.1	2	4	7.5E-03
4425.1	4	2	4.2E-03
4441.7	6	4	7.5E-03
4472.6	4	4	9.3E-03
4477.7	6	8	1.3E-02
4513.4	6	4	2.8E-03

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
4525.6	6	6	7.2E-03
4575.7	4	4	1.6E-02
4614.6	4	6	5.4E-03
4979.8	4	4	2.6E-03
5245.1	2	4	3.1E-03
5345.4	2	4	7.6E-03
7348.5	4	6	1.2E-01
7513.0	6	4	1.2E-01
7803.0	2	4	5.3E-02
7938.7	6	6	1.9E-01
8131.5	2	4	3.8E-02
8343.7	2	2	2.2E-01
8446.6	4	4	1.2E-01
8638.7	6	4	9.7E-02
Br II			
4704.9	5	7	1.1E+00
4785.5	5	5	9.4E-01
4816.7	5	3	1.1E+00
Cadmium			
Cd I			
2288.0	1	3	5.3E+00
2836.9	1	3	2.8E-01
2880.8	3	5	4.2E-01
2881.2	3	3	2.4E-01
2980.6	5	7	5.9E-01
2981.4	5	5	1.5E-01
3261.1	1	3	4.06E-03
3403.7	1	3	7.7E-01
3466.2	3	5	1.2E+00
3467.7	3	3	6.7E-01
3610.5	5	7	1.3E+00
3612.9	5	5	3.5E-01
4140.5	3	5	4.7E-02
4662.4	3	5	5.5E-02
4678.1	1	3	1.3E-01
4799.9	3	3	4.1E-01
5085.8	5	3	5.6E-01
6438.5	3	5	5.9E-01
Cd II			
2144.4	2	4	2.8E+00
2265.0	2	2	3.0E+00
2572.9	2	2	1.7E+00
2748.5	4	2	2.8E+00
4415.6	4	6	1.4E-02
Calcium			
Ca I			
2275.5	1	3	3.01E-01
2995.0	1	3	3.67E-01
2997.3	3	5	2.41E-01
2999.6	3	3	2.79E-01
3000.9	3	1	1.58E+00
3006.9	5	5	7.5E-01
3009.2	5	3	4.30E-01
3344.5	1	3	1.51E-01
3350.2	3	5	1.78E-01
3361.9	5	7	2.23E-01
3624.1	1	3	2.12E-01
3630.8	3	5	2.97E-01
3631.0	3	3	1.53E-01
3644.4	5	7	3.55E-01
3644.8	5	5	9.4E-02
3870.5	3	5	7.2E-02
3957.1	3	3	9.8E-02
3973.7	5	3	1.75E-01
4092.6	3	5	1.1E-01
4094.9	5	7	1.2E-01
4098.5	7	9	1.3E-01
4108.5	5	7	9.0E-01
4226.7	1	3	2.18E+00
4283.0	3	5	4.34E-01
4289.4	1	3	6.0E-01
4299.0	3	3	4.66E-01
4302.5	5	5	1.36E+00
4307.7	3	1	1.99E+00
4318.7	5	3	7.4E-01
4355.1	5	7	1.9E-01
4425.4	1	3	4.98E-01
4435.0	3	5	6.7E-01
4435.7	3	3	3.42E-01
4454.8	5	7	8.7E-01
4455.9	5	5	2.0E-01
4526.9	5	3	4.1E-01
4578.6	3	5	1.76E-01
4581.4	5	7	2.09E-01
4585.9	7	9	2.29E-01
4685.3	3	5	8.0E-02
4878.1	5	7	1.88E-01
5041.6	5	3	3.3E-01
5188.9	3	5	4.0E-01
5261.7	3	3	1.5E-01
5262.2	3	1	6.0E-01
5264.2	5	5	9.1E-02
5265.6	5	3	4.4E-01
5270.3	7	5	5.0E-01
5582.0	5	7	6.0E-02
5588.8	7	7	4.9E-01
5590.1	3	5	8.3E-02
5594.5	5	5	3.8E-01
5598.5	3	3	4.3E-01
5601.3	7	5	8.6E-02
5602.9	5	3	1.4E-01
5857.5	3	5	6.6E-01
6102.7	1	3	9.6E-02
6122.2	3	3	2.87E-01
6161.3	5	5	3.3E-02
6162.2	5	3	3.54E-01
6163.8	3	3	5.6E-02
6166.4	3	1	2.2E-01
6169.1	5	3	1.7E-01
6169.6	7	5	1.9E-01
6439.1	7	9	5.3E-01
6449.8	3	5	9.0E-02
6462.6	5	7	4.7E-01
6471.7	7	7	5.9E-02
6493.8	3	5	4.4E-01
6499.7	5	5	8.1E-02
Ca II			
1341.9	2	4	1.5E-02
1342.5	2	2	1.5E-02
1649.9	2	4	3.2E-03
1652.0	2	2	3.1E-03
1673.9	2	4	2.24E-01
1680.1	4	6	2.65E-01
1680.1	4	4	4.41E-02
1807.3	2	4	3.54E-01
1814.5	4	6	4.2E-01
1814.7	4	4	7.0E-02
1843.1	2	2	1.6E-01
1850.7	4	2	3.08E-01
2103.2	2	4	8.2E-01
2112.8	4	6	9.7E-01
2113.2	4	4	1.6E-01
2197.8	2	2	3.1E-01
2208.6	4	2	6.2E-01
3158.9	2	4	3.1E+00
3179.3	4	6	3.6E+00
3181.3	4	4	5.8E-01
3706.0	2	2	8.8E-01
3736.9	4	2	1.7E+00
3933.7	2	4	1.47E+00
3968.5	2	2	1.4E+00
Ca III			
357.97	1	3	8.8E+02
439.69	1	3	1.9E-01
490.55	1	3	1.6E-02
Ca V			
558.60	5	3	2.2E+01
637.93	5	3	3.9E+00
643.12	3	1	9.1E+00
646.57	5	5	6.9E+00
647.88	3	3	2.3E+00
651.55	1	3	2.9E+00
656.76	3	5	2.1E+00
Ca VII			
550.20	5	5	1.8E+01
624.39	1	3	3.3E+00
630.54	3	5	4.5E+00
630.79	3	3	2.2E+00
639.15	5	7	5.7E+00
640.41	5	5	1.3E+00
Ca VIII			
182.71	2	2	1.6E+02
184.16	4	2	3.2E+02
Ca IX			
163.23	5	3	3.76E+02
371.89	1	3	8.8E+01
373.81	3	5	1.16E+02

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
378.08	5	7	1.5E+02
395.03	3	5	2.2E+02
466.24	1	3	1.12E+02
498.01	3	5	2.49E+01
506.18	5	5	7.2E+01
515.57	5	3	3.75E+01
Ca X			
110.96	2	4	2.9E+02
111.20	2	2	2.92E+02
151.84	2	2	2.3E+02
153.02	4	2	4.5E+02
206.57	4	4	2.9E+01
206.75	6	4	2.6E+02
207.39	4	2	2.8E+02
411.70	2	4	8.3E+01
419.75	4	6	9.5E+01
420.47	4	4	1.6E+01
557.76	2	4	3.50E+01
574.01	2	2	3.2E+01
Ca XI			
30.448	1	3	6.2E+03
30.867	1	3	4.9E+04
35.212	1	3	2.0E+03
Ca XII			
140.05	4	2	3.7E+02
147.27	2	2	1.6E+02
Ca XV			
141.69	5	3	4.08E+02
*142.23	9	3	6.3E+02
161.00	5	5	1.9E+02
Ca XVII			
19.558	1	3	3.8E+04
21.198	3	5	4.9E+04
192.82	1	3	1.21E+02
218.82	3	5	2.76E+01
223.02	1	3	3.44E+01
228.72	3	3	2.37E+01
232.83	5	5	6.5E+01
244.06	5	3	3.28E+01
Ca XVIII			
*18.71	2	6	2.31E+04
*19.74	6	10	7.0E+04
302.19	2	4	2.0E+01
344.76	2	2	1.3E+01
Carbon			
C I			
945.191	1	3	3.79E+00
945.338	3	3	1.14E+01
945.579	5	3	1.89E+01
1193.24	5	7	1.22E+00
1260.74	1	3	5.32E-01
1260.93	3	1	1.70E+00
1261.00	3	3	4.42E-01
1261.12	3	5	3.71E-01
1261.43	5	3	7.06E-01
1261.55	5	5	1.27E+00
1274.11	5	7	1.03E-02
1277.25	1	3	1.27E+00
1277.28	3	5	1.73E+00
1277.51	3	3	9.12E-01
1277.55	5	7	2.31E+00
1277.72	5	5	6.35E-01
1277.95	5	3	5.56E-02
1279.23	5	7	1.10E-01
1279.89	3	5	3.08E-01
1280.14	1	3	3.11E-01
1280.33	5	5	5.77E-01
1280.40	3	3	1.73E-01
1280.60	3	1	8.22E-01
1280.85	5	3	3.33E-01
1328.83	1	3	7.95E-01
1329.09	3	1	2.41E+00
1329.58	5	5	1.79E+00
1329.60	5	3	1.00E+00
1355.84	5	7	1.04E+00
1364.16	5	5	1.57E-01
1431.60	5	7	2.11E+00
1432.10	5	5	2.01E+00
1432.53	5	3	2.11E+00
1459.03	5	3	4.76E-01
1463.34	5	7	1.88E+00
1467.40	5	3	5.49E-01
1468.41	5	3	3.90E-02
1470.09	5	7	1.37E-02
1472.23	5	3	8.01E-03
1481.76	5	5	3.92E-01
1560.31	1	3	6.57E-01
1561.34	5	5	2.94E-01
1561.44	5	7	1.18E+00
1656.27	3	5	8.58E-01
1656.93	1	3	1.13E+00
1657.01	5	5	2.52E+00
1657.38	3	3	8.64E-01
1657.91	3	1	3.43E+00
1658.12	5	3	1.44E+00
1751.83	1	3	9.07E-01
1763.91	1	3	3.59E-02
1765.37	1	3	1.04E-02
1930.90	5	3	3.51E+00
2478.56	1	3	3.40E-01
2902.23	1	3	4.32E-03
2903.27	3	3	1.29E-02
2905.00	5	3	2.15E-02
4371.37	3	3	1.27E-02
4762.31	1	3	3.37E-03
4762.53	3	5	2.72E-03
4766.67	3	3	2.36E-03
4770.03	3	1	1.07E-02
4771.74	5	5	7.97E-03
4775.90	5	3	4.84E-03
4812.92	1	3	4.03E-04
4817.37	3	3	8.76E-04
4826.80	5	3	6.28E-04
4932.05	3	1	6.02E-02
5023.84	7	9	1.81E-03
5039.06	7	9	4.73E-03
5041.48	3	5	5.25E-03
5041.79	5	7	3.28E-03
5052.17	3	5	2.60E-02
5380.34	3	3	1.86E-02
5545.05	3	3	3.04E-03
5668.94	3	3	2.35E-02
5793.12	7	5	3.44E-03
5794.47	5	5	6.44E-04
5800.23	3	3	1.04E-03
5800.60	5	3	3.04E-03
5805.20	3	1	4.12E-03
6001.12	5	5	3.22E-03
6006.02	7	5	1.79E-02
6007.18	3	3	5.34E-03
6010.68	3	1	2.13E-02
6013.17	7	5	1.79E-02
6013.21	7	9	4.35E-03
6014.83	5	3	1.60E-02
6016.45	5	7	3.86E-03
6587.61	3	3	5.09E-02
6655.52	3	3	5.03E-03
6828.12	3	5	9.89E-03
7111.47	3	5	2.17E-02
7113.18	7	9	2.47E-02
7115.17	5	7	2.19E-02
7115.18	3	1	4.43E-02
7116.99	7	5	3.26E-02
7119.66	5	3	3.12E-02
7860.88	5	5	1.53E-02
8058.62	5	5	1.09E-02
8335.15	3	1	3.51E-01
9061.44	3	5	7.31E-02
9062.49	1	3	9.48E-02
9078.29	3	3	7.07E-02
9088.51	3	1	3.00E-01
9094.83	5	5	2.28E-01
9111.81	5	3	1.35E-01
9405.73	3	5	2.91E-01
9603.03	1	3	3.06E-02
9620.78	3	3	8.62E-02
9658.43	5	3	1.25E-01
C II			
687.345	4	6	2.84E+01
858.092	2	2	1.18E+00
858.559	4	2	2.35E+00
903.623	2	4	6.85E+00
903.962	2	2	2.74E+01
904.142	4	4	3.42E+01
904.480	4	2	1.37E+01
1009.86	2	4	5.71E+00
1010.08	4	4	1.14E+01
1010.37	6	4	1.71E+01
1036.34	2	2	7.61E+00

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
1037.02	4	2	1.52E+01
1323.91	4	4	4.33E+00
1323.95	6	6	4.49E+00
1334.53	2	4	2.37E+00
1335.71	4	6	2.84E+00
2091.14	2	4	1.00E-01
2091.19	4	6	1.69E-01
2091.65	6	8	2.41E-01
2093.16	6	6	7.20E-02
2173.85	2	4	2.31E-01
2174.17	2	2	2.31E-01
2509.13	2	4	4.53E-01
2511.74	4	4	9.04E-02
2512.06	4	6	5.42E-01
2727.31	2	4	6.63E-02
2728.72	4	4	3.31E-01
2729.21	2	2	2.65E-01
2730.63	4	2	1.32E-01
5132.95	2	4	3.89E-01
5133.28	4	6	2.80E-01
5137.26	2	2	1.55E-01
5139.17	4	4	1.24E-01
5143.49	4	2	7.73E-01
5145.16	6	6	6.49E-01
5151.08	6	4	4.16E-01
5640.55	2	4	9.89E-02
5648.07	4	4	1.97E-01
5662.46	6	4	2.93E-01
5818.31	2	2	3.38E-02
5822.98	2	4	3.38E-03
5823.18	4	2	3.38E-02
5827.85	4	4	2.16E-02
5836.37	6	4	4.22E-02
5843.62	6	6	1.20E-02
5856.06	8	6	5.31E-02
6095.29	2	4	4.20E-01
6098.51	4	6	5.03E-01
6102.56	4	4	8.37E-02
6578.05	2	4	3.63E-01
6582.88	2	2	3.62E-01
6724.56	2	4	3.17E-02
6727.07	2	2	6.34E-02
6727.26	4	6	2.96E-02
6731.07	4	4	5.06E-02
6733.58	4	2	6.32E-02
6734.00	6	8	1.80E-02
6738.61	6	6	7.23E-02
6742.43	6	4	4.41E-02
6750.54	8	8	1.08E-01
6755.16	8	6	2.38E-02
6779.94	4	6	2.56E-01
6780.59	2	4	1.52E-01
6783.91	6	8	3.65E-01
6787.21	2	2	3.04E-01
6791.47	4	4	1.94E-01
6798.10	4	2	6.04E-02
6800.69	6	6	1.09E-01
6812.28	6	4	1.80E-02
7046.25	4	2	3.20E-01
7053.09	4	4	3.19E-01
7063.68	4	6	3.17E-01
7112.48	2	4	2.94E-01
7113.04	4	6	3.15E-01
7115.63	6	8	3.60E-01
7119.76	4	4	1.17E-01
7119.91	8	10	4.19E-01
7125.72	6	6	1.02E-01
7132.47	6	4	8.33E-03
7134.10	8	8	5.93E-02
7231.33	2	4	3.52E-01
7236.42	4	6	4.22E-01
7237.17	4	4	7.03E-02
8028.85	2	2	1.71E-02
8037.73	2	4	4.26E-02
8039.40	4	2	8.51E-02
8048.31	4	4	1.36E-02
8062.10	4	6	3.04E-02
8062.80	6	4	4.56E-02
8076.64	6	6	7.05E-02
9238.30	4	6	3.34E-02
9251.01	2	4	2.77E-02
9863.06	2	4	5.56E-02
9870.78	4	6	9.31E-02
9882.68	6	8	1.33E-01
C III			
310.170	1	3	6.56E+00
386.203	1	3	3.46E+01
459.466	1	3	5.91E+01
459.514	3	5	7.97E+01
459.627	5	7	1.06E+02
574.281	3	5	6.24E+01
977.020	1	3	1.767E+01
1174.93	3	5	3.293E+00
1175.26	1	3	4.385E+00
1175.59	3	3	3.287E+00
1175.71	5	5	9.856E+00
1175.99	3	1	1.313E+01
1176.37	5	3	5.468E+00
1247.38	3	1	2.082E+01
2296.87	3	5	1.376E+00
2849.05	3	1	1.95E-01
3703.70	3	3	5.90E-01
4325.56	3	5	1.24E-01
4647.42	3	5	7.26E-01
4650.25	3	3	7.25E-01
4651.02	3	5	2.28E-01
4651.47	3	1	7.24E-01
4652.05	1	3	3.04E-01
4659.06	3	3	2.27E-01
4663.64	3	1	9.05E-01
4665.86	5	5	6.78E-01
4673.95	5	3	3.75E-01
5244.66	1	3	5.30E-02
5253.58	3	3	1.58E-01
5272.52	5	3	2.61E-01
5695.92	3	5	4.27E-01
5858.34	3	1	1.34E-01
5863.25	3	3	3.35E-02
5871.68	5	3	1.00E-01
5880.56	5	5	1.99E-02
5894.07	7	5	1.11E-01
6727.48	1	3	1.12E-01
6731.04	3	5	1.50E-01
6742.15	3	3	8.32E-02
6744.39	5	7	1.99E-01
6762.17	5	5	4.95E-02
6773.39	5	3	5.47E-03
6851.18	3	5	7.60E-03
6853.68	5	7	5.64E-03
6857.24	3	3	3.79E-02
6862.69	5	5	3.51E-02
6868.78	5	3	1.26E-02
6872.04	7	7	4.46E-02
6881.10	7	5	7.80E-03
7353.88	5	3	3.09E-02
7707.43	3	5	1.30E-01
7771.76	3	1	1.77E-01
7780.41	3	3	1.76E-01
7796.00	3	5	1.75E-01
8500.32	1	3	1.01E-01
9593.32	3	3	5.32E-03
9651.47	5	5	1.57E-02
9696.48	5	7	7.53E-03
9696.54	3	5	7.12E-03
9699.57	7	9	8.47E-03
9701.10	1	3	4.40E-02
9705.41	3	5	5.93E-02
9706.44	3	3	3.29E-02
9715.09	5	7	7.88E-02
9717.75	5	5	1.97E-02
9718.79	5	3	2.19E-03
C IV			
*312.43	2	6	4.63E+01
*384.13	6	10	1.76E+02
1548.19	2	4	2.65E+00
1550.77	2	2	2.64E+00
5801.31	2	4	3.17E-01
5811.97	2	2	3.16E-01
C V			
34.9728	1	3	2.554E+03
40.2678	1	3	8.873E+03
*227.19	3	9	1.363E+02
247.315	1	3	1.278E+02
*248.71	9	15	4.247E+02
*260.19	9	3	6.680E+01
267.267	3	5	3.947E+02
*2273.9	3	9	5.646E-01
3526.66	1	3	1.663E-01
8420.72	3	5	6.898E-02
*8433.2	3	9	6.868E-02
8448.12	3	1	6.832E-02

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
8449.19	3	3	6.829E-02
Cesium			
Cs I			
3203.5	2	4	7.6E-06
3205.3	2	4	7.9E-06
3207.5	2	4	8.5E-06
3210.0	2	4	9.4E-06
3212.8	2	4	1.19E-05
3216.2	2	4	1.49E-05
3220.1	2	4	1.7E-05
3220.2	2	2	1.07E-07
3224.8	2	4	2.0E-05
3225.0	2	2	1.43E-07
3230.5	2	4	2.5E-05
3230.7	2	2	1.97E-07
3237.4	2	4	2.8E-05
3237.6	2	2	2.63E-07
3245.9	2	4	3.45E-05
3246.2	2	2	3.7E-07
3256.7	2	4	4.25E-05
3257.1	2	2	7.0E-07
3270.5	2	4	5.6E-05
3271.0	2	2	9.8E-07
3288.6	2	4	1.0E-04
3289.3	2	2	2.7E-06
3313.1	2	4	1.6E-04
3314.0	2	2	5.2E-06
3347.5	2	4	2.2E-04
3348.8	2	2	1.1E-05
3397.9	2	4	4.0E-04
3400.0	2	2	2.4E-05
3476.8	2	4	6.6E-04
3480.0	2	2	6.6E-05
3611.4	2	4	1.5E-03
3617.3	2	2	2.5E-04
3876.1	2	4	3.8E-03
3888.6	2	2	9.7E-04
4555.3	2	4	1.88E-02
4593.2	2	2	8.0E-03
8521.1	2	4	3.276E-01
8943.5	2	2	2.87E-01
Chlorine			
Cl I			
1188.8	4	6	2.33E+00
1188.8	4	4	2.71E-01
1201.4	2	4	2.39E+00
1335.7	4	2	1.74E+00
1347.2	4	4	4.19E+00
1351.7	2	2	3.23E+00
1363.4	2	4	7.5E-01
4323.3	4	4	1.1E-02
4363.3	4	6	6.8E-03
4379.9	4	4	1.4E-02
4389.8	6	8	1.4E-02
4526.2	4	4	5.1E-02
4601.0	2	2	4.2E-02
4661.2	2	4	1.2E-02
7256.6	6	4	1.5E-01
7414.1	6	4	4.7E-02
7547.1	4	4	1.2E-01
7717.6	4	4	3.0E-02
7745.0	2	4	6.3E-02
7769.2	6	6	6.0E-02
7821.4	6	8	9.8E-02
7830.8	4	4	9.7E-02
7878.2	6	6	1.8E-02
7899.3	4	6	5.1E-02
7924.6	2	4	2.1E-02
7935.0	6	8	3.9E-02
7997.9	4	4	2.1E-02
Cl II			
3329.1	5	7	1.5E+00
3522.1	7	7	1.4E+00
3798.8	5	7	1.6E+00
3805.2	7	9	1.8E+00
3809.5	3	5	1.5E+00
3851.0	5	7	1.8E+00
3851.4	5	5	1.6E+00
3854.7	3	5	2.2E+00
3861.9	5	7	2.4E+00
3868.6	7	9	2.7E+00
3913.9	9	9	8.2E-01
3990.2	5	7	8.4E-01
4132.5	5	5	1.6E+00
4276.5	9	7	7.6E-01
4768.7	3	5	7.7E-01
4781.3	5	7	1.0E+00
4794.6	5	7	1.04E+00
4810.1	5	5	9.9E-01
4819.5	5	3	1.00E+00
4904.8	5	7	8.1E-01
4917.7	3	5	7.5E-01
5078.3	7	7	7.7E-01
5219.1	3	9	8.6E-01
5392.1	5	7	1.0E+00
Cl III			
2298.5	4	4	4.2E+00
2340.6	6	6	4.2E+00
2370.4	8	6	2.8E+00
2531.8	2	4	4.4E+00
2532.5	4	6	5.3E+00
2577.1	4	6	4.3E+00
2580.7	6	8	4.7E+00
2601.2	2	4	4.6E+00
2603.6	4	6	5.0E+00
2609.5	6	8	5.7E+00
2617.0	8	10	6.6E+00
2661.6	4	6	3.4E+00
2665.5	6	8	4.8E+00
2691.5	4	4	3.5E+00
2710.4	4	6	3.5E+00
3340.4	6	6	1.5E+00
3392.9	4	4	1.9E+00
3393.5	6	6	1.9E+00
3530.0	6	8	1.8E+00
3560.7	4	6	1.7E+00
3602.1	6	8	1.7E+00
3612.9	4	6	1.2E+00
3720.5	4	6	1.7E+00
Chromium			
Cr I			
1999.95	9	9	1.4E+00
2383.30	9	11	4.1E-01
2389.21	3	5	2.3E-01
2408.60	9	7	6.7E-01
2408.72	7	5	2.9E-01
2492.57	3	5	4.5E-01
2495.08	3	3	2.7E-01
2496.30	5	7	5.6E-01
2502.55	7	9	2.2E-01
2504.31	7	9	4.5E-01
2508.11	5	5	2.1E-01
2508.97	5	3	3.8E-01
2527.11	9	9	5.3E-01
2549.55	3	3	4.8E-01
2560.70	5	5	4.3E-01
2571.74	7	5	6.4E-01
2577.66	7	7	2.6E-01
2591.84	9	7	6.5E-01
2620.48	5	3	1.9E-01
2673.64	3	3	1.8E-01
2701.99	9	11	2.1E-01
2726.50	5	7	7.5E-01
2731.90	5	5	7.8E-01
2736.46	5	3	7.5E-01
2752.85	3	3	8.7E-01
2757.09	5	5	6.8E-01
2761.74	5	3	6.8E-01
2764.36	7	7	3.7E-01
2769.90	7	5	1.1E+00
2780.70	9	7	1.4E+00
2879.27	5	7	2.1E-01
2887.00	3	5	2.7E-01
2889.22	9	9	6.6E-01
2893.25	7	7	5.2E-01
2894.17	1	3	3.3E-01
2896.76	5	5	3.0E-01
2905.48	3	1	1.3E+00
2909.05	5	3	6.8E-01
2910.89	7	5	3.4E-01
2911.15	9	7	2.6E-01
2967.64	7	9	3.9E-01
2971.10	5	7	7.1E-01
2975.48	3	5	8.9E-01
2980.78	1	3	5.10E-01
2988.64	5	7	5.2E-01
2991.88	3	1	3.0E+00
2994.06	5	5	2.5E-01
2995.09	5	5	4.3E-01
2996.57	5	3	2.0E+00
2998.78	5	3	4.07E-01
3000.88	7	5	1.6E+00

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
3005.06	9	7	9.2E-01
3013.72	3	5	8.3E-01
3015.20	1	3	1.63E+00
3020.67	3	3	1.5E+00
3021.58	9	11	2.91E+00
3024.36	5	5	1.27E+00
3029.17	5	3	3.8E-01
3030.25	7	7	1.1E+00
3031.35	5	3	3.1E-01
3034.19	7	7	3.5E-01
3037.05	9	9	5.4E-01
3040.84	7	5	7.4E-01
3053.87	9	7	7.97E-01
3148.44	9	11	5.6E-01
3155.16	11	13	5.7E-01
3163.76	13	15	6.0E-01
3237.73	9	9	1.3E+00
3238.09	11	11	2.0E-01
3578.68	7	9	1.48E+00
3593.48	7	7	1.50E+00
3605.32	7	5	1.62E+00
3639.80	13	11	1.8E+00
3743.89	13	13	7.61E-01
3757.66	7	7	4.13E-01
3768.24	5	5	5.10E-01
3804.80	9	9	6.9E-01
3963.69	13	15	1.3E+00
3969.75	11	13	1.2E+00
3983.90	7	9	1.05E+00
3991.12	5	7	1.07E+00
4001.44	9	11	6.8E-01
4039.10	15	15	6.7E-01
4048.78	13	13	6.4E-01
4058.78	11	11	6.7E-01
4065.71	9	11	3.5E-01
4165.52	11	13	7.5E-01
4204.48	13	11	3.1E-01
4254.33	7	9	3.15E-01
4263.15	15	17	6.4E-01
4274.81	7	7	3.07E-01
4275.98	11	11	2.2E-01
4280.42	13	15	4.7E-01
4289.73	7	5	3.16E-01
4291.97	7	5	2.4E-01
4297.75	11	13	4.9E-01
4298.05	9	9	2.6E-01
4300.52	9	7	1.9E-01
4301.19	11	9	2.6E-01
4302.78	11	11	2.5E-01
4319.66	5	3	1.8E-01
4337.25	5	7	2.0E-01
4373.65	9	9	2.8E-01
4376.80	13	13	3.2E-01
4413.86	7	5	2.7E-01
4422.70	5	5	2.7E-01
4424.29	9	7	2.1E-01
4429.93	3	3	2.4E-01
4432.16	1	3	1.8E-01
4432.77	15	15	4.9E-01
4443.72	3	1	4.5E-01
4482.88	3	3	3.0E-01
4490.55	9	7	3.9E-01
4492.31	5	3	4.47E-01
4495.28	9	7	2.0E-01
4500.29	7	7	2.1E-01
4506.84	13	11	2.7E-01
4540.72	11	11	3.14E-01
4564.17	11	13	5.1E-01
4595.60	13	13	4.7E-01
4622.47	7	7	4.1E-01
4663.33	3	3	2.0E-01
4665.90	3	3	3.0E-01
4689.38	7	5	2.3E-01
4698.46	9	7	2.2E-01
4708.02	11	9	4.31E-01
4718.43	13	11	3.4E-01
4730.69	7	5	3.83E-01
4737.33	9	7	3.38E-01
4741.09	3	5	2.2E-01
4752.07	13	13	6.2E-01
4756.09	11	9	4.0E-01
4792.49	7	5	2.6E-01
4801.02	9	7	3.06E-01
4816.13	9	9	1.8E-01
4870.79	7	9	3.5E-01
4887.01	9	11	3.2E-01
4922.28	11	13	4.0E-01
4966.80	3	1	3.0E-01
5204.51	5	3	5.09E-01
5206.02	5	5	5.14E-01
5208.42	5	7	5.06E-01
5243.38	5	3	2.19E-01
5297.37	7	9	3.88E-01
5297.99	7	7	3.0E-01
5328.36	9	11	6.2E-01
5329.17	9	9	2.25E-01
5783.11	3	3	2.1E-01
5783.89	5	5	2.02E-01
5787.97	5	7	2.35E-01
Cr II			
2653.57	4	6	3.5E-01
2658.59	2	4	5.8E-01
2666.02	6	8	5.9E-01
2668.71	4	2	1.4E+00
2671.80	6	4	1.0E+00
2672.83	8	6	5.5E-01
2744.97	4	6	8.5E-01
2787.61	6	6	1.5E+00
2822.38	14	16	2.3E+00
2835.63	10	12	2.0E+00
2840.01	10	12	2.7E+00
2843.24	8	10	6.4E-01
2849.83	6	8	9.2E-01
2851.35	8	10	2.2E+00
2856.77	4	6	4.3E-01
2857.40	6	8	2.8E-01
2860.92	2	4	6.9E-01
2862.57	8	8	6.3E-01
2866.72	4	4	1.2E+00
2867.09	4	4	1.1E+00
2867.65	2	2	1.1E+00
2870.43	6	6	1.3E+00
2873.81	4	2	8.8E-01
2880.86	6	4	7.9E-01
2898.53	10	12	1.2E+00
2921.81	8	10	9.0E-01
2930.83	2	4	1.1E+00
2935.12	6	8	1.8E+00
2953.34	2	2	1.8E+00
2966.03	10	8	5.4E-01
2971.90	14	14	2.0E+00
2979.73	12	12	1.8E+00
2985.32	10	10	2.2E+00
2989.18	8	8	2.2E+00
3118.64	2	4	1.7E+00
3120.36	4	6	1.5E+00
3122.59	12	12	4.4E-01
3128.69	4	4	8.1E-01
3136.68	6	6	6.4E-01
4588.22	8	6	1.2E-01
Cr V			
434.306	9	9	1.5E+01
436.351	9	7	2.4E+01
436.601	7	5	2.1E+01
437.420	7	7	1.4E+01
437.655	5	5	1.3E+01
441.056	5	3	2.3E+01
456.357	1	3	9.5E+00
456.637	3	1	3.3E+01
456.743	3	3	9.1E+00
457.028	5	5	2.7E+01
457.504	5	3	1.2E+01
464.015	9	7	3.6E+01
469.634	5	5	2.3E+01
1106.25	7	9	1.2E+01
1121.07	7	9	2.1E+01
1127.63	9	11	3.5E+01
1465.86	5	3	1.1E+01
1481.65	3	1	1.0E+01
1519.03	5	7	9.5E+00
1579.70	7	9	8.6E+00
Cr VI			
161.687	6	6	1.7E+02
168.088	4	6	2.0E+02
201.007	4	4	2.5E+03
201.224	4	6	1.8E+02
201.388	6	4	2.7E+02
201.606	6	6	2.6E+03
202.442	6	4	1.0E+03
202.739	4	2	1.2E+03
226.241	6	8	7.2E+02

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
227.202	4	6	6.6E+02
Cr X			
216.72	6	8	9.0E+02
223.86	4	2	7.7E+02
224.74	4	4	7.6E+02
226.24	4	6	7.3E+02
227.42	4	4	5.2E+02
227.50	4	6	1.8E+01
228.63	6	4	8.1E+01
228.71	6	6	4.5E+02
231.21	2	4	1.2E+02
232.96	4	4	4.4E+02
242.20	2	4	5.0E+01
244.19	4	6	5.8E+01
395.984	4	4	2.4E+01
398.150	6	6	2.1E+01
Cr XI			
214.31	5	7	1.4E+01
226.45	5	7	6.0E+02
232	3	1	4.1E+02
235.53	5	7	5.5E+02
240.76	1	3	4.8E+02
250.28	5	7	1.0E+01
366.491	3	3	1.2E+01
366.942	3	1	3.0E+01
374.927	5	5	2.3E+01
422.083	3	5	1.0E+01
Cr XII			
216	4	6	2.4E+02
218	6	8	2.4E+02
239	2	2	1.6E+02
244.70	2	4	3.0E+02
247	4	2	2.4E+02
247	2	2	3.3E+02
248	6	8	1.4E+02
250	6	8	3.5E+02
250	6	6	2.2E+02
251.52	4	6	3.4E+02
252	4	6	2.0E+02
256	2	2	1.5E+02
259	2	4	3.2E+02
269	2	2	2.1E+02
300.32	2	2	1.4E+02
305.81	4	4	2.76E+02
309	4	2	2.7E+02
309	6	6	1.6E+02
311.55	4	2	1.6E+02
324	4	6	2.2E+02
327	6	8	2.2E+02
332.06	6	4	1.4E+02
Cr XIII			
49.59	1	3	9.9E+02
67.01	1	3	1.67E+03
228	5	7	1.8E+02
267.73	5	7	1.9E+02
270	3	1	1.7E+02
276.4	5	7	2.2E+02
277	1	3	2.1E+02
279.32	3	5	3.5E+02
286	3	1	4.6E+02
328.29	1	3	1.86E+02
345	7	9	1.74E+02
Cr XIV			
*38.036	2	6	2.47E+02
39.796	2	4	3.05E+02
40.018	4	6	3.6E+02
40.782	2	4	3.9E+02
40.800	2	2	3.9E+02
41.556	2	4	4.5E+02
41.788	4	6	5.3E+02
44.597	2	4	7.1E+02
44.869	4	6	8.3E+02
46.125	4	2	3.1E+02
46.468	2	4	6.6E+02
46.527	2	2	6.7E+02
48.300	4	6	5.9E+02
48.338	6	8	6.3E+02
50.821	2	4	1.2E+03
51.172	4	6	1.4E+03
51.180	4	4	2.3E+02
52.321	4	6	1.0E+03
52.363	6	8	1.1E+03
53.760	2	2	3.0E+02
54.164	4	2	5.9E+02
60.699	4	6	2.05E+03
60.756	6	8	2.19E+03
63.324	2	4	1.07E+03
63.539	2	2	1.13E+03
68.594	2	4	1.98E+03
69.213	4	6	2.31E+03
69.247	4	4	3.8E+02
86.060	4	6	5.3E+03
86.169	6	8	5.9E+03
86.185	6	6	3.9E+02
101.05	6	4	4.4E+02
101.42	4	2	4.83E+02
104.4	4	6	3.0E+02
104.5	6	8	3.1E+02
109.8	2	4	2.3E+02
110.4	4	6	2.8E+02
118.3	4	2	2.1E+02
125.2	4	6	5.0E+02
125.3	6	8	5.4E+02
148.5	2	4	2.18E+02
149.1	2	2	2.1E+02
157.1	2	4	3.3E+02
158.4	4	6	3.7E+02
187.02	4	6	9.3E+02
187.30	6	8	9.6E+02
189.1	2	2	2.13E+02
191.0	4	2	4.11E+02
222.9	4	2	2.2E+02
346.3	4	6	2.4E+02
346.5	6	8	2.5E+02
Cr XV			
18.497	1	3	1.62E+05
18.782	1	3	2.8E+04
19.015	1	3	6.3E+02
20.863	1	3	6.0E+03
21.153	1	3	5.6E+03
102	3	3	1.6E+02
102.18	5	3	7.0E+02
103	3	1	3.8E+02
105	7	5	5.3E+02
111.27	3	3	1.7E+02
Cr XVI			
17.073	4	6	1.2E+04
17.242	2	4	8.6E+04
17.299	4	4	2.5E+04
17.372	4	4	1.4E+05
17.438	4	2	1.1E+05
17.514	2	4	1.1E+05
17.587	2	4	2.0E+04
17.656	2	2	2.0E+04
19.442	4	2	9.9E+03
19.714	2	2	1.1E+04
Cr XVII			
16.31	5	3	9.6E+03
16.32	5	7	3.2E+04
16.37	3	1	9.7E+04
16.44	5	7	1.3E+05
16.59	3	1	5.7E+04
16.65	5	5	1.1E+04
16.66	1	3	1.8E+05
16.68	5	7	6.8E+04
16.80	5	7	4.4E+04
16.97	1	3	2.63E+04
16.97	3	3	1.5E+04
17.968	5	3	8.6E+03
18.336	5	3	1.7E+04
18.336	5	5	1.6E+04
18.389	1	3	9.2E+03
Cr XVIII			
95.77	4	2	3.08E+02
102.32	4	4	1.54E+02
104.98	6	4	8.7E+02
106.84	4	2	3.4E+02
110.41	4	2	7.9E+02
112.27	4	2	4.24E+02
119.62	2	2	3.2E+02
123.87	6	4	3.9E+02
125.51	4	4	3.4E+02
128.10	6	6	2.8E+02
136.52	4	2	1.66E+02
139.87	4	4	1.49E+02
140.82	4	2	2.66E+02
155.46	2	2	2.84E+02
157.40	4	4	2.83E+02

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
Cr XIX			
14.73	3	3	7.1E+04
14.80	1	3	1.3E+05
14.81	5	3	3.4E+04
14.84	5	7	1.3E+05
109.64	3	3	2.46E+02
110.37	5	3	6.0E+02
113.97	5	3	5.5E+02
118.31	3	1	3.29E+02
118.67	5	3	2.1E+02
118.83	3	3	1.35E+02
126.30	1	3	1.56E+02
126.33	5	5	4.35E+02
130.99	7	5	2.9E+02
134.89	3	1	1.98E+02
138.15	3	1	1.75E+02
138.45	5	5	1.71E+02
140.92	5	3	1.38E+02
143.57	3	1	7.2E+02
163.94	5	5	3.1E+02
179.18	3	1	1.45E+02
Cr XX			
14.13	2	4	1.1E+05
14.26	4	6	1.3E+05
128.42	4	4	3.8E+02
131.31	6	4	1.27E+02
133.82	2	4	8.3E+01
135.26	4	2	2.41E+02
140.75	4	4	1.35E+02
148.99	6	4	1.75E+02
156.00	2	4	8.4E+01
167.97	6	6	1.12E+02
180.85	4	4	1.6E+02
Cr XXI			
12.97	3	1	4.8E+04
12.98	5	5	3.9E+04
13.02	3	5	3.8E+04
13.02	5	7	3.9E+04
13.08	1	3	5.2E+04
13.22	3	1	4.6E+04
13.34	3	5	5.2E+04
13.49	1	3	9.0E+04
13.53	3	3	6.6E+04
13.55	3	5	1.2E+05
13.65	5	7	1.5E+05
13.66	3	1	1.2E+05
13.67	5	5	3.9E+04
13.68	3	3	8.2E+04
13.75	5	3	4.5E+04
13.75	5	5	9.5E+04
13.76	1	3	1.51E+05
13.78	5	7	1.7E+05
13.84	5	7	2.59E+05
13.87	3	5	8.5E+04
13.92	3	5	8.5E+04
13.93	5	7	4.2E+04
13.95	5	5	3.8E+04
14.04	3	5	1.2E+05
14.24	1	3	1.41E+05
Cr XXII			
2.190	4	2	1.7E+06
2.191	2	2	2.5E+06
2.198	4	4	4.5E+06
2.199	2	4	2.3E+06
2.202	4	6	1.6E+06
2.203	4	2	1.3E+06
13.149	2	4	1.29E+05
13.292	4	6	1.54E+05
Cr XXIII			
1.7632	1	3	3.68E+05
1.8557	1	3	8.97E+05
2.095	3	1	3.5E+06
2.101	1	3	2.0E+06
2.101	5	5	7.9E+05
2.102	3	5	2.1E+06
2.103	3	5	1.2E+06
2.104	1	3	1.4E+06
2.105	3	3	9.6E+05
2.106	3	3	2.0E+06
2.107	5	5	2.3E+06
2.107	3	5	3.3E+06
2.109	5	3	1.7E+06
2.113	3	5	5.9E+05
2.119	3	1	2.7E+05
2.129	3	1	5.1E+05
2.1818	1	3	3.37E+06
2.1923	1	3	2.34E+05
Cobalt			
Co I			
2287.80	8	8	8.6E-01
2295.22	10	8	2.2E-01
2309.03	10	10	5.6E-01
2323.13	8	8	5.0E-01
2325.53	6	8	1.1E-01
2335.98	6	6	5.1E-01
2338.66	4	4	7.7E-01
2353.36	8	10	1.5E-01
2355.48	6	8	1.3E-01
2358.18	4	6	1.4E-01
2365.06	10	10	1.3E-01
2371.85	6	8	7.3E-02
2384.86	10	8	2.4E-01
2392.03	6	6	4.0E-01
2402.06	8	6	5.1E-01
2407.25	10	12	3.6E+00
2412.76	4	6	6.5E-01
2414.46	6	8	3.4E+00
2415.29	4	6	3.6E+00
2424.93	10	10	3.2E+00
2432.21	8	8	2.6E+00
2436.66	6	6	2.6E+00
2439.04	4	4	2.7E+00
2460.80	4	6	1.2E-01
2467.69	6	8	7.0E-02
2470.27	10	12	1.5E-01
2476.64	10	8	2.2E-01
2504.52	10	8	1.8E-01
2511.02	10	10	9.2E-01
2521.36	10	8	3.0E+00
2528.97	8	6	2.8E+00
2530.13	6	6	7.1E-02
2535.96	6	4	1.9E+00
2536.50	8	8	3.0E-01
2544.25	4	2	3.0E+00
2562.12	4	4	3.9E-01
2567.34	6	6	3.0E-01
2574.35	8	8	1.7E-01
2685.34	6	8	5.5E-02
3017.55	8	6	6.9E-02
3044.00	10	10	1.9E-01
3048.89	6	4	7.5E-02
3061.82	8	8	1.6E-01
3072.34	6	6	1.5E-01
3086.78	4	4	1.9E-01
3354.37	8	6	1.1E-01
3367.11	10	8	6.0E-02
3385.22	8	6	1.1E-01
3388.16	6	4	2.4E-01
3395.37	6	8	2.9E-01
3405.12	10	10	1.0E+00
3409.17	8	8	4.2E-01
3412.34	8	10	6.1E-01
3412.63	10	8	1.2E-01
3414.74	4	4	8.8E-02
3417.15	6	6	3.2E-01
3431.58	8	6	1.1E-01
3433.05	4	4	1.0E+00
3442.92	6	4	1.2E-01
3443.64	8	8	6.9E-01
3449.17	6	6	7.6E-01
3449.44	10	10	1.8E-01
3453.51	10	12	1.1E+00
3455.24	4	2	1.9E-01
3462.80	4	6	7.9E-01
3465.79	10	12	9.2E-02
3474.02	6	8	5.6E-01
3483.41	8	10	5.5E-02
3489.40	8	6	1.3E+00
3491.32	4	4	5.0E-02
3495.68	4	6	4.9E-01
3502.28	10	8	8.0E-01
3502.63	6	6	5.2E-02
3506.32	8	6	8.2E-01
3509.84	6	8	3.2E-01
3512.64	6	4	1.0E+00
3513.48	8	10	7.8E-02
3518.34	6	4	1.6E+00
3521.58	10	8	1.8E-01
3523.42	4	2	9.8E-01
3526.85	10	10	1.3E-01
3529.03	6	8	8.8E-02
3529.82	8	10	4.6E-01

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
3533.36	4	6	9.1E-02
3560.89	4	4	2.3E-01
3564.95	6	8	7.0E-02
3569.37	8	8	1.6E+00
3574.97	6	6	1.5E-01
3575.36	8	8	9.6E-02
3585.15	8	8	7.1E-02
3587.19	6	6	1.4E+00
3594.87	6	6	9.2E-02
3602.08	4	4	1.0E-01
3704.06	6	8	1.2E-01
3745.49	8	8	7.5E-02
3842.05	8	6	1.3E-01
3845.47	8	10	4.6E-01
3861.16	6	4	1.4E-01
3873.12	10	8	1.2E-01
3873.95	8	6	1.0E-01
3881.87	6	4	8.2E-02
3894.07	6	8	6.9E-01
3894.98	4	2	8.8E-02
3935.96	8	10	6.2E-02
3995.31	8	10	2.5E-01
3997.90	6	8	7.0E-02
4092.39	8	8	5.7E-02
4110.53	6	6	5.5E-02
4118.77	6	8	1.6E-01
4121.32	8	10	1.9E-01
5146.75	8	8	1.5E-01
5212.70	10	10	1.9E-01
5265.79	6	8	5.0E-02
5280.63	10	8	2.8E-01
5352.05	12	10	2.7E-01
5477.09	6	8	6.8E-02
5483.96	8	10	7.3E-02
6082.43	10	10	5.4E-02
6455.00	8	10	9.0E-02
7838.12	8	10	5.4E-02
8093.93	12	10	2.0E-01
8372.79	10	10	8.7E-02
Co II			
2286.15	11	13	3.3E+00
2307.85	9	11	2.6E+00
2311.61	7	9	2.8E+00
2314.05	5	7	2.8E+00
2314.97	3	5	2.7E+00
2330.36	5	3	1.32E+00
2344.28	3	3	1.5E+00
2353.41	7	7	1.9E+00
2363.80	9	9	2.1E+00
2378.62	11	9	1.9E+00
2383.45	9	7	1.8E+00
2388.92	11	11	2.8E+00
2389.54	5	3	1.5E+00
2404.17	3	3	1.5E+00
2417.66	9	9	8.5E-01
Copper			
Cu I			
*2024.3	2	6	9.8E-02
2165.1	2	4	5.1E-01
2178.9	2	4	9.13E-01
2181.7	2	2	1.0E+00
2225.7	2	2	4.6E-01
2244.3	2	4	1.19E-02
2441.6	2	2	2.0E-02
2492.2	2	4	3.11E-02
2618.4	6	4	3.07E-01
2766.4	4	4	9.6E-02
2824.4	6	6	7.8E-02
2961.2	6	8	3.76E-02
3063.4	4	4	1.55E-02
3194.1	4	4	1.55E-02
3247.5	2	4	1.39E+00
3274.0	2	2	1.37E+00
3337.8	6	8	3.8E-03
4022.6	2	4	1.90E-01
4062.6	4	6	2.10E-01
4249.0	2	2	1.95E-01
4275.1	6	8	3.45E-01
4480.4	2	2	3.0E-02
4509.4	4	2	2.75E-01
4530.8	4	2	8.4E-02
4539.7	6	4	2.12E-01
4587.0	8	6	3.20E-01
4651.1	10	8	3.80E-01
4704.6	8	8	5.5E-02
5105.5	6	4	2.0E-02
5153.2	2	4	6.0E-01
5218.2	4	6	7.5E-01
5220.1	4	4	1.50E-01
5292.5	8	8	1.09E-01
5700.2	4	4	2.4E-03
5782.1	4	2	1.65E-02
Cu II			
2489.7	5	5	1.5E-02
2544.8	9	7	1.1E+00
2689.3	7	7	4.1E-01
2701.0	5	5	6.7E-01
2703.2	3	3	1.2E+00
2713.5	5	5	6.8E-01
2769.7	7	7	6.1E-01
Dysprosium			
Dy I			
2862.7	17	15	6.5E-02
2964.6	17	17	6.5E-02
3147.7	15	17	1.1E-01
3263.2	15	13	1.4E-01
3511.0	15	13	3.1E-01
3571.4	15	13	2.0E-01
3757.1	17	19	3.0E+00
3868.8	17	17	3.1E+00
3967.5	17	19	8.7E-01
4046.0	17	15	1.5E+00
4103.9	13	11	1.7E+00
4186.8	17	17	1.32E+00
4194.8	17	17	7.2E-01
4211.7	17	19	2.08E+00
4218.1	15	15	1.85E+00
4221.1	15	17	1.52E+00
4225.2	13	15	4.5E+00
4268.3	15	15	3.6E-02
4276.7	13	13	7.3E-01
4292.0	15	15	5.8E-02
4577.8	17	19	2.2E-02
4589.4	17	15	1.3E-01
4612.3	17	15	8.2E-02
5077.7	17	17	5.7E-03
5301.6	17	15	1.1E-02
5547.3	17	17	2.7E-03
5639.5	17	19	4.7E-03
5974.5	17	17	4.0E-03
5988.6	17	15	5.3E-03
6010.8	15	15	2.6E-02
6088.3	15	13	3.5E-02
6168.4	15	17	2.5E-02
6259.1	17	19	8.5E-03
6579.4	17	15	7.5E-03
Erbium			
Er I			
3862.9	13	13	2.5E+00
4008.0	13	15	2.6E+00
4151.1	13	11	1.8E+00
Europium			
Eu I			
2372.9	8	6	1.9E-01
2375.3	8	8	2.0E-01
2379.7	8	10	2.0E-01
2619.3	8	10	7.0E-03
2643.8	8	8	6.6E-03
2659.4	8	10	1.2E-02
2682.6	8	6	1.2E-02
2710.0	8	10	1.4E-01
2724.0	8	8	1.2E-01
2731.4	8	8	3.1E-02
2732.6	8	6	3.7E-02
2735.3	8	10	4.7E-02
2738.6	8	10	1.3E-02
2743.3	8	6	1.1E-01
2745.6	8	6	5.0E-02
2747.8	8	8	5.2E-02
2772.9	8	6	1.0E-02
2878.9	8	10	2.8E-02
2892.5	8	8	1.0E-01
2893.0	8	6	1.0E-01

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
2909.0	8	10	6.9E-02
2958.9	8	6	1.6E-02
3059.0	8	8	3.8E-02
3067.0	8	10	9.1E-03
3106.2	8	10	5.5E-02
3111.4	8	10	3.0E-01
3168.3	8	10	6.9E-02
3185.5	8	10	5.8E-03
3210.6	8	8	1.1E-01
3212.8	8	8	2.9E-01
3213.8	8	6	1.8E-01
3235.1	8	10	1.0E-02
3241.4	8	8	2.3E-02
3246.0	8	6	1.4E-02
3247.6	8	8	2.3E-02
3322.3	8	6	3.5E-02
3334.3	8	6	3.4E-01
3350.4	8	10	1.5E-02
3353.7	8	8	5.8E-03
3457.1	8	8	8.4E-03
3467.9	8	8	1.0E-02
3589.3	8	6	6.9E-03
4594.0	8	10	1.4E+00
4627.2	8	8	1.3E+00
4661.9	8	6	1.3E+00
5645.8	8	6	5.4E-03
5765.2	8	8	1.1E-02
6018.2	8	10	8.5E-03
6291.3	8	6	1.8E-03
6864.5	8	10	5.8E-03
7106.5	8	8	2.6E-03
Fluorine			
F I			
806.96	4	6	3.3E+00
809.60	2	4	2.8E+00
951.87	4	2	2.6E+00
954.83	4	4	5.77E+00
955.55	2	2	5.1E+00
958.52	2	4	1.3E+00
6239.7	6	4	2.5E-01
6348.5	4	4	1.8E-01
6413.7	2	4	1.1E-01
6708.3	6	4	1.4E-02
6774.0	6	6	1.0E-01
6795.5	4	2	5.2E-02
6834.3	4	4	2.1E-01
6856.0	6	8	4.94E-01
6870.2	2	2	3.8E-01
6902.5	4	6	3.2E-01
6909.8	2	4	2.2E-01
6966.4	4	2	1.1E-01
7037.5	4	4	3.0E-01
7127.9	2	2	3.8E-01
7309.0	6	8	4.7E-01
7311.0	4	2	3.9E-01
7314.3	4	6	4.8E-01
7332.0	6	4	3.1E-01
7398.7	6	6	2.85E-01
7425.7	4	2	3.4E-01
7482.7	4	4	5.6E-02
7489.2	2	2	1.1E-01
7514.9	2	2	5.2E-02
7552.2	4	6	7.8E-02
7573.4	2	4	1.0E-01
7607.2	4	4	7.0E-02
7754.7	4	6	3.82E-01
7800.2	2	4	2.1E-01
Gallium			
Ga I			
2195.4	2	2	1.9E-02
2199.7	4	2	3.3E-02
2214.4	4	6	1.2E-02
2235.9	4	2	4.3E-02
2255.0	2	2	3.1E-02
2259.2	4	6	3.1E-02
2294.2	2	4	7.0E-02
2297.9	4	2	5.8E-02
2338.2	4	6	9.8E-02
2371.3	2	2	5.7E-02
2418.7	4	2	1.0E-01
2450.1	2	4	2.8E-01
2500.2	4	6	3.4E-01
2659.9	2	2	1.2E-01
2719.7	4	2	2.3E-01
2874.2	2	4	1.2E+00
2943.6	4	6	1.4E+00
2944.2	4	4	2.7E-01
4033.0	2	2	4.9E-01
4172.0	4	2	9.2E-01
Ga II			
829.60	1	3	2.2E-01
1414.4	1	3	1.88E+01
Germanium			
Ge I			
1944.7	3	1	7.0E-01
1955.1	3	3	2.8E-01
1988.3	5	3	2.5E-01
1998.9	5	5	5.5E-01
2041.7	1	3	1.1E+00
2065.2	3	3	8.5E-01
2068.7	3	5	1.2E+00
2086.0	3	5	4.0E-01
2094.3	5	7	9.7E-01
2105.8	5	5	1.7E-01
2256.0	5	5	3.2E-02
2417.4	5	5	9.6E-01
2498.0	1	3	1.3E-01
2533.2	3	3	1.0E-01
2589.2	5	3	5.1E-02
2592.5	3	5	7.1E-01
2651.2	5	5	2.0E+00
2651.6	1	3	8.5E-01
2691.3	3	3	6.1E-01
2709.6	3	1	2.8E+00
2754.6	5	3	1.1E+00
3039.1	5	3	2.8E+00
3124.8	5	5	3.1E-02
3269.5	5	3	2.9E-01
4226.6	1	3	2.1E-01
4685.8	1	3	9.5E-02
Ge II			
999.10	2	4	1.9E+00
1016.6	4	6	2.1E+00
1017.1	4	4	3.5E-01
1055.0	2	2	6.9E-01
1075.1	4	2	1.3E+00
1237.1	2	4	1.9E+01
1261.9	4	6	2.2E+01
1264.7	4	4	3.5E+00
1602.5	2	2	3.4E+00
1649.2	4	2	6.5E+00
4741.8	2	4	4.6E-01
4814.6	4	6	5.1E-01
4824.1	4	4	8.6E-02
5131.8	4	6	1.9E+00
5178.5	6	6	1.3E-01
5178.6	6	8	2.0E+00
5893.4	2	4	9.2E-01
6021.0	2	2	8.4E-01
6336.4	2	2	4.4E-01
6484.2	4	2	8.5E-01
Gold			
Au I			
2427.95	2	4	1.99E+00
2675.95	2	2	1.64E+00
3122.78	6	4	1.90E-01
6278.30	4	2	3.4E-02
Helium			
He I			
510.00	1	3	4.6224E-01
512.10	1	3	7.3174E-01
515.62	1	3	1.2582E+00
522.21	1	3	2.4356E+00
537.03	1	3	5.6634E+00
584.33	1	3	1.7989E+01
*2677.1	3	9	4.4174E-03
*2696.1	3	9	6.0234E-03
*2723.2	3	9	8.4996E-03
*2763.8	3	9	1.2508E-02
*2829.1	3	9	1.9389E-02
*2945.1	3	9	3.2006E-02
*3187.7	3	9	5.6361E-02
3231.3	1	3	5.1015E-03
3258.3	1	3	6.9627E-03
3296.8	1	3	9.8432E-03
3354.6	1	3	1.4537E-02
3447.6	1	3	2.2691E-02
*3554.4	9	15	7.5971E-03
*3563.0	9	3	4.8362E-03
*3587.3	9	15	1.8107E-02

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
3613.6	1	3	3.8022E-02
*3634.2	9	15	2.6062E-02
*3652.0	9	3	9.7444E-03
*3705.0	9	15	3.9528E-02
*3819.6	9	15	6.4351E-02
3833.6	3	5	9.6470E-03
*3867.5	9	3	2.4465E-02
3871.8	3	5	1.3386E-02
*3888.7	3	9	9.4746E-02
3926.5	3	5	1.9371E-02
3935.9	3	1	7.4475E-03
3964.7	1	3	6.9507E-02
4009.3	3	5	2.9612E-02
4024.0	3	1	1.1281E-02
*4026.2	9	15	1.1600E-01
*4120.8	9	3	4.4529E-02
4143.8	3	5	4.8812E-02
4169.0	3	1	1.8298E-02
4387.9	3	5	8.9889E-02
4437.6	3	1	3.2689E-02
*4471.5	9	15	2.4578E-01
*4713.2	9	3	9.5209E-02
4921.9	3	5	1.9863E-01
5015.7	1	3	1.3372E-01
5047.7	3	1	6.7712E-02
*5875.7	9	15	7.0703E-01
6678.2	3	5	6.3705E-01
*7065.2	9	3	2.7853E-01
7281.4	3	1	1.8299E-01
*8361.7	3	9	3.8126E-03
*9463.6	3	9	5.6868E-03
9603.4	1	3	5.8286E-03
*9702.6	9	3	8.6511E-03
*10311	9	15	1.9945E-02
*10668	9	3	1.4471E-02
*10830	3	9	1.0216E-01
*10913	15	21	1.9801E-02
10917	5	7	1.6083E-02
*10997	15	9	1.4253E-03
11013	1	3	9.2496E-03
11045	3	5	1.8457E-02
11226	3	1	1.1168E-02
*11969	9	15	3.4781E-02
*12528	3	9	7.0932E-03
12756	5	3	1.2754E-03
*12785	15	21	4.1339E-02
12791	5	7	3.2475E-02
*12846	9	3	2.7317E-02
12968	3	5	3.3615E-02
*12985	15	9	2.7292E-03
Indium			
In I			
2560.2	2	4	4.0E-01
2710.3	4	6	4.0E-01
3039.4	2	4	1.3E+00
3256.1	4	6	1.3E+00
4101.8	2	2	5.6E-01
4511.3	4	2	1.02E+00
In II			
2941.1	3	1	1.4E+00
Iodine			
I I			
1782.8	4	4	2.71E+00
1830.4	4	6	1.6E-01
Iridium			
Ir I			
2475.12	10	10	2.1E-01
2502.98	10	12	3.2E-01
2639.71	10	10	4.7E-01
2661.98	10	10	2.5E-01
2664.79	10	8	4.0E-01
2694.23	10	12	4.8E-01
2849.72	10	10	2.2E-01
2853.31	10	10	2.0E-03
2882.64	10	8	7.2E-02
2924.79	10	12	1.42E-01
2934.64	8	10	2.0E-01
2951.22	10	8	2.8E-02
3003.63	8	10	5.9E-02
3168.88	8	10	5.47E-02
3220.78	10	8	2.4E-01
3558.99	6	8	1.5E-02
3573.72	8	10	5.4E-02
3617.21	6	8	2.0E-02
3628.67	8	8	2.8E-02
3661.71	8	10	4.0E-02
3734.77	8	8	2.7E-02
4033.76	8	10	2.7E-02
4069.92	6	8	3.6E-02
4913.35	12	12	3.3E-02
4939.24	10	12	2.5E-03
Iron			
Fe I			
1934.54	9	7	2.5E-01
1937.27	9	7	2.2E-01
1940.66	7	5	2.6E-01
2084.12	9	7	3.7E-01
2102.35	7	7	8.8E-02
2112.97	1	3	1.9E-01
2132.02	9	9	7.6E-02
2145.19	7	7	5.7E-02
2153.01	5	5	6.9E-02
2161.58	3	5	5.0E-02
2166.77	9	7	2.7E+00
2171.30	5	7	5.1E-02
2173.21	3	5	8.3E-02
2176.84	1	3	1.0E-01
2191.20	1	3	7.3E-02
2191.84	5	5	1.2E+00
2196.04	3	3	1.2E+00
2200.72	3	5	2.8E-01
2259.51	9	11	7.0E-02
2267.08	7	5	7.1E-02
2272.07	7	9	3.8E-02
2276.03	9	7	1.7E-01
2277.11	7	5	3.7E+01
2287.25	5	3	3.4E-01
2292.52	7	9	4.3E-02
2294.41	3	1	6.1E-01
2300.14	5	7	8.0E-02
2301.68	1	3	1.3E-01
2303.42	1	3	9.4E-02
2303.58	3	5	7.6E-02
2309.00	3	5	1.5E-01
2313.10	5	7	1.4E-01
2320.36	7	9	1.2E-01
2371.43	5	5	5.2E-02
2373.62	7	7	6.7E-02
2374.52	1	3	2.9E-01
2381.83	3	5	5.4E-02
2389.97	5	7	5.0E-02
2462.18	7	5	1.5E-01
2462.65	9	9	5.8E-01
2479.78	5	5	1.8E+00
2483.27	9	11	4.9E+00
2488.14	7	9	4.7E+00
2490.64	5	7	3.8E+00
2491.15	3	5	3.0E+00
2501.13	9	7	6.8E-01
2510.83	7	5	1.3E+00
2518.10	5	3	1.9E+00
2522.85	9	9	2.9E+00
2524.29	3	1	3.4E+00
2527.43	7	7	1.9E+00
2529.13	5	5	9.8E-01
2535.61	1	3	9.7E-01
2540.97	3	5	9.2E-01
2545.98	5	7	6.7E-01
2549.61	7	9	3.6E-01
2584.54	11	13	4.6E-01
2606.83	9	11	4.2E-01
2618.02	7	7	4.0E-01
2623.53	7	9	3.3E-01
2656.15	13	15	2.8E-01
2669.49	11	13	1.7E-01
2679.06	11	11	1.9E-01
2719.03	9	7	1.4E+00
2720.90	7	5	1.1E+00
2723.58	5	3	6.4E-01
2733.58	11	9	8.6E-01
2735.48	9	7	6.2E-01
2737.31	3	3	8.5E-01
2742.41	5	5	6.3E-01
2744.07	1	3	3.5E-01
2750.14	7	7	3.9E-01
2756.33	3	5	2.0E-01
2788.10	11	13	6.3E-01
2894.50	5	5	6.2E-01
2899.42	5	3	5.9E-01
2920.69	5	5	5.2E-02
2923.29	11	11	1.6E+00
2925.36	7	9	1.8E-01
2929.01	7	5	7.3E-02

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}	λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}	λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
2936.90	9	9	1.3E-01	3215.94	5	5	8.0E-01	3442.36	5	5	4.55E-02
2941.34	5	3	5.6E-02	3217.38	11	9	2.2E-01	3443.88	5	3	6.2E-02
2947.88	7	7	2.0E-01	3219.58	7	9	6.2E-01	3445.15	5	7	2.8E-01
2953.94	5	5	1.89E-01	3222.07	11	11	3.3E-01	3447.28	5	5	9.1E-02
2954.65	5	7	1.0E-01	3225.79	11	13	8.8E-01	3450.33	3	3	2.0E-01
2957.36	3	3	1.77E-01	3227.80	9	7	1.4E+00	3476.70	1	3	5.4E-02
2965.25	1	3	1.16E-01	3228.25	5	3	4.5E-01	3477.85	3	1	4.2E-02
2966.90	9	11	2.72E-01	3229.99	9	11	4.5E-01	3485.34	5	3	1.4E-01
2969.36	3	1	3.66E-02	3230.21	5	5	1.9E-01	3495.29	9	7	9.46E-02
2973.13	5	7	1.35E-01	3230.96	7	5	3.9E-01	3497.10	7	7	1.4E-01
2973.24	7	9	1.83E-01	3233.05	13	15	5.4E-01	3505.07	5	3	9.9E-02
2980.53	7	7	2.2E-01	3233.97	9	9	2.0E-01	3506.50	5	5	7.1E-02
2981.45	7	5	6.54E-02	3246.96	5	3	9.9E-02	3508.49	9	11	5.7E-02
2983.57	9	7	2.80E-01	3248.20	7	7	2.2E-01	3510.44	1	3	4.4E-02
2987.29	9	7	6.6E-02	3253.60	7	9	1.8E-01	3516.56	7	5	3.7E-02
2990.39	9	11	3.9E-01	3254.36	11	13	5.1E-01	3521.84	3	5	9.6E-02
2994.43	7	5	4.4E-01	3257.59	7	5	1.4E-01	3523.31	5	3	7.6E-02
2996.39	3	5	1.6E-01	3265.62	7	5	3.8E-01	3524.08	7	5	7.5E-02
2999.51	11	11	2.3E-01	3268.23	3	3	5.9E-02	3524.24	5	7	4.2E-02
3000.95	5	3	6.42E-01	3271.00	5	3	6.6E-01	3527.79	9	9	2.0E-01
3008.14	3	1	1.07E+00	3280.26	9	11	5.4E-01	3529.82	3	3	7.6E-01
3009.09	13	11	6.7E-02	3282.89	3	5	3.0E-01	3536.56	5	7	7.8E-01
3009.57	9	9	1.7E-01	3284.59	5	5	5.4E-02	3537.73	5	3	1.1E-01
3011.48	7	9	4.7E-01	3290.99	3	5	6.0E-02	3537.90	11	11	8.4E-02
3015.92	11	9	5.9E-02	3292.02	7	9	6.1E-01	3540.12	7	9	1.2E-01
3016.18	5	3	8.5E-02	3292.59	3	3	2.6E-01	3541.08	9	11	6.2E-01
3017.63	3	3	6.82E-02	3298.13	3	5	8.1E-02	3542.08	7	9	7.4E-01
3018.98	7	7	1.3E-01	3305.97	5	7	4.7E-01	3543.67	3	5	1.8E-01
3021.07	7	7	4.56E-01	3306.36	3	5	6.1E-01	3548.02	5	3	9.7E-02
3024.03	3	5	4.88E-02	3307.23	13	13	2.0E-01	3552.11	3	5	4.5E-02
3025.84	1	3	3.48E-01	3314.74	5	7	6.9E-01	3552.83	5	5	1.5E-01
3026.46	5	5	1.1E-01	3322.47	9	11	6.2E-02	3553.74	11	9	8.1E-01
3031.63	3	3	1.5E-01	3323.74	5	5	3.0E-01	3556.88	9	11	4.4E-01
3037.39	3	5	3.2E-01	3328.87	11	11	2.7E-01	3559.50	3	3	1.9E-01
3042.02	3	5	4.9E-02	3337.66	11	9	5.7E-02	3560.70	7	9	6.5E-02
3042.66	5	7	5.7E-02	3347.93	5	5	4.0E-02	3565.38	7	9	3.8E-01
3047.60	5	7	2.84E-01	3354.06	1	3	7.7E-02	3567.03	5	7	6.5E-02
3053.07	3	5	1.5E-01	3355.23	9	9	3.2E-01	3568.42	5	3	5.3E-02
3057.45	11	9	4.4E-01	3369.55	9	9	2.4E-01	3568.82	7	9	5.6E-02
3059.09	7	9	1.7E-01	3370.78	11	11	3.3E-01	3570.10	9	11	6.77E-01
3067.24	9	7	3.4E-01	3380.11	7	7	2.4E-01	3572.00	11	11	2.4E-01
3068.17	5	3	9.8E-02	3383.98	7	7	9.3E-02	3573.39	5	7	7.5E-02
3075.72	7	5	2.9E-01	3392.65	7	7	2.6E-01	3576.76	11	9	9.6E-02
3083.74	5	3	3.0E-01	3394.58	5	3	9.9E-02	3578.38	1	3	6.3E-02
3091.58	3	1	5.4E-01	3399.33	5	5	3.8E-01	3581.19	11	13	1.02E+00
3098.19	11	11	1.1E-01	3402.26	13	13	2.8E-01	3582.20	13	11	2.5E-01
3100.67	7	7	1.4E-01	3406.44	3	5	3.0E-01	3583.33	1	3	2.3E-01
3119.49	11	9	8.2E-02	3407.46	7	9	5.8E-01	3585.32	7	7	1.3E-01
3120.43	9	7	8.9E-02	3410.17	3	5	4.7E-01	3585.71	9	9	3.75E-02
3156.27	7	7	5.4E-01	3411.35	9	9	5.5E-02	3586.98	5	5	1.6E-01
3160.66	9	9	1.9E-01	3413.13	5	7	3.6E-01	3591.48	1	3	6.0E-02
3161.95	11	13	1.2E-01	3417.84	3	3	5.1E-01	3592.67	7	5	4.0E-02
3166.44	9	7	1.14E-01	3418.51	3	1	1.3E+00	3594.63	9	9	2.7E-01
3168.85	5	7	5.7E-02	3424.28	7	7	2.0E-01	3595.30	5	5	5.4E-02
3175.45	11	11	1.3E-01	3425.01	9	7	2.8E-01	3597.02	5	3	1.7E-01
3176.36	5	3	9.2E-02	3427.12	7	9	5.5E-01	3599.62	11	9	1.8E-01
3196.93	9	11	9.0E-01	3428.19	5	5	2.1E-01	3603.20	11	11	2.6E-01
3199.53	9	9	2.6E-01	3428.75	7	5	2.7E-01	3603.82	3	3	1.7E-01
3205.40	3	3	1.2E+00	3440.99	7	5	8.4E-02	3605.45	9	9	6.4E-01

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}	λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}	λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
3606.68	11	13	8.2E-01	3724.38	5	7	1.3E-01	3820.43	11	9	6.68E-01
3608.86	3	5	8.14E-01	3726.93	5	5	4.6E-01	3821.18	11	13	7.0E-01
3610.16	13	13	4.8E-01	3727.09	9	7	2.0E-01	3821.83	5	5	7.8E-02
3610.70	5	3	7.1E-02	3727.62	7	5	2.25E-01	3825.88	9	7	5.98E-01
3612.07	11	13	7.5E-02	3730.39	9	11	1.3E-01	3827.82	7	5	1.05E+00
3613.45	7	7	6.7E-02	3730.95	5	7	3.8E-02	3833.31	9	9	4.69E-02
3615.19	3	3	5.8E-02	3732.40	5	5	2.8E-01	3834.22	7	5	4.53E-01
3617.79	5	7	6.5E-01	3733.32	3	3	6.2E-02	3836.33	5	5	3.7E-01
3618.77	5	7	7.3E-01	3734.86	11	11	9.02E-01	3839.26	9	9	2.8E-01
3621.46	9	11	5.1E-01	3735.32	9	9	2.4E-01	3839.61	3	5	3.9E-01
3622.00	7	7	5.1E-01	3737.13	7	9	1.42E-01	3840.44	5	3	4.70E-01
3623.19	13	13	7.4E-02	3738.31	11	13	3.8E-01	3841.05	5	3	1.3E+00
3624.06	5	3	5.4E-02	3740.24	7	9	1.4E-01	3843.26	9	7	4.7E-01
3630.35	9	7	7.6E-02	3742.62	9	9	1.0E-01	3845.17	3	3	6.8E-02
3631.46	7	9	5.17E-01	3743.36	5	3	2.60E-01	3845.69	5	7	4.9E-02
3632.04	3	5	4.8E-01	3744.10	5	3	3.6E-01	3846.00	9	7	4.3E-02
3632.55	11	9	5.2E-02	3745.56	5	7	1.15E-01	3846.41	11	9	1.9E-01
3635.19	5	3	1.4E-01	3745.90	1	3	7.33E-02	3846.80	7	7	6.6E-01
3637.86	9	9	5.5E-02	3746.93	7	7	2.2E-01	3849.96	3	1	6.06E-01
3638.30	7	9	2.6E-01	3748.26	3	5	9.15E-02	3856.37	7	5	4.64E-02
3640.39	9	11	3.8E-01	3749.48	9	9	7.64E-01	3859.21	13	11	8.5E-02
3644.80	7	5	7.8E-02	3753.61	7	5	9.3E-02	3859.91	9	9	9.70E-02
3645.82	1	3	5.7E-01	3756.94	11	11	2.4E-01	3865.52	3	3	1.55E-01
3647.84	9	11	2.92E-01	3757.45	5	3	1.2E-01	3867.22	5	5	3.4E-01
3649.51	11	9	4.2E-01	3758.23	7	7	6.34E-01	3871.75	11	11	6.7E-02
3650.03	7	7	9.9E-02	3760.05	13	15	4.47E-02	3872.50	5	5	1.05E-01
3651.47	7	9	6.2E-01	3760.53	3	5	4.8E-02	3873.76	11	9	8.0E-02
3655.46	5	5	1.0E-01	3763.79	5	5	5.44E-01	3878.02	7	7	7.72E-02
3659.52	9	9	5.8E-02	3765.54	13	15	9.8E-01	3878.57	5	3	6.6E-02
3667.25	9	7	1.4E-01	3766.67	5	3	9.7E-02	3883.28	7	7	1.6E-01
3669.15	9	7	7.4E-02	3767.19	3	3	6.40E-01	3884.36	11	9	3.5E-02
3669.52	9	7	3.0E-01	3768.03	3	1	8.4E-02	3885.51	3	5	5.8E-02
3670.09	11	13	7.6E-02	3774.82	3	3	4.7E-02	3886.28	7	7	5.30E-02
3674.77	5	3	6.7E-02	3778.51	7	5	1.2E-01	3887.05	9	9	3.52E-02
3676.31	9	11	4.63E-02	3781.94	5	7	3.7E-02	3888.51	5	5	2.6E-01
3677.31	5	7	3.1E-01	3785.95	11	13	4.2E-02	3888.82	5	3	2.7E-01
3677.63	7	5	8.0E-01	3786.19	5	5	1.2E-01	3891.93	3	3	4.0E-01
3678.86	3	5	4.1E-02	3787.16	5	5	1.0E-01	3893.39	11	11	1.3E-01
3682.24	5	5	1.7E+00	3787.88	3	5	1.29E-01	3895.66	3	1	9.40E-02
3684.11	9	7	3.4E-01	3789.82	9	7	3.9E-02	3900.52	7	7	7.5E-02
3686.00	9	11	2.6E-01	3791.73	5	3	6.3E-02	3902.95	7	7	2.14E-01
3686.26	3	1	1.2E-01	3793.87	3	3	7.4E-02	3903.90	9	9	9.6E-02
3687.46	11	9	8.01E-02	3794.34	9	11	3.8E-02	3906.75	5	7	6.7E-02
3688.48	7	9	6.9E-02	3795.00	5	7	1.15E-01	3907.93	7	5	6.7E-02
3690.73	11	11	2.7E-01	3799.55	7	9	7.32E-02	3909.66	3	5	5.3E-02
3694.01	5	7	6.8E-01	3801.68	5	7	6.6E-02	3909.83	3	3	6.5E-02
3697.43	7	7	2.1E-01	3802.00	11	13	3.5E-02	3914.27	3	3	5.4E-02
3698.60	5	7	3.8E-02	3802.28	5	5	5.0E-02	3916.73	13	11	1.2E-01
3699.15	5	7	4.5E-02	3804.01	11	9	4.7E-02	3919.07	9	9	3.9E-02
3701.09	7	9	4.8E-01	3805.35	9	11	9.8E-01	3925.20	1	3	5.7E-02
3702.03	3	1	3.5E-01	3806.22	3	3	2.3E-01	3931.12	5	7	4.5E-02
3703.69	9	11	5.3E-02	3806.70	11	11	5.4E-01	3941.28	5	5	8.4E-02
3703.82	1	3	1.2E-01	3807.54	3	5	8.0E-02	3942.44	3	5	9.0E-02
3704.46	11	9	1.3E-01	3808.73	9	9	3.54E-02	3946.99	9	11	4.4E-02
3709.25	9	7	1.56E-01	3810.76	5	3	2.0E-01	3948.77	11	9	2.2E-01
3711.41	3	5	7.3E-02	3813.88	13	11	8.7E-02	3949.14	3	3	3.9E-02
3718.41	7	7	5.3E-02	3815.84	9	7	1.3E+00	3949.95	7	5	5.9E-02
3719.93	9	11	1.62E-01	3817.64	11	11	8.3E-02	3951.16	3	5	3.6E-01
3722.56	5	5	4.97E-02	3819.50	7	5	4.6E-02	3952.60	11	11	4.1E-02

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}	λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}	λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
3953.15	7	9	3.7E-02	4109.07	1	3	4.5E-02	4250.79	7	7	1.0E-01
3955.34	3	3	1.4E-01	4109.80	3	3	1.6E-01	4260.47	11	11	3.2E-01
3955.96	3	3	5.7E-02	4112.96	11	13	1.4E-01	4267.83	1	3	9.4E-02
3956.45	13	11	2.1E-01	4114.45	5	5	4.7E-02	4268.75	5	3	4.2E-02
3957.02	5	7	1.6E-01	4118.54	11	13	5.8E-01	4271.15	7	9	1.82E-01
3960.28	5	7	4.2E-02	4126.18	11	11	3.9E-02	4271.76	9	11	2.28E-01
3963.10	3	5	1.7E-01	4127.61	1	3	1.3E-01	4282.40	7	5	1.1E-01
3967.42	9	7	2.3E-01	4132.06	5	7	1.2E-01	4300.83	5	5	4.7E-02
3967.96	7	9	6.3E-02	4132.90	3	5	9.4E-02	4305.45	5	3	6.0E-02
3969.26	9	7	2.3E-01	4134.68	5	7	1.8E-01	4307.90	7	9	3.4E-01
3970.39	3	1	3.5E-01	4137.00	3	5	2.2E-01	4315.08	5	5	7.7E-02
3971.32	11	9	5.7E-02	4137.42	5	7	6.1E-02	4325.76	5	7	5.0E-01
3973.65	5	7	6.6E-02	4142.63	3	5	7.4E-02	4327.09	5	5	7.8E-02
3976.61	3	5	1.8E-01	4143.87	7	9	1.5E-01	4352.73	3	5	3.9E-02
3977.74	5	5	7.0E-02	4149.37	11	13	3.6E-02	4369.77	9	9	7.2E-02
3981.77	9	9	3.9E-02	4150.25	3	3	7.1E-02	4383.54	9	11	5.00E-01
3983.96	9	7	7.6E-02	4153.90	7	9	2.3E-01	4387.89	3	3	3.9E-02
3985.39	5	5	6.7E-02	4154.80	9	11	1.5E-01	4388.41	7	7	1.3E-01
3989.86	5	7	5.0E-02	4156.80	5	5	1.9E-01	4401.29	7	7	5.9E-02
3996.97	9	9	6.7E-02	4158.79	3	5	1.6E-01	4404.75	7	9	2.75E-01
3997.39	9	11	1.5E-01	4170.90	5	5	6.1E-02	4415.12	5	7	1.19E-01
3998.05	11	9	6.6E-02	4172.12	7	5	9.7E-02	4422.57	3	3	8.8E-02
4003.76	3	3	7.1E-02	4175.64	3	5	1.6E-01	4430.61	3	1	7.45E-02
4005.24	7	5	2.04E-01	4181.75	5	7	3.6E-01	4433.22	5	3	2.3E-01
4006.31	11	9	4.7E-02	4182.38	5	5	4.9E-02	4438.34	3	1	7.9E-02
4007.27	7	5	4.2E-02	4184.89	5	5	1.1E-01	4442.34	5	5	3.76E-02
4009.71	3	5	5.2E-02	4187.04	7	5	2.15E-01	4443.19	1	3	1.1E-01
4014.53	11	11	2.4E-01	4187.79	9	7	1.52E-01	4446.83	3	3	5.3E-02
4017.15	9	11	4.5E-02	4191.68	1	3	4.8E-02	4447.72	3	3	5.11E-02
4021.87	7	9	1.0E-01	4196.21	7	7	9.8E-02	4454.38	5	5	3.8E-02
4024.72	7	9	8.9E-02	4198.30	11	9	8.03E-02	4455.03	9	7	3.9E-02
4031.96	3	5	7.1E-02	4198.64	5	5	1.3E-01	4466.55	5	7	1.2E-01
4040.64	5	7	4.4E-02	4199.09	9	11	6.1E-01	4469.37	5	7	2.6E-01
4044.61	5	3	1.1E-01	4200.09	7	7	4.0E-02	4481.61	3	3	4.2E-02
4045.81	9	9	8.63E-01	4200.92	7	9	4.2E-02	4484.22	7	9	7.0E-02
4054.87	5	3	1.6E-01	4202.03	9	9	8.22E-02	4485.67	3	3	1.1E-01
4058.22	9	7	4.9E-02	4203.67	7	9	8.6E-02	4528.61	7	9	5.44E-02
4059.73	5	3	8.1E-02	4203.94	13	13	1.3E-01	4533.13	3	1	3.7E-02
4062.44	3	3	2.2E-01	4205.54	5	5	3.6E-02	4547.85	5	7	7.6E-02
4063.59	7	7	6.8E-01	4207.13	5	3	4.3E-02	4619.29	7	5	4.7E-02
4065.40	3	1	1.9E-01	4210.34	3	3	1.7E-01	4669.17	5	3	4.0E-02
4067.98	9	9	1.7E-01	4213.65	3	1	1.9E-01	4673.16	5	7	4.6E-02
4070.77	7	5	1.3E-01	4217.55	3	5	2.3E-01	4678.85	7	9	7.4E-02
4071.74	5	5	7.65E-01	4219.36	11	13	3.8E-01	4704.95	3	1	8.1E-02
4073.76	5	3	1.6E-01	4220.34	3	1	1.9E-01	4736.77	9	11	4.9E-02
4074.79	9	9	4.8E-02	4222.21	7	7	5.77E-02	4789.65	5	5	7.2E-02
4076.63	9	9	1.9E-01	4224.17	9	11	1.3E-01	4859.74	5	3	1.3E-01
4078.35	5	3	4.2E-02	4224.51	3	5	7.1E-02	4871.32	7	5	2.2E-01
4079.18	5	5	5.1E-02	4225.45	5	7	1.7E-01	4872.14	3	3	2.4E-01
4079.84	1	3	6.3E-02	4226.42	3	3	3.7E-02	4878.21	1	3	9.1E-02
4080.21	3	1	2.4E-01	4233.60	3	5	1.85E-01	4890.75	5	5	2.1E-01
4082.44	3	3	3.8E-02	4235.94	9	9	1.88E-01	4891.49	9	7	2.9E-01
4084.49	11	9	1.1E-01	4238.81	7	9	2.2E-01	4892.87	3	3	4.8E-02
4085.00	3	5	4.2E-02	4240.37	5	3	5.7E-02	4903.31	3	5	4.7E-02
4085.30	7	7	1.1E-01	4245.26	1	3	8.3E-02	4917.23	5	3	6.1E-02
4085.98	7	5	5.0E-02	4246.08	7	5	5.7E-02	4918.01	1	3	4.0E-02
4088.57	5	3	3.9E-02	4247.43	9	11	2.0E-01	4918.99	7	7	1.7E-01
4098.18	7	7	6.8E-02	4248.22	3	5	3.5E-02	4920.50	11	9	3.5E-01
4107.49	5	3	2.5E-01	4250.12	5	7	2.08E-01	4930.31	3	3	4.1E-02

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
4969.92	3	3	1.8E-01
4973.10	3	3	1.0E-01
4978.60	5	3	1.1E-01
4988.95	7	7	4.9E-02
4991.27	5	7	8.2E-02
5001.86	9	7	3.9E-01
5004.04	5	3	3.5E-02
5014.94	7	5	3.0E-01
5022.24	5	3	2.6E-01
5074.75	9	11	1.5E-01
5090.78	7	5	2.0E-01
5109.65	3	5	5.4E-02
5121.64	5	5	7.9E-02
5125.11	9	7	2.6E-01
5133.69	11	13	2.7E-01
5137.38	11	9	1.1E-01
5159.06	5	3	1.3E-01
5162.27	11	11	2.4E-01
5184.26	5	7	3.5E-02
5208.59	7	5	5.2E-02
5232.94	9	11	1.4E-01
5263.30	5	5	5.2E-02
5266.55	7	9	8.6E-02
5283.62	7	7	8.0E-02
5302.30	3	5	6.3E-02
5324.18	9	9	1.5E-01
5339.93	5	7	7.0E-02
5353.39	9	7	4.8E-02
5364.87	5	7	5.5E-01
5367.47	7	9	5.8E-01
5369.96	9	11	4.7E-01
5373.71	7	9	3.5E-02
5383.37	11	13	5.6E-01
5389.48	7	7	1.3E-01
5398.29	5	5	9.8E-02
5400.50	9	9	1.8E-01
5410.91	7	9	4.8E-01
5415.20	11	13	5.6E-01
5424.07	13	15	5.0E-01
5432.95	5	5	4.1E-02
5445.04	11	11	2.0E-01
5463.27	9	9	3.2E-01
5466.39	9	7	7.5E-02
5473.90	7	7	5.5E-02
5480.87	3	1	1.2E-01
5487.74	7	5	8.6E-02
5554.89	9	9	8.7E-02
5569.62	5	3	2.1E-01
5572.84	7	5	2.1E-01
5576.09	3	1	2.1E-01
5586.76	9	7	1.9E-01
5598.30	5	5	1.8E-01
5615.64	11	9	1.7E-01
5624.54	5	5	5.3E-02
5633.97	11	13	8.7E-02
5638.27	9	7	4.0E-02
5650.01	3	5	5.0E-02
5655.18	7	9	5.3E-02
5658.82	7	7	3.6E-02
5679.02	5	7	3.6E-02
5686.53	9	11	4.4E-02
5691.51	3	1	6.2E-02
5705.99	7	9	6.7E-02
5717.85	1	3	5.0E-02
5753.12	3	5	7.0E-02
5762.99	5	7	1.0E-01
5816.36	9	11	3.7E-02
5905.67	5	3	1.2E-01
5927.80	5	3	5.1E-02
5930.17	5	7	1.6E-01
6020.17	7	9	1.1E-01
6024.07	9	11	1.3E-01
6055.99	7	9	7.0E-02
6170.49	5	5	1.3E-01
6336.84	3	3	4.9E-02
6338.90	5	3	4.8E-02
6400.00	7	9	5.5E-02
6411.65	5	7	3.5E-02
6419.98	7	7	1.3E-01
6469.21	3	3	9.0E-02
6495.78	3	3	6.0E-02
6496.46	5	5	8.5E-02
6569.23	7	9	6.5E-02
6633.76	7	7	3.6E-02
6733.16	3	1	3.9E-02
6841.35	5	7	3.6E-02
7130.94	3	5	4.3E-02
Fe II			
1144.94	10	12	4.8E+00
1635.40	8	6	2.4E+00
1641.76	6	4	1.8E+00
1647.16	6	6	5.2E-01
2208.41	10	10	1.8E+00
2213.66	14	14	4.4E-01
2218.27	8	10	1.9E+00
2327.40	6	4	5.9E-01
2331.31	10	8	2.9E-01
2332.80	8	6	1.5E+00
2338.01	4	4	1.1E+00
2343.49	10	8	1.7E+00
2343.96	8	6	2.9E-01
2344.28	2	4	8.2E-01
2348.11	10	8	5.1E-01
2348.30	6	6	1.2E+00
2351.67	6	6	1.7E+00
2352.31	2	4	4.2E+00
2353.68	8	8	1.3E+00
2354.89	6	4	2.4E-01
2360.00	10	10	2.4E-01
2360.29	8	6	5.9E-01
2362.02	8	8	1.3E-01
2363.86	8	10	5.1E+00
2364.83	8	8	6.1E-01
2365.77	6	6	2.1E+00
2366.59	6	6	9.9E-02
2368.60	6	4	5.9E-01
2369.95	10	12	5.7E+00
2370.50	4	4	1.4E-01
2373.74	10	10	3.3E-01
2375.19	4	2	9.8E-01
2379.27	8	8	1.5E-01
2380.76	6	8	3.1E-01
2382.04	10	12	3.8E+00
2382.90	12	14	2.2E-01
2383.25	6	6	3.4E-01
2384.39	4	4	2.3E-01
2388.37	10	12	2.2E-01
2388.63	8	8	1.0E+00
2390.10	14	16	5.5E+00
2390.77	6	6	9.3E-01
2395.42	6	4	3.3E-01
2395.62	8	10	2.5E+00
2399.24	6	6	1.4E+00
2400.06	12	14	5.2E+00
2401.29	6	8	2.5E+00
2404.43	4	2	7.1E-01
2404.89	6	8	1.7E+00
2406.66	4	4	1.6E+00
2410.52	4	6	1.5E+00
2411.07	2	2	2.4E+00
2413.31	2	4	1.1E+00
2416.45	8	10	1.6E+00
2418.44	6	8	1.6E+00
2423.21	4	6	1.4E+00
2428.36	8	10	2.7E+00
2432.87	14	14	3.2E+00
2434.06	8	6	7.0E-01
2434.24	8	10	2.0E+00
2434.73	12	12	3.2E+00
2439.30	12	14	2.8E+00
2445.11	12	12	1.9E+00
2445.80	4	6	1.5E+00
2446.47	12	14	2.9E-01
2447.20	6	6	1.2E+00
2453.98	8	10	7.3E-01
2455.71	8	8	1.0E+00
2458.78	10	12	2.7E+00
2458.97	6	4	2.0E+00
2460.44	10	12	5.3E+00
2461.28	6	8	2.6E+00
2461.86	8	10	2.6E+00
2466.52	2	4	2.1E+00
2469.51	8	6	2.8E+00
2472.61	8	10	3.7E+00
2475.12	4	6	3.9E+00
2475.54	6	8	3.5E+00
2481.05	12	12	1.9E-01
2484.44	8	8	2.3E+00
2492.34	10	12	1.6E-01
2493.26	14	16	3.4E+00
2501.31	2	2	1.4E+00
2503.87	10	10	2.4E+00
2508.34	8	10	2.7E+00
2533.63	12	12	1.3E+00
2534.42	8	8	1.2E+00
2535.36	6	4	3.3E+00

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}	λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}	λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
2535.49	10	8	5.4E-01	2592.78	14	16	2.1E+00	2712.39	10	12	1.3E-01
2536.67	12	12	4.0E-01	2593.72	2	4	1.3E-01	2714.41	8	6	5.5E-01
2537.14	10	10	1.4E+00	2594.96	8	8	1.0E-01	2716.22	6	6	1.1E+00
2538.20	14	12	1.2E+00	2598.37	8	6	1.3E+00	2716.56	14	12	1.6E+00
2538.50	8	6	3.3E-01	2599.40	10	10	2.2E+00	2717.87	16	14	1.4E+00
2538.80	12	10	8.2E-01	2604.05	8	8	1.1E-01	2718.64	10	8	1.3E+00
2538.91	10	8	7.8E-01	2605.04	6	8	2.1E+00	2719.30	6	8	3.7E-01
2538.99	14	12	1.2E+00	2605.34	4	4	1.6E+00	2722.06	8	8	1.1E-01
2540.52	2	2	1.5E+00	2605.42	6	6	2.6E-01	2722.74	6	8	7.8E-01
2541.10	8	6	7.3E-01	2605.90	4	2	1.2E+00	2724.88	6	6	9.7E-01
2541.84	8	6	7.7E-01	2606.51	6	6	1.8E+00	2727.38	12	10	3.2E-01
2542.73	2	2	1.9E+00	2607.09	6	4	1.7E+00	2727.54	6	4	8.5E-01
2543.38	10	12	4.4E-01	2609.13	8	10	3.0E-01	2728.91	8	10	8.8E-02
2543.43	6	4	7.1E-01	2609.87	8	8	1.8E-01	2730.73	4	4	2.5E-01
2544.97	4	6	4.0E-01	2611.87	8	8	1.1E+00	2732.94	8	6	7.8E-01
2545.22	8	10	3.3E-01	2613.82	4	2	2.0E+00	2739.55	8	8	1.9E+00
2545.44	8	10	1.4E-01	2617.62	6	6	4.4E-01	2741.40	6	6	1.7E-01
2546.67	8	8	6.2E-01	2619.07	10	10	2.7E-01	2743.20	2	4	1.8E+00
2547.34	8	8	2.0E-01	2620.17	6	6	1.3E-01	2746.48	4	6	1.9E+00
2548.33	4	6	2.0E-01	2620.70	8	8	3.3E-01	2746.98	6	6	1.6E+00
2548.59	10	10	1.9E-01	2621.67	2	2	4.9E-01	2749.18	4	4	1.1E+00
2548.74	4	2	1.7E+00	2623.11	14	14	1.1E-01	2749.32	6	8	2.1E+00
2548.92	12	10	4.8E-01	2623.73	6	6	2.2E-01	2749.49	2	2	1.1E+00
2549.08	10	8	1.5E+00	2625.49	12	14	2.2E+00	2753.29	10	12	1.2E+00
2549.40	4	4	1.3E+00	2625.67	8	10	3.4E-01	2754.91	8	6	8.4E-01
2549.46	6	6	8.0E-01	2626.50	4	6	3.4E-01	2755.73	8	10	2.1E+00
2549.77	8	6	2.5E-01	2628.29	2	4	8.6E-01	2761.81	2	4	1.1E-01
2550.03	10	10	1.2E+00	2629.59	6	8	6.2E-01	2762.34	6	6	3.7E-01
2550.15	8	10	4.0E-01	2630.07	4	6	5.7E-01	2763.66	14	12	1.3E+00
2550.68	12	12	8.9E-01	2631.05	4	6	7.7E-01	2765.13	10	8	1.2E+00
2551.21	10	8	3.2E-01	2631.32	6	8	6.0E-01	2767.50	12	14	1.9E+00
2555.07	6	8	1.8E-01	2631.61	10	12	5.3E-01	2769.36	12	14	1.6E-01
2555.45	4	6	2.5E-01	2633.20	6	4	1.7E+00	2774.69	2	4	2.4E-01
2557.51	10	8	1.3E-01	2636.69	4	4	1.2E-01	2776.91	8	8	3.0E-01
2559.77	6	8	2.4E-01	2637.50	6	6	5.2E-01	2779.30	10	8	7.6E-01
2559.92	6	8	2.4E-01	2637.64	2	4	8.3E-01	2779.91	2	4	2.3E-01
2560.28	4	4	1.5E+00	2639.56	2	2	1.1E+00	2780.04	2	2	2.9E-01
2562.09	4	2	1.5E+00	2642.01	6	6	3.6E-01	2783.69	12	10	7.0E-01
2562.54	8	6	1.5E+00	2649.47	6	8	1.8E+00	2785.19	12	10	1.0E+00
2563.48	6	4	1.3E+00	2650.48	6	8	1.6E+00	2787.24	8	6	1.3E-01
2566.22	8	10	2.5E+00	2654.63	4	4	7.7E-01	2793.89	10	12	9.6E-02
2566.40	8	6	2.1E+00	2658.25	8	8	3.2E-01	2796.63	10	10	1.0E-01
2566.91	4	2	1.1E+00	2662.56	2	2	9.6E-01	2799.29	10	8	1.1E-01
2568.41	2	4	4.4E-01	2664.66	8	10	1.5E+00	2809.78	8	8	1.6E-01
2569.78	2	4	1.2E+00	2666.64	6	8	1.7E+00	2817.09	6	4	2.1E-01
2570.53	6	8	1.2E+00	2667.22	4	6	9.2E-01	2831.56	4	6	5.8E-01
2570.85	8	6	1.7E+00	2669.93	2	4	4.7E-01	2833.09	6	6	2.7E-01
2573.21	8	10	1.4E-01	2671.40	2	4	5.6E-01	2835.71	4	6	3.1E-01
2574.36	6	4	1.6E+00	2682.51	8	10	7.0E-01	2838.22	4	2	4.2E-01
2576.86	10	12	1.1E+00	2683.00	4	6	6.4E-01	2839.51	10	8	9.9E-01
2577.92	2	2	1.3E+00	2684.75	8	10	1.4E+00	2839.80	8	10	4.1E-01
2582.41	6	8	2.4E-01	2692.60	10	12	1.2E+00	2840.65	2	4	5.3E-01
2582.58	4	4	7.7E-01	2697.33	4	4	2.7E-01	2840.76	10	12	1.1E-01
2585.63	10	10	3.6E-01	2697.46	4	2	1.8E+00	2844.96	2	2	4.5E-01
2585.88	10	8	8.1E-01	2699.20	4	4	6.6E-01	2847.77	4	4	3.3E-01
2587.95	8	10	1.4E+00	2703.99	8	8	1.2E+00	2848.11	6	6	7.0E-01
2588.18	2	2	1.6E-01	2707.13	4	6	8.5E-01	2848.32	6	4	1.1E+00
2590.55	4	6	9.1E-02	2709.05	4	6	3.7E-01	2855.69	8	10	1.0E-01
2591.54	6	6	5.1E-01	2711.84	12	14	3.8E-01	2856.38	6	8	2.7E-01

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
2856.91	8	8	8.7E-01
2857.17	6	8	9.5E-02
2872.39	10	8	1.5E-01
2873.40	8	10	3.4E-01
2875.35	8	10	9.5E-02
2883.71	12	14	1.0E-01
2884.77	6	8	1.4E-01
2895.22	8	10	8.0E-02
2897.27	6	4	1.4E-01
2944.40	4	2	4.6E-01
2947.66	6	4	2.0E-01
2949.18	10	8	2.0E-01
2959.84	8	6	1.6E-01
2964.63	2	2	9.3E-02
2969.93	8	6	1.8E-01
2982.06	4	6	2.1E-01
2984.82	6	6	3.6E-01
2985.55	2	4	1.8E-01
2997.30	6	8	8.3E-02
3002.65	4	6	1.4E-01
3036.96	6	6	1.6E-01
3048.99	4	4	2.8E-01
3062.23	12	10	1.2E-01
3071.12	2	4	1.9E-01
3076.44	4	6	2.8E-01
3077.17	14	12	1.1E-01
3078.68	6	8	4.2E-01
3135.36	6	6	8.4E-02
3154.20	10	10	1.5E-01
3167.86	8	8	1.3E-01
3177.54	8	8	8.1E-02
3179.50	6	8	9.9E-02
5247.95	4	6	1.7E+00
5506.20	12	14	1.4E+00
5961.71	10	12	7.7E-01
Fe III			
1843.4	9	7	4.8E+00
1844.3	7	5	4.9E+00
1846.9	5	3	5.5E+00
1854.38	3	1	5.7E+00
1865.20	7	7	6.1E+00
1893.98	11	9	5.5E+00
1896.80	13	11	5.0E+00
1904.3	5	5	5.7E+00
1907.58	15	13	5.3E+00
1915.08	13	15	6.0E+00
1922.79	11	13	5.5E+00
1930.39	9	11	5.1E+00
1931.51	9	11	5.3E+00
1937.35	7	9	5.1E+00
1943.48	5	7	5.0E+00
1950.33	13	15	5.5E+00
1951.01	11	11	5.3E+00
1952.65	9	9	4.9E+00
1953.32	7	7	5.1E+00
1987.50	13	13	4.9E+00

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
Fe VII			
150.807	5	7	1.3E+03
150.852	7	9	1.3E+03
151.023	9	11	1.6E+03
151.046	7	7	2.2E+02
151.145	9	9	2.1E+02
151.432	5	7	2.2E+02
151.512	5	5	5.3E+02
151.675	7	7	3.9E+02
151.782	9	9	2.4E+02
154.307	3	1	8.9E+02
154.335	5	7	1.2E+03
154.363	3	3	4.2E+02
154.565	5	3	3.5E+02
154.650	5	5	8.8E+02
154.848	1	3	7.7E+02
154.921	3	5	9.7E+02
154.941	3	3	2.4E+02
154.949	5	7	1.0E+03
155.994	9	11	1.8E+03
158.481	9	9	2.3E+02
165.087	1	3	6.9E+02
165.919	7	5	2.8E+03
166.365	9	7	2.9E+03
173.441	9	9	3.6E+03
176.744	9	9	2.7E+03
176.928	7	7	2.4E+03
177.172	5	5	1.5E+03
235.221	5	3	1.7E+02
240.053	3	1	1.3E+02
243.379	9	7	2.1E+02
Fe VIII			
112.472	4	4	3.6E+02
112.486	6	6	4.3E+02
116.196	4	6	4.5E+02
117.197	6	8	3.8E+02
167.486	4	4	3.0E+03
168.172	6	6	3.1E+03
168.545	6	4	2.0E+03
168.929	4	2	2.1E+03
185.213	6	8	1.0E+03
186.601	4	6	9.4E+02
Fe X			
76.822	2	2	1.8E+03
77.865	4	6	1.6E+03
100.026	8	10	2.6E+03
101.733	6	8	1.8E+03
101.846	4	6	1.7E+03
102.095	10	12	2.9E+03
102.192	10	12	2.9E+03
102.829	4	6	2.1E+03
103.319	6	8	2.6E+03
103.724	6	8	1.7E+03
104.638	8	10	2.1E+03
174.534	4	6	1.8E+03

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
175.266	2	4	1.72E+03
Fe XI			
72.166	5	7	2.9E+03
72.310	5	5	1.5E+03
72.635	5	7	1.6E+03
91.394	5	7	2.6E+03
91.472	7	9	2.5E+03
91.63	3	5	2.3E+03
91.63	7	9	3.4E+03
91.63	5	7	2.8E+03
91.733	9	11	4.1E+03
92.81	9	11	3.7E+03
92.87	11	13	3.9E+03
93.433	9	11	3.2E+03
179.762	5	7	1.67E+03
Fe XII			
65.905	4	4	2.0E+03
66.526	6	8	1.7E+03
66.960	4	6	1.6E+03
67.164	4	2	1.1E+03
67.821	4	6	1.4E+03
68.382	2	4	1.7E+03
80.541	6	6	8.7E+02
81.943	6	4	1.4E+03
82.226	4	2	1.9E+03
84.48	4	6	4.5E+03
84.48	8	10	4.9E+03
84.52	10	12	5.2E+03
84.52	6	8	4.0E+03
84.85	6	8	2.3E+03
85.14	8	10	3.4E+03
85.477	10	12	4.6E+03
186.880	6	8	1.0E+03
192.394	4	2	9.0E+02
193.509	4	4	9.1E+02
195.119	4	6	8.6E+02
Fe XIII			
62.353	1	3	2.0E+03
62.46	5	7	1.2E+03
62.699	3	5	2.3E+03
63.188	5	7	3.9E+03
64.139	1	3	2.1E+03
74.845	5	5	1.0E+03
75.892	5	3	7.7E+02
76.117	5	3	2.1E+03
78.452	9	11	6.3E+03
84.270	7	9	5.5E+03
107.384	7	5	1.8E+03
Fe XIV			
58.963	2	4	2.7E+03
59.579	4	6	3.1E+03
69.176	4	6	5.6E+02
69.386	2	4	7.6E+02

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
69.66	2	2	8.9E+02
69.66	6	6	1.3E+03
70.251	6	4	8.1E+02
70.613	4	2	1.7E+03
72.80	10	12	7.9E+03
76.022	4	6	6.6E+03
76.152	6	8	7.0E+03
91.009	6	4	5.1E+02
91.273	4	2	5.6E+02
188	4	6	2.7E+02
190	6	8	2.8E+02
207	2	2	2.1E+02
211.316	2	4	3.6E+02
213	4	2	2.8E+02
214	2	2	4.0E+02
216	6	8	1.7E+02
217	6	8	4.0E+02
217	6	6	2.6E+02
219	2	4	4.8E+02
219	4	6	2.4E+02
219.123	4	6	3.9E+02
220	4	4	3.2E+02
221	4	6	5.9E+02
226	2	4	3.9E+02
234	2	2	2.8E+02
264.787	4	4	3.38E+02
265	4	4	1.5E+02
266	6	4	1.7E+02
268	6	6	2.1E+02
268	4	2	3.3E+02
270.524	4	2	2.1E+02
274.203	2	2	1.8E+02
280	4	6	2.8E+02
283	6	8	2.7E+02
288.45	6	4	1.6E+02
Fe XV			
38.95	1	3	1.69E+03
52.911	1	3	2.94E+03
59.404	3	5	3.4E+03
63.959	5	7	1.6E+03
65.370	1	3	3.2E+02
65.612	3	3	9.8E+02
66.238	5	3	1.6E+03
68.860	9	11	9.2E+03
69.7	3	1	1.9E+03
69.942	3	5	7.4E+03
69.989	5	7	7.9E+03
70.052	7	9	8.8E+03
70.224	1	3	4.13E+03
70.53	7	5	2.6E+02
70.59	7	7	1.7E+03
73.199	7	9	8.8E+03
73.473	5	7	6.2E+03
233.857	5	7	2.2E+02
235	1	3	2.5E+02
243	1	3	2.4E+02
243	5	7	2.3E+02
243.790	3	5	4.2E+02
248	3	1	5.4E+02
284.160	1	3	2.28E+02
Fe XVI			
31.041	2	4	5.2E+02
31.242	4	6	6.1E+02
32.166	2	4	6.8E+02
32.192	2	2	6.7E+02
32.433	2	4	7.7E+02
32.652	4	6	9.1E+02
34.857	2	4	1.23E+03
35.106	4	6	1.44E+03
35.333	4	6	6.4E+02
35.368	6	8	6.8E+02
36.01	4	2	5.0E+02
36.749	2	4	1.1E+03
36.803	2	2	1.2E+03
37.096	4	6	1.0E+03
37.138	6	8	1.07E+03
39.827	2	4	2.1E+03
40.153	4	6	2.5E+03
40.161	4	4	4.1E+02
40.199	4	6	1.7E+03
40.245	6	8	1.8E+03
41.91	2	2	4.72E+02
42.30	4	2	9.2E+02
46.661	4	6	3.46E+03
46.718	6	8	3.7E+03
50.350	2	4	1.86E+03
50.555	2	2	1.98E+03
54.142	2	4	3.41E+03
54.728	4	6	4.16E+03
54.769	4	4	6.97E+02
62.879	2	2	1.05E+03
63.719	4	2	2.18E+03
66.263	4	6	9.39E+03
66.368	6	8	1.00E+04
66.392	6	6	6.69E+02
76.502	6	4	6.7E+02
76.796	4	2	7.72E+02
80.192	4	6	5.2E+02
80.270	6	8	5.4E+02
85.587	2	4	4.0E+02
86.133	4	6	4.8E+02
96.256	4	6	8.7E+02
96.348	6	8	9.3E+02
117.2	2	4	3.93E+02
117.7	2	2	3.9E+02
123.4	2	4	5.9E+02
124.5	4	6	7.0E+02
144.06	4	6	1.6E+03
144.25	6	8	1.6E+03
148	4	2	6.5E+02
266.7	4	6	3.9E+02
267.0	6	8	4.3E+02
Fe XVII			
11.023	1	3	2.1E+04
12.123	1	3	8.0E+04
12.264	1	3	5.9E+04
12.526	1	3	3.0E+03
12.681	1	3	3.5E+03
13.823	1	3	3.3E+04
13.891	1	3	3.4E+03
15.015	1	3	2.28E+05
15.262	1	3	6.0E+04
16.777	1	3	8.29E+03
17.054	1	3	9.33E+03
41.37	9	11	4.8E+03
49.427	3	3	4.0E+03
50.26	7	9	6.0E+03
58.76	9	11	1.2E+04
Fe XIX			
13.413	5	3	1.3E+04
13.426	5	7	4.8E+04
13.47	3	1	1.5E+05
13.520	5	7	2.0E+05
13.56	3	5	1.0E+04
13.68	3	1	8.0E+04
13.69	5	7	2.3E+04
13.700	1	3	2.7E+05
13.71	5	5	2.2E+04
13.738	5	7	1.0E+04
13.796	5	7	7.0E+04
13.83	5	5	1.4E+04
13.934	1	3	4.51E+04
13.961	3	3	2.0E+04
14.668	5	7	1.1E+04
14.671	5	3	1.1E+04
14.929	3	3	1.2E+04
14.966	5	3	2.5E+04
14.995	5	5	2.2E+04
15.015	1	3	1.4E+04
16.668	3	1	1.1E+04
Fe XX			
12.67	6	6	1.0E+04
12.69	4	6	1.2E+04
12.73	4	2	4.0E+04
12.77	4	4	2.1E+05
12.78	4	2	6.9E+04
12.78	2	4	1.4E+05
12.79	6	4	1.7E+04
12.82	4	4	1.1E+05
12.88	6	4	2.7E+04
12.89	4	4	4.4E+04
12.90	4	2	6.2E+03
12.90	4	6	1.4E+05
12.92	2	4	1.7E+04
12.93	4	6	1.6E+05
12.93	2	2	1.2E+04
12.98	2	2	6.7E+04
12.99	6	6	5.1E+04
13.00	6	4	1.1E+04
13.01	2	4	3.0E+04
13.03	4	2	8.6E+04
13.07	6	4	8.2E+03

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
13.13	2	4	8.9E+04
13.24	4	4	1.2E+04
13.28	4	4	6.1E+03
13.70	4	6	1.1E+04
13.71	2	2	9.9E+03
13.78	4	4	1.0E+04
13.79	6	6	1.2E+04
13.83	4	2	9.8E+03
13.90	4	2	1.2E+04
13.98	6	4	1.6E+04
13.99	4	2	2.2E+04
14.05	4	4	1.7E+04
14.23	2	2	6.3E+03
Fe XXI			
8.53	3	1	1.8E+04
8.53	3	5	6.1E+03
8.53	3	3	1.5E+04
8.56	5	7	2.0E+04
8.56	1	3	2.1E+04
8.56	5	3	6.5E+03
8.64	5	7	1.5E+04
8.65	5	7	3.9E+04
8.66	5	5	4.4E+03
8.74	1	3	2.5E+04
9.42	3	1	4.3E+04
9.42	3	3	3.3E+04
9.44	3	5	1.7E+04
9.45	1	3	5.2E+04
9.46	5	3	1.5E+04
9.47	5	7	4.9E+04
9.47	5	5	6.1E+03
9.52	3	3	8.1E+03
9.58	5	5	5.2E+03
9.59	5	5	1.0E+04
9.67	1	3	5.7E+04
9.68	5	7	4.0E+03
9.74	5	3	5.3E+03
12.02	1	3	1.3E+04
12.13	3	3	1.8E+04
12.18	5	7	2.2E+04
12.19	5	3	6.4E+03
12.21	3	1	1.5E+05
12.21	3	3	1.2E+05
12.25	1	3	2.1E+05
12.28	5	3	5.2E+04
12.30	5	7	2.1E+05
12.36	3	3	3.6E+04
12.37	5	7	3.1E+05
12.38	5	3	6.9E+03
12.47	5	7	5.8E+04
12.47	5	3	1.3E+04
12.49	5	7	1.3E+04
12.53	5	5	1.5E+04
12.57	1	3	7.2E+04
12.73	5	5	8.2E+03
12.95	3	5	6.2E+03
13.00	1	3	7.2E+03
13.03	5	5	1.3E+04
13.14	3	1	2.0E+04
13.41	1	3	7.3E+03
Fe XXII			
9.002	4	6	5.5E+04
9.006	6	8	5.7E+04
9.006	6	6	5.3E+04
9.163	4	6	6.9E+04
9.183	6	8	8.3E+04
9.241	4	6	5.1E+04
11.748	4	4	1.2E+05
11.748	4	6	1.6E+05
11.748	4	2	1.8E+05
11.763	2	4	1.6E+05
11.789	2	2	2.6E+05
11.789	6	8	1.2E+05
11.797	2	4	1.7E+05
11.823	6	4	7.9E+04
11.837	6	8	2.3E+05
11.837	6	6	1.7E+05
11.886	4	6	1.3E+05
11.898	2	4	8.2E+04
11.922	4	6	1.8E+05
11.976	6	8	5.9E+04
12.027	2	4	6.9E+04
12.045	6	8	2.4E+05
12.045	4	4	9.7E+04
12.053	4	6	6.1E+04
12.077	2	4	1.0E+05
12.077	4	6	2.4E+05
12.095	6	6	7.8E+04
12.193	2	4	7.2E+04
12.193	4	6	9.9E+04
12.325	2	2	1.5E+05
Fe XXIII			
7.733	5	7	3.0E+04
7.849	5	7	4.9E+04
8.307	1	3	4.8E+04
8.529	1	3	4.3E+04
8.550	3	5	6.0E+04
8.552	3	3	3.2E+04
8.614	5	7	7.7E+04
8.664	3	3	4.4E+04
8.669	5	7	6.1E+04
8.672	1	3	6.8E+04
8.752	5	7	1.2E+05
8.764	5	7	4.6E+04
8.814	3	5	6.2E+04
10.902	5	5	5.3E+04
10.910	3	1	6.7E+04
10.927	5	7	6.0E+04
10.934	3	5	5.4E+04
10.979	1	3	7.9E+04
11.018	1	3	4.9E+04
11.086	3	1	6.5E+04
11.165	3	5	6.7E+04
11.255	3	3	3.7E+04
11.298	1	3	1.3E+05
11.325	3	5	1.7E+05
11.338	3	3	9.3E+04
11.429	3	1	1.7E+05
11.433	3	3	1.2E+05
11.441	5	7	2.2E+05
11.445	5	5	5.6E+04
11.485	3	5	1.40E+05
11.491	5	3	5.9E+04
11.519	5	5	1.16E+05
11.520	1	3	2.16E+05
11.524	5	7	2.3E+05
11.593	5	7	3.58E+05
11.613	3	5	1.0E+05
11.615	3	3	4.4E+04
11.691	5	7	7.7E+04
11.698	5	5	7.3E+04
11.737	3	5	1.8E+05
11.898	1	3	2.03E+05
Fe XXIV			
1.8523	2	2	1.0E+05
1.8552	2	4	4.82E+06
1.8563	4	2	2.43E+06
1.8572	2	2	3.06E+06
1.858	2	4	1.2E+05
1.8614	4	4	6.24E+06
1.8626	2	4	3.16E+06
1.8627	2	2	5.47E+06
1.8637	2	2	1.91E+06
1.8655	4	6	2.14E+06
1.8672	4	2	1.63E+06
1.8678	4	4	3.5E+05
1.8721	4	6	3.2E+05
1.8721	2	2	2.0E+05
1.8730	2	4	1.5E+05
1.8739	4	4	8.3E+04
1.891	2	2	9.7E+04
1.897	4	2	9.8E+04
8.231	2	4	6.10E+04
8.316	4	6	7.07E+04
10.619	2	4	7.28E+04
10.663	2	2	7.51E+04
11.030	2	4	1.84E+05
11.171	4	6	2.18E+05
Fe XXV			
1.4607	1	3	2.54E+05
1.4945	1	3	5.05E+05
1.5730	1	3	1.24E+06
1.5749	1	3	1.5E+05
1.778	3	3	8.7E+04
1.782	3	1	4.69E+06
1.787	1	3	2.57E+06
1.787	5	5	1.19E+06
1.788	3	5	2.68E+06
1.788	3	5	1.63E+06
1.789	1	3	1.78E+06
1.790	3	3	1.23E+06
1.791	3	5	4.10E+06

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
1.791	3	3	2.59E+06
1.792	3	1	4.92E+06
1.792	5	5	2.81E+06
1.793	3	1	2.67E+06
1.794	5	3	2.22E+06
1.797	3	5	8.8E+05
1.798	3	3	1.0E+05
1.800	1	3	8.6E+04
1.802	3	1	4.1E+05
1.810	3	1	5.9E+05
1.8502	1	3	4.57E+06
1.8593	1	3	4.42E+05
10.038	3	3	8.08E+04
Krypton			
Kr I			
1164.9	1	3	3.16E+00
1235.8	1	3	3.12E+00
4274.0	5	5	2.6E-02
4351.4	3	1	3.2E-02
4362.6	5	3	8.4E-03
4376.1	3	1	5.6E-02
4400.0	3	5	2.0E-02
4410.4	3	3	4.4E-03
4425.2	3	3	9.7E-03
4453.9	3	5	7.8E-03
4463.7	3	3	2.3E-02
4502.4	3	5	9.2E-03
5562.2	5	5	2.8E-03
5570.3	5	3	2.1E-02
5649.6	1	3	3.7E-03
5870.9	3	5	1.8E-02
6904.7	3	5	1.3E-02
7224.1	3	5	1.4E-02
7587.4	3	1	5.1E-01
7601.5	5	5	3.1E-01
7685.2	3	1	4.9E-01
7694.5	5	3	5.6E-02
7854.8	1	3	2.3E-01
8059.5	1	3	1.9E-01
8104.4	5	5	1.3E-01
8112.9	5	7	3.6E-01
8190.1	3	5	1.1E-01
8263.2	3	5	3.5E-01
8281.1	3	3	1.9E-01
8298.1	3	3	3.2E-01
8508.9	3	3	2.4E-01
8776.7	3	5	2.7E-01
8928.7	5	3	3.7E-01
Kr II			
4250.6	4	4	1.2E-01
4292.9	4	4	9.6E-01
4355.5	6	8	1.0E+00
4431.7	2	2	1.8E+00
4436.8	2	4	6.6E-01
4577.2	6	8	9.6E-01
4583.0	6	4	7.6E-01
4615.3	4	4	5.4E-01
4619.2	4	6	8.1E-01
4633.9	4	6	7.1E-01
4658.9	6	4	6.5E-01
4739.0	6	6	7.6E-01
4762.4	2	4	4.2E-01
4765.7	4	6	6.7E-01
4811.8	2	4	1.7E-01
4825.2	2	4	1.9E-01
4832.1	4	2	7.3E-01
5208.3	4	4	1.4E-01
5308.7	4	6	2.4E-02
7407.0	6	6	7.0E-02
Lead			
Pb I			
2022.0	1	3	5.2E-02
2053.3	1	3	1.2E-01
2170.0	1	3	1.5E+00
2401.9	3	3	1.9E-01
2446.2	3	3	2.5E-01
2476.4	3	5	2.8E-01
2577.3	5	3	5.0E-01
2613.7	3	3	2.7E-01
2614.2	3	5	1.9E+00
2628.3	5	3	3.1E-02
2657.1	3	5	9.8E-04
2663.2	5	5	7.1E-01
2802.0	5	7	1.6E+00
2823.2	5	5	2.6E-01
2833.1	1	3	5.8E-01
2873.3	5	5	3.7E-01
3572.7	5	3	9.9E-01
3639.6	3	3	3.4E-01
3671.5	5	3	4.4E-01
3683.5	3	1	1.5E+00
3739.9	5	5	7.3E-01
4019.6	5	7	3.5E-02
4057.8	5	3	8.9E-01
4062.1	5	3	9.2E-01
4168.0	5	5	1.2E-02
5005.4	1	3	2.7E-01
5201.4	1	3	1.9E-01
7229.0	5	3	8.9E-03
Lithium			
Li I			
*2741.2	2	6	1.3E-02
*3232.7	2	6	1.17E-02
*4602.9	6	10	2.23E-01
*6103.6	6	10	6.860E-01
*6707.8	2	6	3.691E-01
Lutetium			
Lu I			
3376.5	4	4	2.23E+00
3567.8	4	6	5.9E-01
3620.3	6	4	1.1E-02
3841.2	6	6	2.5E-01
4518.6	4	4	2.1E-01
Magnesium			
Mg I			
2025.8	1	3	8.4E-01
*2779.8	9	9	5.2E+00
*2850.0	9	15	2.3E-01
2852.1	1	3	4.95E+00
*3094.9	9	15	5.2E-01
3329.9	1	3	3.3E-02
3332.2	3	3	9.7E-02
3336.7	5	3	1.6E-01
*3835.3	9	15	1.68E+00
4703.0	3	5	2.55E-01
5167.3	1	3	1.16E-01
5172.7	3	3	3.46E-01
5183.6	5	3	5.75E-01
5528.4	3	5	1.99E-01
Mg II			
1239.9	2	4	1.4E-02
1240.4	2	2	1.4E-02
*2660.8	10	14	3.8E-01
2790.8	2	4	4.0E+00
2795.5	2	4	2.6E+00
2797.9	4	4	7.9E-01
2798.1	4	6	4.8E+00
2802.7	2	2	2.6E+00
2928.8	2	2	1.2E+00
2936.5	4	2	2.3E+00
*3104.8	10	14	8.1E-01
3848.2	6	4	2.8E-02
3848.3	4	4	3.0E-03
3850.4	4	2	3.0E-02
*4481.2	10	14	2.23E+00
9218.3	2	4	3.6E-01
9244.3	2	2	3.6E-01
Mg IV			
320.99	4	2	1.2E+02
323.31	2	2	5.9E+01
1219.0	6	6	5.9E+00
1375.5	4	4	4.5E+00
1459.6	6	4	4.6E+00
1495.5	4	6	6.4E+00
1510.7	4	4	6.7E+00
1683.0	6	8	5.8E+00
1698.8	4	6	3.9E+00
1893.9	6	6	2.8E+00
Mg VI			
*269.92	10	6	3.1E+02
*292.53	6	6	9.0E+01
*314.64	6	2	1.8E+02
*349.15	10	10	6.1E+01
*387.94	6	10	1.3E+01
399.29	4	2	2.8E+01
400.68	4	4	2.8E+01
403.32	4	6	2.7E+01

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
Mg VII			
277.01	3	3	9.5E+01
278.41	5	3	1.5E+02
280.74	5	3	2.0E+02
319.02	5	5	8.9E+01
*366.42	9	9	4.4E+01
*433.04	9	15	1.6E+01
1334.3	5	5	5.3E+00
1410.0	5	5	2.57E+00
1487.0	3	5	3.02E+00
1487.9	5	7	3.66E+00
Mg VIII			
*74.976	6	10	4.3E+03
315.02	4	4	1.2E+02
*342.29	10	6	6.3E+01
353.86	4	4	3.89E+01
356.00	6	4	5.7E+01
*428.52	10	10	3.24E+01
*434.62	6	10	1.6E+01
*489.33	6	6	3.9E+01
*686.92	6	10	9.4E+00
Mg IX			
62.751	1	3	2.87E+03
*67.189	9	15	6.20E+03
*71.965	9	3	1.22E+03
72.312	3	5	4.43E+03
77.737	3	1	3.92E+02
368.07	1	3	5.27E+01
438.69	3	1	7.9E+01
*443.74	9	9	4.19E+01
749.55	3	5	8.2E+00
1639.8	3	5	2.1E+00
2814.2	1	3	3.35E-01
Mg X			
57.876	2	4	2.09E+03
57.920	2	2	2.09E+03
63.152	2	4	5.6E+03
63.295	4	6	6.7E+03
609.79	2	4	7.53E+00
624.94	2	2	7.01E+00
2212.5	2	4	9.64E-01
2278.7	2	2	8.82E-01
5918.7	2	4	3.20E-02
6229.6	4	6	3.30E-02
Mg XI			
7.310	1	3	1.15E+04
7.473	1	3	2.27E+04
7.850	1	3	5.50E+04
9.169	1	3	1.97E+05
Manganese			
Mn I			
2794.82	6	8	3.7E+00
2798.27	6	6	3.6E+00
2801.08	6	4	3.7E+00
3007.65	6	8	1.8E-01
3011.38	8	10	3.1E-01
3016.45	10	12	2.9E-01
3043.36	8	8	5.9E-01
3044.57	10	8	5.7E-01
3045.59	10	10	6.7E-01
3045.80	8	10	1.7E-01
3047.03	12	12	6.1E-01
3054.36	8	6	4.6E-01
3070.27	6	6	1.9E-01
3073.18	4	4	3.7E-01
3082.71	14	14	2.9E-01
3110.68	6	8	2.7E-01
3113.80	12	10	2.6E-01
3118.10	4	6	1.7E-01
3122.88	10	10	1.9E-01
3126.85	8	6	2.3E-01
3132.28	10	10	2.1E-01
3132.79	8	8	2.7E-01
3175.58	8	10	1.8E-01
3201.11	4	6	2.2E-01
3228.09	10	12	6.4E-01
3230.23	10	12	1.9E-01
3230.72	8	8	3.5E-01
3240.88	6	4	2.2E-01
3243.78	6	6	5.3E-01
3251.13	4	2	2.3E-01
3252.95	4	4	1.8E-01
3256.14	4	6	5.0E-01
3258.41	2	2	9.7E-01
3260.24	2	4	3.8E-01
3267.79	14	14	3.5E-01
3268.72	6	8	3.3E-01
3270.35	12	12	2.6E-01
3273.02	10	10	2.7E-01
3298.23	6	4	2.8E-01
3303.28	4	4	1.9E-01
3463.66	8	8	3.2E-01
3470.01	6	8	2.4E-01
3511.83	12	12	2.7E-01
3535.30	10	10	1.7E-01
3559.81	6	6	2.1E-01
3577.87	10	8	9.4E-01
3595.11	6	4	1.8E-01
3601.27	12	10	2.3E-01
3607.53	8	8	2.3E-01
3608.49	6	6	3.6E-01
3610.30	4	4	4.2E-01
3635.70	10	8	2.1E-01
3660.40	12	14	9.1E-01
3675.67	6	8	2.2E-01
3676.96	10	12	7.3E-01
3680.15	12	10	1.9E-01
3682.09	8	10	7.6E-01
3684.87	6	8	2.6E-01
3706.08	12	14	1.4E+00
3718.92	10	12	9.6E-01
3731.94	8	10	1.0E+00
3771.44	14	14	1.9E-01
3773.86	12	12	2.5E-01
3800.55	6	8	2.7E-01
3806.72	10	12	5.9E-01
3823.51	8	10	5.21E-01
3823.89	6	6	2.31E-01
3833.87	4	4	3.14E-01
3834.37	6	8	4.29E-01
3839.78	2	2	4.64E-01
3841.07	4	6	3.3E-01
3843.99	2	4	2.11E-01
3889.46	12	14	3.1E-01
3898.37	6	8	1.7E-01
3899.34	4	6	2.4E-01
3924.08	2	4	9.4E-01
3926.48	6	8	5.4E-01
3951.98	2	2	3.1E-01
3952.84	6	6	4.1E-01
3975.88	2	4	1.8E-01
3982.16	4	2	3.5E-01
3982.58	6	4	2.3E-01
3982.90	6	4	5.5E-01
3991.60	2	2	2.1E-01
4011.91	8	8	2.3E-01
4018.11	10	8	2.54E-01
4030.76	6	8	1.7E-01
4033.07	6	6	1.65E-01
4034.49	6	4	1.58E-01
4041.36	10	10	7.87E-01
4048.75	6	4	7.5E-01
4052.48	6	8	3.8E-01
4055.55	8	8	4.31E-01
4058.94	4	2	7.25E-01
4061.74	8	6	1.9E-01
4063.53	6	6	1.69E-01
4065.08	12	14	2.5E-01
4066.24	10	8	2.2E-01
4070.28	2	2	2.3E-01
4079.42	2	4	3.8E-01
4082.95	4	6	2.95E-01
4083.63	6	8	2.8E-01
4089.94	8	10	1.7E-01
4105.37	10	8	1.7E-01
4135.03	12	12	3.0E-01
4141.06	10	10	2.6E-01
4148.80	8	8	2.3E-01
4176.61	14	12	2.4E-01
4189.99	12	10	2.0E-01
4201.78	10	8	2.3E-01
4235.30	8	6	9.17E-01
4239.74	4	2	3.9E-01
4257.67	2	2	3.7E-01
4265.93	4	4	4.92E-01
4281.10	6	6	2.3E-01
4411.87	12	10	2.6E-01
4414.89	8	6	2.93E-01
4419.77	10	8	2.1E-01
4436.36	6	4	4.37E-01
4451.58	8	8	7.98E-01
4453.01	4	2	5.44E-01

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
4455.82	4	6	1.7E-01
4457.04	6	4	2.34E-01
4457.55	6	6	4.27E-01
4458.26	6	8	4.62E-01
4461.09	8	8	1.7E-01
4462.03	8	10	7.00E-01
4464.68	6	6	4.39E-01
4470.14	4	4	3.00E-01
4472.79	2	2	4.35E-01
4479.40	8	10	3.4E-01
4490.08	2	4	2.49E-01
4498.90	4	6	2.49E-01
4502.22	6	8	1.86E-01
4605.37	10	12	3.6E-01
4626.54	12	14	3.6E-01
4709.71	8	8	1.72E-01
4727.46	6	6	1.7E-01
4739.11	4	4	2.40E-01
4754.05	6	8	3.03E-01
4761.53	2	4	5.35E-01
4762.38	8	10	7.83E-01
4765.86	4	6	4.1E-01
4766.43	6	8	4.6E-01
4783.43	8	8	4.01E-01
4823.53	10	8	4.99E-01
6013.48	4	6	1.72E-01
6021.79	8	6	3.32E-01
Mn II			
2593.72	7	7	2.6E+00
2605.68	7	5	2.7E+00
2933.05	5	3	2.0E+00
2939.31	5	5	1.9E+00
2949.20	5	7	1.9E+00
3441.99	9	7	4.3E-01
3460.32	7	5	3.2E-01
3474.13	5	3	1.5E-01
3482.90	5	5	2.0E-01
3488.68	3	3	2.5E-01
Mn VI			
307.999	9	9	3.7E+01
309.440	9	7	5.7E+01
309.579	7	5	4.4E+01
310.058	7	7	3.4E+01
310.182	5	5	2.8E+01
311.748	5	3	5.7E+01
320.598	3	5	1.5E+01
320.681	1	3	2.2E+01
320.874	3	1	7.8E+01
320.979	3	3	2.2E+01
321.176	5	5	6.0E+01
321.541	5	3	2.7E+01
325.146	9	7	1.3E+02
328.431	5	5	4.4E+01
328.558	3	5	1.2E+01
329.043	1	3	1.1E+01
1236.23	5	3	1.3E+01
1255.77	3	1	1.2E+01
1285.10	5	7	1.1E+01
1333.87	7	9	1.0E+01
Mercury			
Hg I			
2536.52	1	3	8.00E-02
2652.04	3	5	3.88E-01
2655.13	3	5	1.1E-01
2752.78	1	3	6.10E-02
2856.94	3	1	1.1E-02
2893.60	3	3	1.6E-01
2925.4	5	3	7.7E-02
2967.3	1	3	4.5E-01
3021.50	5	7	5.09E-01
3023.48	5	5	9.4E-02
3027.49	5	5	2.0E-02
3125.66	3	5	6.56E-01
3341.48	5	3	1.68E-01
3650.15	5	7	1.3E+00
3654.83	5	5	1.8E-01
4046.56	1	3	2.1E-01
4077.81	3	1	4.0E-02
4108.1	3	1	3.0E-02
4339.22	3	5	2.88E-02
4347.50	3	5	8.4E-02
4358.34	3	3	5.57E-01
4916.07	3	1	5.8E-02
5025.64	3	3	2.7E-04
5460.75	5	3	4.87E-01
5769.59	3	5	2.36E-01
6234.4	1	3	5.3E-03
6716.4	1	3	4.3E-03
6907.5	3	5	2.8E-02
7728.8	1	3	9.7E-03
10139.79	3	1	2.71E-01
Molybdenum			
Mo I			
2616.79	3	5	7.34E-01
2621.06	7	7	1.16E-01
2628.96	3	3	2.81E-01
2629.85	5	7	7.75E-01
2631.50	1	3	2.54E-01
2638.30	5	5	7.57E-01
2640.98	7	5	1.20E+00
2644.36	5	7	1.96E-01
2649.46	7	9	9.84E-01
2655.02	9	7	4.08E-01
2658.11	7	7	6.43E-01
2665.09	7	9	1.32E-01
2679.85	9	11	1.31E+00
2684.16	9	9	4.18E-01
2706.11	3	5	2.03E-01
2710.74	3	3	1.57E-01
2725.15	3	5	2.79E-01
2728.71	3	3	1.26E-01
2733.39	5	7	2.95E-01
2743.71	1	3	2.47E-01
2745.38	13	11	1.29E-01
2751.47	7	9	2.54E-01
2756.26	5	3	1.18E-01
2761.53	9	11	2.06E-01
2763.02	3	1	4.44E-01
2766.25	3	5	1.17E-01
2787.83	9	7	2.85E-01
2792.96	5	3	1.53E-01
2798.02	7	5	1.22E-01
2801.47	5	7	1.24E-01
2825.68	5	7	2.53E-01
2826.75	7	7	4.23E-01
2876.54	9	9	2.84E-01
2886.60	11	11	4.74E-01
2906.06	3	3	8.04E-01
2913.52	5	3	1.38E-01
2915.38	5	3	7.31E-01
2918.84	5	3	3.79E-01
2930.39	1	3	1.91E-01
2936.50	11	11	2.33E-01
2945.43	7	7	3.66E-01
2945.66	3	3	4.08E-01
2946.01	5	5	1.68E-01
2951.45	9	9	1.43E-01
2959.48	9	11	1.75E-01
2972.96	5	3	2.69E-01
2977.27	9	7	3.28E-01
2978.28	7	5	1.50E-01
2983.04	1	3	2.82E-01
2987.92	3	5	8.43E-01
2988.23	5	7	4.28E-01
2988.68	7	9	1.61E-01
2989.80	9	7	9.27E-01
3000.24	9	9	1.40E-01
3000.44	5	5	1.25E-01
3000.85	5	7	2.58E-01
3001.43	5	5	2.31E-01
3007.71	7	5	1.90E-01
3013.39	7	5	6.06E-01
3016.78	9	9	2.75E-01
3025.00	5	5	8.49E-01
3036.31	3	5	5.81E-01
3041.70	13	11	5.94E-01
3046.80	13	11	1.63E-01
3047.31	11	9	5.01E-01
3055.32	9	7	4.29E-01
3057.56	7	5	2.64E-01
3061.59	7	5	4.41E-01
3064.27	13	13	8.46E-01
3065.04	13	13	3.08E-01
3069.51	5	5	1.52E-01
3069.96	11	11	2.72E-01
3070.89	9	11	1.87E-01
3074.37	11	11	1.42E+00
3079.88	9	11	9.55E-01
3080.40	7	9	3.61E-01
3081.16	3	5	2.35E-01
3085.62	9	9	1.63E+00
3089.13	11	9	1.53E-01
3089.71	5	7	2.34E-01

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}	λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}	λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
3094.66	7	7	1.63E+00	3285.35	9	7	4.49E-01	3456.52	3	3	2.96E-01
3099.92	9	7	1.45E-01	3287.38	5	5	1.38E-01	3460.22	5	3	2.77E-01
3100.88	7	9	1.20E+00	3289.01	9	9	5.08E-01	3460.78	9	7	6.03E-01
3101.34	5	5	1.92E+00	3290.82	7	5	5.44E-01	3465.84	3	1	9.99E-01
3106.34	7	5	2.21E-01	3305.56	5	3	1.74E-01	3466.19	9	7	2.11E-01
3117.54	13	13	1.89E-01	3305.91	7	9	3.06E-01	3466.96	7	7	1.52E-01
3123.03	3	3	2.81E-01	3307.13	7	9	1.25E-01	3467.85	5	7	2.63E-01
3125.03	5	3	1.98E-01	3312.33	7	5	1.62E-01	3469.22	5	3	6.96E-01
3132.59	7	9	1.79E+00	3323.95	9	7	2.82E-01	3469.63	13	15	1.51E-01
3135.90	9	11	3.68E-01	3325.13	5	3	2.26E-01	3470.92	3	5	2.91E-01
3136.75	9	11	1.57E-01	3325.67	5	5	1.72E-01	3475.03	3	3	4.68E-01
3142.75	3	5	4.10E-01	3327.30	1	3	2.88E-01	3479.42	7	5	2.26E-01
3147.35	13	11	2.41E-01	3336.56	9	9	1.64E-01	3483.67	7	7	1.13E-01
3155.19	7	7	2.75E-01	3340.16	5	3	1.20E-01	3483.83	7	5	1.41E-01
3158.17	7	7	4.63E-01	3344.73	3	5	6.04E-01	3489.43	7	7	3.27E-01
3170.34	7	7	1.37E+00	3346.83	11	11	1.13E-01	3504.41	7	9	8.06E-01
3171.38	5	7	2.03E-01	3347.00	3	3	2.72E-01	3505.31	7	9	2.25E-01
3175.59	13	11	8.40E-01	3358.12	5	7	7.59E-01	3508.11	9	9	1.59E-01
3179.78	11	13	2.33E-01	3361.37	9	9	1.38E-01	3510.77	13	13	4.75E-01
3183.03	11	9	3.98E-01	3363.78	5	7	2.74E-01	3517.55	11	11	5.41E-01
3184.58	7	5	2.77E-01	3363.87	5	7	1.39E-01	3518.21	3	3	3.64E-01
3185.10	7	7	2.54E-01	3373.81	3	3	2.03E-01	3521.38	9	9	1.39E-01
3185.71	5	3	6.10E-01	3375.22	7	7	1.38E-01	3521.41	9	11	6.06E-01
3188.10	7	9	3.45E-01	3375.65	7	9	1.56E-01	3524.65	5	3	3.10E-01
3188.41	5	7	4.40E-01	3378.19	3	1	1.88E-01	3524.98	7	9	2.25E-01
3192.79	9	11	1.88E-01	3378.46	13	13	3.75E-01	3538.92	11	11	2.24E-01
3193.98	7	5	1.53E+00	3379.96	5	5	4.11E-01	3540.57	5	3	4.46E-01
3194.88	9	11	1.75E-01	3382.48	3	3	2.66E-01	3542.17	7	5	4.93E-01
3195.96	9	7	4.10E-01	3384.61	7	9	7.32E-01	3552.71	9	7	3.64E-01
3197.18	1	3	1.47E-01	3385.87	9	11	3.30E-01	3555.64	3	3	3.46E-01
3198.85	15	13	7.22E-01	3389.79	5	7	1.85E-01	3558.09	5	7	5.43E-01
3200.89	3	5	1.82E-01	3392.17	9	9	1.97E-01	3563.75	1	3	1.53E-01
3205.22	1	3	4.27E-01	3393.65	11	11	2.08E-01	3566.05	9	9	2.67E-01
3205.43	9	11	2.55E-01	3404.33	7	7	2.10E-01	3566.74	7	7	1.43E-01
3205.89	9	9	5.35E-01	3413.37	11	11	1.25E-01	3570.64	15	15	7.18E-01
3208.84	7	5	2.77E-01	3415.27	9	9	1.83E-01	3573.88	3	5	3.58E-01
3210.97	7	5	6.94E-01	3415.61	7	9	1.29E-01	3580.54	13	11	5.49E-01
3214.44	9	7	2.01E-01	3416.14	9	11	2.45E-01	3581.88	11	13	3.81E-01
3215.07	3	5	4.20E-01	3418.52	5	3	1.41E-01	3584.25	3	3	1.73E-01
3216.78	15	13	2.10E-01	3419.69	7	7	1.15E-01	3585.57	7	5	3.95E-01
3221.73	3	1	1.41E+00	3420.04	5	5	3.28E-01	3588.95	7	7	1.18E-01
3228.21	5	7	3.85E-01	3422.31	9	9	2.52E-01	3590.74	7	9	2.23E-01
3229.79	9	11	1.44E-01	3425.13	11	11	2.29E-01	3595.55	5	5	2.32E-01
3233.14	13	13	6.33E-01	3427.90	11	13	4.09E-01	3598.88	13	11	5.67E-01
3237.06	7	9	2.95E-01	3434.79	7	7	1.75E-01	3600.73	9	9	2.07E-01
3244.47	5	3	2.80E-01	3435.45	15	15	1.50E+00	3601.88	7	9	1.15E-01
3247.61	5	5	1.71E-01	3437.21	11	9	8.06E-01	3602.94	5	7	2.96E-01
3249.93	5	3	1.87E-01	3438.87	1	3	2.34E-01	3604.07	9	7	3.25E-01
3251.65	3	5	3.05E-01	3441.87	5	3	1.34E-01	3610.61	5	3	1.78E-01
3256.21	5	3	6.89E-01	3442.66	3	3	2.94E-01	3611.99	7	7	1.16E-01
3256.72	3	3	1.31E-01	3445.03	7	9	1.53E-01	3615.16	7	9	1.96E-01
3259.16	11	13	1.62E-01	3445.26	7	5	2.96E-01	3623.22	11	9	5.58E-01
3262.63	7	9	3.62E-01	3445.80	9	9	1.14E-01	3624.46	9	11	5.27E-01
3264.40	11	9	5.42E-01	3447.12	9	11	8.75E-01	3624.62	5	7	1.37E-01
3265.14	5	7	2.60E-01	3447.29	5	3	1.79E-01	3638.20	5	3	3.51E-01
3266.16	9	11	1.95E-01	3449.07	7	9	1.52E-01	3638.21	5	3	3.33E-01
3270.90	7	7	3.59E-01	3449.85	5	7	1.65E-01	3640.62	7	5	1.94E-01
3276.07	11	9	1.18E-01	3452.60	7	7	2.48E-01	3647.84	7	7	2.11E-01
3285.03	1	3	1.41E-01	3456.15	5	5	3.60E-01	3648.70	7	5	1.15E-01

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
3654.58	3	3	1.80E-01
3657.36	5	7	2.03E-01
3658.13	9	9	1.86E-01
3659.36	7	9	6.70E-01
3660.92	3	5	1.34E-01
3662.15	7	9	1.45E-01
3662.99	11	11	3.48E-01
3663.27	7	5	2.30E-01
3664.81	11	13	9.54E-01
3664.88	1	3	1.92E-01
3669.34	9	7	2.16E-01
3672.81	9	11	1.95E-01
3672.82	9	9	1.13E-01
3676.23	3	1	5.22E-01
3680.68	11	11	2.96E-01
3681.72	9	7	1.68E-01
3683.01	3	5	1.20E-01
3687.96	5	7	2.12E-01
3688.97	11	9	3.26E-01
3690.59	11	9	2.07E-01
3694.94	5	7	6.36E-01
3696.04	11	11	3.59E-01
3698.07	7	5	1.48E-01
3708.55	7	9	1.28E-01
3715.75	9	7	2.38E-01
3718.48	5	7	1.34E-01
3720.25	7	9	2.86E-01
3725.55	7	7	1.60E-01
3727.68	9	11	1.51E-01
3728.30	7	5	1.55E-01
3728.50	7	9	2.20E-01
3733.02	7	7	1.45E-01
3733.41	13	13	2.80E-01
3735.62	11	11	1.66E-01
3742.28	7	7	1.56E-01
3747.19	5	7	3.07E-01
3748.48	9	11	3.95E-01
3755.10	3	5	1.41E-01
3755.16	9	9	2.48E-01
3758.52	9	9	1.22E-01
3759.60	9	7	1.82E-01
3760.88	9	9	2.16E-01
3768.73	9	9	2.88E-01
3769.99	7	9	2.46E-01
3777.72	13	11	1.66E-01
3788.25	7	9	2.87E-01
3794.43	9	9	1.22E-01
3797.47	7	5	1.48E-01
3798.25	7	9	6.90E-01
3801.84	9	7	3.16E-01
3805.99	5	5	2.44E-01
3819.78	9	11	1.47E-01
3824.78	5	7	1.40E-01
3827.15	7	7	1.94E-01
3828.88	7	7	1.35E-01
3830.81	5	5	1.83E-01
3831.07	7	9	1.20E-01
3832.11	9	9	3.05E-01
3833.75	9	9	1.70E-01
3834.64	3	5	1.20E-01
3846.18	7	7	1.26E-01
3847.25	3	1	2.41E-01
3848.30	9	9	1.26E-01
3851.99	11	9	1.78E-01
3864.10	7	7	6.24E-01
3866.69	3	5	1.74E-01
3867.67	5	3	2.22E-01
3869.08	5	3	1.35E-01
3874.15	7	5	1.67E-01
3902.95	7	5	6.17E-01
3909.54	9	7	1.13E-01
3911.94	5	5	1.15E-01
3915.43	5	5	1.40E-01
3916.43	5	3	1.78E-01
3919.55	11	13	2.24E-01
3955.48	13	11	1.71E-01
3973.76	11	13	4.39E-01
3977.90	9	7	1.35E-01
3980.20	5	3	2.70E-01
3991.85	11	9	1.29E-01
4010.13	5	3	4.38E-01
4021.01	9	11	2.65E-01
4051.18	13	11	1.36E-01
4062.08	11	9	1.96E-01
4069.88	13	11	3.25E-01
4076.19	9	9	1.16E-01
4084.37	9	7	1.94E-01
4102.15	5	3	1.22E-01
4107.46	7	5	2.02E-01
4120.09	13	15	6.05E-01
4131.92	9	11	1.56E-01
4148.98	9	11	1.56E-01
4157.40	13	11	2.17E-01
4157.90	9	11	1.60E-01
4185.82	11	13	3.82E-01
4188.32	11	13	3.32E-01
4194.56	11	11	2.70E-01
4232.59	9	11	3.17E-01
4240.83	5	5	1.68E-01
4246.02	11	13	2.00E-01
4251.88	13	11	1.76E-01
4254.95	7	9	2.01E-01
4269.28	11	11	1.36E-01
4276.91	7	9	2.85E-01
4277.24	9	11	1.35E-01
4317.92	15	15	1.28E-01
4325.80	3	3	1.84E-01
4326.14	5	7	2.56E-01
4340.74	5	7	1.23E-01
4381.63	13	13	2.93E-01
4382.41	11	13	3.83E-01
4409.94	13	13	1.38E-01
4411.69	11	11	2.63E-01
4434.95	9	9	2.51E-01
4446.42	11	11	1.90E-01
4457.35	7	7	1.28E-01
4474.57	5	5	2.10E-01
4491.65	11	11	2.09E-01
4536.80	13	15	5.03E-01
4598.23	1	3	1.47E-01
4624.23	9	9	1.32E-01
4633.08	3	5	2.35E-01
4649.06	3	1	1.25E-01
4652.24	5	7	1.55E-01
4686.08	3	3	1.72E-01
4688.21	13	15	1.54E-01
4707.25	7	9	3.63E-01
4718.86	5	5	2.17E-01
4723.05	9	9	1.23E-01
4731.44	9	11	4.49E-01
4758.50	11	9	3.01E-01
4760.18	11	13	4.67E-01
4764.11	9	7	2.16E-01
4811.05	13	11	4.36E-01
4819.25	11	9	2.71E-01
4830.51	9	7	4.07E-01
4858.39	13	11	1.24E-01
4868.02	7	5	3.11E-01
5037.18	9	7	1.14E-01
5044.36	7	5	1.31E-01
5047.70	3	1	2.61E-01
5163.18	9	11	2.03E-01
5171.06	5	7	1.84E-01
5172.94	5	5	4.11E-01
5174.18	5	3	5.83E-01
5191.45	7	9	1.62E-01
5238.21	7	9	3.74E-01
5240.87	7	7	3.89E-01
5242.80	7	5	2.01E-01
5261.53	5	7	1.13E-01
5280.85	5	5	1.28E-01
5355.52	9	9	1.21E-01
5356.46	11	11	2.11E-01
5360.51	9	11	6.19E-01
5364.28	9	9	2.26E-01
5460.50	5	3	3.46E-01
5493.76	7	5	2.13E-01
5506.49	5	7	3.61E-01
5533.03	5	5	3.72E-01
5570.44	5	3	3.30E-01
5849.71	3	3	3.02E-01
5851.50	3	5	1.55E-01
5893.36	5	5	2.60E-01
5895.93	5	7	3.12E-01
5926.37	7	7	1.63E-01
5928.88	7	9	5.32E-01
7154.11	9	9	3.45E-01
Neodymium			
Nd II			
3780.4	16	18	1.4E-01
3805.4	14	16	6.9E-01
3807.2	10	12	4.9E-02
3863.3	8	10	1.5E-01
3941.5	10	10	6.1E-01
3951.2	12	12	6.0E-01
3973.3	18	18	6.3E-01

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
3979.5	10	12	2.7E-01
3990.1	16	16	5.2E-01
4012.3	18	20	5.5E-01
4061.1	16	18	4.4E-01
4106.6	14	16	6.8E-02
4109.5	14	16	3.7E-01
4133.4	14	12	1.5E-01
4156.1	12	14	3.4E-01
4205.6	18	16	1.8E-01
4284.5	18	18	8.5E-02
4303.6	8	10	4.7E-01
4325.8	16	16	1.6E-01
4358.2	14	14	1.5E-01
4382.7	12	10	4.0E-02
4400.8	10	10	6.8E-02
4451.6	12	14	2.5E-01
4456.4	16	18	6.4E-02
4463.0	14	16	1.8E-01
4958.1	12	10	1.2E-02
5130.6	22	20	1.6E-01
5192.6	20	18	1.7E-01
5249.6	18	16	1.8E-01
5276.9	12	10	1.2E-01
5293.2	16	14	1.2E-01
5302.3	20	18	1.1E-01
5311.5	14	12	1.1E-01
5319.8	12	10	1.6E-01
5357.0	18	16	1.8E-01
5371.9	20	20	5.1E-02
5485.7	18	18	5.7E-02
5594.4	16	16	7.0E-02
5620.6	18	18	1.3E-01
5688.5	14	14	5.9E-02
5718.1	16	16	8.7E-02
5726.8	10	10	5.6E-02
5740.9	12	12	7.2E-02
5804.0	10	10	4.6E-02
5865.1	16	18	1.3E-02
6051.9	12	10	1.1E-02
Neon			
Ne I			
615.63	1	3	3.8E-01
618.67	1	3	9.3E-01
619.10	1	3	3.3E-01
626.82	1	3	7.4E-01
629.74	1	3	4.8E-01
735.90	1	3	6.11E+00
743.72	1	3	4.86E-01
3369.8	5	5	1.0E-03
3369.9	5	3	7.6E-03
3375.6	5	3	2.2E-03
3417.9	3	5	9.2E-03
3418.0	3	3	2.2E-03
3423.9	3	3	1.0E-03
3447.7	5	5	2.1E-02
3450.8	5	3	4.9E-03
3454.2	3	1	3.7E-02
3460.5	1	3	7.0E-03
3464.3	5	5	6.7E-03
3466.6	1	3	1.3E-02
3472.6	5	7	1.7E-02
3498.1	3	5	5.1E-03
3501.2	3	3	1.2E-02
3510.7	5	3	2.2E-03
3515.2	3	5	6.9E-03
3520.5	3	1	9.3E-02
3593.5	3	5	9.9E-03
3593.6	3	3	6.6E-03
3600.2	3	3	4.3E-03
3633.7	3	1	1.1E-02
3682.2	3	5	1.6E-03
3685.7	3	3	3.9E-03
3701.2	3	5	2.2E-03
4536.3	3	3	5.0E-03
4702.5	3	3	2.1E-03
4708.9	3	3	4.2E-02
4955.4	3	3	3.3E-03
5113.7	3	3	1.0E-02
5120.5	3	3	5.6E-03
5154.4	3	3	1.9E-02
5191.3	3	3	1.3E-02
5326.4	3	3	6.8E-03
5333.3	3	3	5.3E-03
5341.1	3	3	1.1E-01
5400.6	3	1	9.0E-03
5418.6	3	3	5.2E-03
5433.7	3	3	2.83E-03
5652.6	3	3	8.9E-03
5662.5	3	3	6.9E-03
5852.5	3	1	6.82E-01
5868.4	3	3	1.4E-02
5881.9	5	3	1.15E-01
5913.6	3	3	4.8E-02
5939.3	5	3	2.00E-03
5944.8	5	5	1.13E-01
5961.6	3	3	3.3E-02
5975.5	5	3	3.51E-02
6030.0	3	3	5.61E-02
6046.1	3	3	2.26E-03
6074.3	3	1	6.03E-01
6096.2	3	5	1.81E-01
6118.0	5	3	6.09E-03
6128.5	3	3	6.7E-03
6143.1	5	5	2.82E-01
6150.3	3	3	1.5E-02
6163.6	1	3	1.46E-01
6217.3	5	3	6.37E-02
6266.5	1	3	2.49E-01
6273.0	3	3	9.7E-03
6293.7	3	3	6.39E-03
6304.8	3	5	4.16E-02
6328.2	5	3	3.39E-02
6330.9	3	3	2.3E-02
6334.4	5	5	1.61E-01
6351.9	1	3	3.45E-03
6383.0	3	3	3.21E-01
6401.1	3	3	1.39E-02
6402.2	5	7	5.14E-01
6506.5	3	5	3.00E-01
6532.9	1	3	1.08E-01
6599.0	3	3	2.32E-01
6602.9	3	3	5.9E-03
6652.1	3	1	2.9E-03
6678.3	3	5	2.33E-01
6717.0	3	3	2.17E-01
6721.1	3	3	4.9E-04
6929.5	3	5	1.74E-01
7024.1	3	3	1.89E-02
7032.4	5	3	2.53E-01
7051.3	3	3	3.0E-02
7059.1	3	5	6.8E-02
7173.9	3	5	2.87E-02
7245.2	3	3	9.35E-02
7304.8	1	3	2.55E-03
7438.9	1	3	2.31E-02
7472.4	3	3	4.0E-02
7535.8	3	3	4.3E-01
7937.0	5	5	7.8E-03
8082.5	3	3	1.2E-03
8118.5	3	3	4.9E-02
8128.9	3	5	7.2E-03
8259.4	5	5	2.03E-02
8571.4	3	3	5.5E-02
8582.9	3	5	1.00E-02
8647.0	5	5	3.91E-02
8681.9	3	3	2.1E-01
8767.5	3	3	1.1E-03
8771.7	3	3	1.6E-01
8783.8	3	5	3.13E-01
8865.3	3	3	9.4E-03
9201.8	3	3	9.1E-02
9433.0	3	3	1.1E-03
9486.7	3	3	2.5E-02
9534.2	3	3	6.3E-02
10621	3	3	2.4E-03
11409	3	3	4.2E-02
11525	3	3	8.4E-02
11767	3	3	6.9E-02
12459	3	3	1.5E-02
Ne II			
*357.03	6	10	3.8E+01
*361.77	6	2	1.6E+01
*406.28	6	10	1.8E+01
*446.37	6	6	4.07E+01
460.73	4	2	4.7E+01
462.39	2	2	2.3E+01
1907.5	4	2	2.8E-01
1916.1	4	4	6.9E-01
1930.0	2	2	5.7E-01
1938.8	2	4	1.3E-01
2858.0	6	6	7.9E-01
2870.0	6	6	1.7E-01
2873.0	6	4	3.8E-01
2876.3	4	6	7.8E-01
2876.5	6	4	3.3E-01

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
2878.1	2	2	6.9E-02
2888.4	4	6	7.0E-02
2891.5	4	4	6.1E-02
2897.0	6	8	5.2E-02
2906.8	2	4	5.5E-01
2910.1	4	2	1.7E+00
2910.4	2	4	5.9E-01
2916.2	6	4	9.6E-02
2925.6	2	2	5.6E-01
2933.7	6	6	6.9E-02
2955.7	6	4	1.2E+00
3001.7	4	4	8.7E-01
3017.3	6	4	3.5E-01
3027.0	6	6	1.4E+00
3028.7	4	2	8.5E-01
3028.9	2	4	4.7E-01
3034.5	6	8	3.1E+00
3037.7	4	4	2.1E+00
3045.6	2	2	2.5E+00
3047.6	4	6	1.8E+00
3054.7	2	4	9.4E-01
3092.9	6	6	1.3E+00
3097.1	8	8	1.3E+00
3118.0	8	6	4.2E-02
3134.1	6	4	2.6E-01
3140.4	8	6	2.4E-01
3151.1	6	6	4.8E-02
3154.8	8	6	1.8E-02
3164.4	8	8	1.6E-01
3165.7	6	6	1.2E-01
3173.6	6	4	4.5E-02
3176.1	4	6	6.0E-02
3187.6	4	6	1.4E-02
3188.7	6	6	3.9E-01
3190.9	4	6	1.5E-01
3194.6	4	4	5.2E-01
3198.6	6	8	1.7E+00
3198.9	4	4	2.3E-01
3209.0	8	8	1.6E-01
3209.4	2	4	6.0E-01
3213.7	2	4	1.7E+00
3214.3	4	6	2.2E+00
3218.2	8	10	3.6E+00
3224.8	6	8	3.5E+00
3229.5	8	8	1.3E-01
3229.6	8	10	3.6E+00
3230.1	6	6	1.8E+00
3230.4	4	6	1.4E-01
3232.0	6	4	2.7E-01
3232.4	4	4	1.6E+00
3243.4	6	6	2.3E-01
3244.1	6	8	1.5E+00
3248.1	4	4	2.4E-01
3255.4	6	4	3.8E-02
3263.4	2	4	3.9E-01
3269.9	4	6	5.1E-01
3270.8	6	4	5.7E-02
3297.7	6	6	4.3E-01
3309.7	4	2	3.1E-01
3310.5	4	4	6.9E-02
3311.3	4	2	2.6E-01
3314.7	6	6	4.4E-02
3319.7	4	2	1.6E+00
3320.2	8	6	2.1E-01
3323.7	4	4	1.6E+00
3327.2	4	4	9.1E-01
3329.2	8	8	8.8E-01
3330.7	6	6	3.9E-02
3334.8	6	8	1.8E+00
3336.1	4	6	1.1E+00
3344.4	2	2	1.5E+00
3345.5	6	4	1.4E+00
3345.8	4	4	2.2E-01
3353.6	4	2	1.2E-01
3355.0	4	6	1.3E+00
3356.3	6	6	2.0E-01
3357.8	6	6	5.0E-01
3360.3	2	4	8.6E-01
3360.6	2	4	8.2E-01
3362.9	4	2	3.5E-01
3371.8	4	6	2.2E-01
3374.1	4	4	3.0E-01
3378.2	2	2	1.7E+00
3379.3	2	2	3.0E-01
3386.2	4	6	5.5E-02
3388.4	4	6	2.2E+00
3390.6	2	4	7.7E-02
3392.8	2	4	4.4E-01
3404.8	4	6	1.9E+00
3407.0	6	8	2.3E+00
3411.4	4	2	6.1E-01
3413.2	4	4	1.8E+00
3414.9	4	6	1.8E-02
3416.9	6	6	6.4E-01
3417.7	6	8	1.6E+00
3438.9	2	2	1.4E+00
3440.7	2	4	3.5E-01
3453.1	4	4	4.6E-01
3454.8	4	4	1.6E+00
3456.6	2	4	9.6E-01
3457.1	4	6	9.9E-02
3459.3	6	6	1.6E+00
3475.2	4	4	1.2E-02
3477.6	4	6	4.3E-01
3481.9	4	2	1.4E+00
3503.6	2	2	2.0E+00
3522.7	4	2	2.3E-02
3538.0	4	2	7.6E-01
3539.9	4	4	3.6E-02
3542.2	6	4	6.0E-01
3542.9	4	6	1.2E+00
3546.2	2	4	6.3E-02
3551.6	2	4	3.7E-02
3557.8	2	2	1.9E-01
3561.2	4	6	2.1E-01
3565.8	4	4	6.2E-01
3568.5	6	8	1.4E+00
3571.2	4	4	6.3E-01
3574.2	6	6	1.0E-01
3574.6	4	6	1.3E+00
3590.4	4	6	3.6E-02
3594.2	4	2	1.3E+00
3612.3	2	4	2.6E-01
3628.0	4	4	6.0E-01
3632.7	4	4	1.3E-01
3643.9	4	4	3.2E-01
3644.9	2	4	9.9E-01
3659.9	4	6	6.7E-02
3664.1	6	4	7.0E-01
3679.8	4	2	3.2E-01
3694.2	6	6	1.0E+00
3697.1	2	2	2.8E-01
3701.8	4	6	2.7E-01
3709.6	4	2	1.1E+00
3713.1	4	6	1.3E+00
3721.8	4	6	2.0E-01
3726.9	4	4	1.2E-01
3727.1	2	4	9.8E-01
3734.9	4	4	1.9E-01
3744.6	2	4	2.6E-01
3751.2	2	2	1.8E-01
3753.8	4	6	4.5E-01
3766.3	4	6	2.9E-01
3777.1	2	4	4.2E-01
3800.0	4	4	3.7E-01
3818.4	2	4	6.1E-01
3829.8	4	6	8.4E-01
3942.3	4	6	1.0E-02
Ne V			
*142.61	9	9	6.7E+02
*143.32	9	15	1.2E+03
147.13	5	7	1.5E+03
151.23	5	5	3.38E+02
154.50	1	3	7.0E+02
*167.69	9	9	1.5E+02
*358.93	9	3	2.1E+02
365.59	5	3	1.35E+02
*482.15	9	9	3.01E+01
*571.04	9	15	1.0E+01
2259.6	3	5	1.9E+00
2265.7	5	7	2.4E+00
Ne VII			
97.502	1	3	1.07E+03
*115.46	9	3	4.8E+02
116.69	3	5	1.6E+03
127.66	3	1	1.9E+02
465.22	1	3	4.09E+01
558.61	3	5	8.11E+00
559.95	1	3	1.07E+01
561.38	3	3	7.99E+00
561.73	5	5	2.39E+01
562.99	3	1	3.17E+01

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
564.53	5	3	1.31E+01
Ne VIII			
*88.09	2	6	8.4E+02
*98.208	6	10	2.77E+03
770.41	2	4	5.90E+00
780.32	2	2	5.69E+00
2820.7	2	4	7.20E-01
2860.1	2	2	6.88E-01
Nickel			
Ni I			
1963.85	7	7	1.1E-01
1976.87	7	9	1.1E+00
1981.61	5	5	1.3E-01
1990.25	5	7	8.3E-01
2007.01	5	5	1.7E-01
2007.69	7	7	9.0E-02
2014.25	3	5	9.3E-01
2025.40	7	5	2.3E-01
2026.62	9	7	2.4E-01
2047.35	7	5	1.8E-01
2052.04	9	9	9.7E-02
2055.50	5	3	3.3E-01
2059.92	7	5	2.1E-01
2060.20	5	3	2.3E-01
2064.39	3	1	4.0E-01
2069.52	5	5	1.1E-01
2085.57	5	5	2.6E+00
2089.09	7	5	9.7E-02
2095.13	5	7	1.1E-01
2114.43	5	5	9.7E-02
2121.40	7	5	2.8E-01
2124.80	5	3	3.8E-01
2147.80	5	3	4.7E-01
2157.83	5	3	4.1E-01
2158.31	7	5	6.9E-01
2161.04	5	5	1.3E-01
2173.54	5	3	1.5E-01
2174.48	3	1	8.9E-01
2182.38	7	5	1.3E-01
2183.91	5	5	1.2E-01
2190.22	5	5	3.0E-01
2197.35	3	3	7.8E-01
2201.59	5	3	7.3E-01
2221.94	5	3	2.2E-01
2244.46	5	5	3.8E-01
2253.57	7	7	1.9E-01
2254.81	9	9	9.6E-02
2258.15	7	5	1.7E-01
2259.56	5	3	2.0E-01
2261.42	9	7	9.1E-02
2287.32	3	5	1.8E-01
2289.98	9	7	2.1E+00
2293.11	5	5	3.8E-01
2300.77	7	7	7.5E-01
2302.97	3	3	4.5E-01
2307.35	5	7	1.6E-01
2312.34	7	7	5.5E+00
2313.98	5	5	5.0E+00
2317.16	7	5	3.8E+00
2320.03	9	11	6.9E+00
2321.38	5	7	5.6E+00
2324.65	7	9	1.8E-01
2325.79	7	9	3.5E+00
2329.96	5	3	5.3E+00
2345.54	9	7	2.2E+00
2346.63	7	5	5.5E-01
2347.51	9	9	2.2E-01
2348.73	7	7	2.2E-01
2419.31	7	5	2.0E-01
2943.91	7	5	1.1E-01
2981.65	5	3	2.8E-01
3002.48	7	7	8.0E-01
3003.62	5	5	6.9E-01
3012.00	5	5	1.3E+00
3037.93	7	7	2.8E-01
3050.82	7	9	6.0E-01
3054.31	5	5	4.0E-01
3057.64	3	3	1.0E+00
3064.62	5	7	1.1E-01
3101.56	5	7	6.3E-01
3101.88	5	7	4.9E-01
3134.11	3	5	7.3E-01
3225.02	5	3	9.3E-02
3369.56	9	7	1.8E-01
3380.57	5	3	1.3E+00
3392.98	7	7	2.4E-01
3414.76	7	9	5.5E-01
3423.71	3	3	3.3E-01
3433.56	7	7	1.7E-01
3446.26	5	5	4.4E-01
3452.88	5	7	9.8E-02
3458.46	3	5	6.1E-01
3461.66	7	9	2.7E-01
3472.55	5	7	1.2E-01
3483.77	5	3	1.4E-01
3492.96	5	3	9.8E-01
3510.33	3	1	1.2E+00
3515.05	5	7	4.2E-01
3524.54	7	5	1.0E+00
3566.37	5	5	5.6E-01
3597.70	3	3	1.4E-01
3619.39	5	7	6.6E-01
4027.67	5	7	1.3E-01
4295.88	9	7	1.7E-01
4401.54	9	11	3.8E-01
4462.46	3	5	1.7E-01
4470.48	5	7	1.9E-01
4600.37	5	3	2.6E-01
4604.99	9	7	2.3E-01
4606.23	5	3	1.0E-01
4648.66	11	9	2.4E-01
4686.22	5	5	1.4E-01
4701.54	9	9	1.4E-01
4714.42	13	11	4.6E-01
4715.78	7	7	2.0E-01
4732.47	7	9	9.3E-02
4752.43	3	3	2.0E-01
4756.52	9	9	1.5E-01
4786.54	11	11	1.8E-01
4812.00	3	1	9.5E-02
4829.03	5	7	1.9E-01
4831.18	9	7	1.6E-01
4838.64	9	7	2.2E-01
4855.41	5	5	5.7E-01
4904.41	5	3	6.2E-01
4912.03	3	3	1.5E-01
4913.97	1	3	2.2E-01
4918.36	9	7	2.3E-01
4935.83	7	5	2.4E-01
4937.34	9	9	1.2E-01
4953.20	5	5	1.2E-01
4980.17	9	11	1.9E-01
5000.34	7	7	1.4E-01
5012.46	7	7	1.1E-01
5017.58	11	11	2.0E-01
5035.37	7	9	5.7E-01
5042.20	3	5	1.4E-01
5048.85	7	7	1.6E-01
5080.53	9	11	3.2E-01
5081.11	7	9	5.7E-01
5082.35	3	3	2.5E-01
5084.08	7	9	3.1E-01
5099.95	7	7	2.9E-01
5115.40	11	9	2.2E-01
5129.37	7	5	1.2E-01
5155.14	5	5	1.1E-01
5155.76	5	7	2.9E-01
5176.57	5	5	1.8E-01
5371.33	7	7	1.6E-01
5476.91	1	3	9.5E-02
5637.12	3	3	1.1E-01
5664.02	5	7	1.1E-01
5695.00	3	3	1.7E-01
6086.29	3	5	1.1E-01
6175.42	3	3	1.7E-01
7122.24	5	7	2.1E-01
7381.94	9	11	9.7E-02
7422.30	7	5	1.8E-01
7727.66	7	7	1.1E-01
Ni II			
2165.55	10	10	2.4E+00
2169.10	8	8	1.58E+00
2174.67	8	10	1.43E+00
2175.15	6	6	1.77E+00
2184.61	4	4	2.90E+00
2201.41	4	6	1.3E+00
2206.72	6	8	1.66E+00
2216.48	10	12	3.4E+00
2220.40	6	8	2.3E+00
2222.96	10	10	9.8E-01
2224.86	8	8	1.55E+00
2226.33	6	6	1.3E+00
2253.85	4	6	1.98E+00
2264.46	6	8	1.43E+00

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
2270.21	8	10	1.56E+00
2278.77	8	6	2.8E+00
2287.09	6	4	2.8E+00
2296.55	8	8	1.98E+00
2297.14	6	4	2.70E+00
2297.49	4	2	3.0E+00
2298.27	6	6	2.8E+00
2303.00	8	6	2.9E+00
2316.04	10	8	2.88E+00
2334.58	8	8	8.0E-01
2375.42	6	8	6.6E-01
2394.52	8	10	1.70E+00
2416.13	6	8	2.1E+00
2437.89	8	10	5.4E-01
2510.87	8	10	5.8E-01
Ni III			
1692.51	11	13	7.9E+00
1709.90	9	11	6.3E+00
1719.46	5	7	6.0E+00
1722.28	3	5	5.9E+00
1724.52	3	1	6.7E+00
1741.96	9	7	5.7E+00
1752.43	7	5	5.5E+00
1760.56	5	3	6.5E+00
1769.64	11	11	6.2E+00
1823.06	9	9	5.6E+00
Ni XIV			
164.13	6	8	1.2E+03
168	2	4	2.4E+02
168.12	4	2	8.5E+02
169.69	4	4	9.8E+02
170.50	4	4	7.1E+02
171.37	4	6	9.4E+02
172.16	6	6	4.7E+02
172.80	6	4	1.4E+02
177.28	4	4	5.6E+02
178	2	4	8.9E+01
181	4	6	7.4E+01
182.14	4	2	1.5E+02
196	4	2	3.8E+01
288.894	4	4	4.6E+01
292.399	6	6	3.6E+01
Ni XV			
50.249	5	7	6.8E+03
60.890	9	11	1.0E+04
64.635	7	9	9.6E+03
163.64	5	7	5.6E+01
173.73	5	7	7.6E+02
175	3	1	5.7E+02
179.28	5	7	7.5E+02
181	1	3	6.8E+02
269	3	1	5.3E+01
278.386	5	5	4.3E+01
Ni XVI			
166	4	6	3.1E+02
168	6	8	3.2E+02
182	2	2	2.5E+02
185.23	2	4	4.2E+02
187	4	6	1.2E+02
187	4	2	3.3E+02
188	2	2	4.7E+02
190	6	8	2.0E+02
192	6	8	4.54E+02
192	6	6	3.1E+02
194	4	6	2.8E+02
194	2	4	5.5E+02
194	2	2	1.1E+02
194	4	4	3.5E+02
194.04	4	6	4.6E+02
195.27	4	4	9.5E+01
196	4	6	6.7E+02
197	4	6	1.5E+02
197	4	2	1.2E+02
199	2	4	4.9E+02
206	2	2	3.7E+02
217	4	4	1.1E+02
218.391	2	4	9.5E+01
223.119	2	2	1.3E+02
231	4	4	1.6E+02
232.475	4	4	4.07E+02
233	6	4	2.4E+02
235	4	2	3.8E+02
235	6	6	2.5E+02
236	4	4	1.2E+02
237.875	4	2	2.6E+02
238	6	4	1.3E+02
239.550	2	2	2.6E+02
245	4	4	1.4E+02
245	4	6	3.2E+02
249	6	8	3.3E+02
249	6	4	1.2E+02
250	4	2	1.6E+02
254	6	4	1.8E+02
Ni XVII			
30.919	1	3	2.77E+03
42.855	1	3	4.75E+03
54.451	9	11	1.5E+04
55.361	1	3	6.7E+03
57.348	7	9	1.4E+04
197.39	1	3	1.6E+02
199.87	3	5	2.1E+02
204	3	3	1.8E+02
205	3	1	2.4E+02
206	1	3	3.0E+02
207.50	5	7	2.5E+02
215.89	3	5	4.8E+02
216	1	3	2.7E+02
217	5	7	2.4E+02
227	5	5	1.6E+02
249.180	1	3	2.75E+02
281.50	3	1	2.1E+02
282	3	1	2.4E+02
284	5	3	1.5E+02
292	5	7	2.2E+02
Ni XVIII			
24.881	2	4	8.6E+02
25.070	4	6	9.9E+02
26.02	2	4	1.26E+03
26.020	2	4	1.1E+03
26.046	2	2	1.1E+03
26.218	4	6	1.5E+03
27.98	4	6	1.0E+03
27.982	2	4	2.0E+03
28.018	6	8	1.1E+03
28.220	4	6	2.33E+03
29.383	4	6	1.58E+03
29.422	6	8	1.69E+03
29.779	2	4	1.9E+03
29.829	2	2	1.9E+03
31.845	4	6	2.7E+03
31.890	6	8	3.0E+03
32.034	2	4	3.4E+03
32.340	4	6	4.0E+03
36.990	4	6	5.5E+03
37.049	6	8	5.9E+03
41.015	2	4	2.97E+03
41.218	2	2	3.2E+03
43.814	2	4	5.5E+03
44.365	4	6	6.8E+03
44.405	4	4	1.14E+03
52.615	4	6	1.5E+04
52.720	6	8	1.6E+04
52.745	6	6	1.06E+03
59.950	6	4	9.6E+02
60.212	4	2	1.1E+03
63.512	4	6	7.9E+02
63.589	6	8	8.5E+02
69.075	4	6	8.0E+02
76.254	4	6	1.38E+03
76.359	6	8	1.47E+03
99.275	2	4	1.0E+03
100.4	4	6	1.2E+03
114.46	4	6	2.5E+03
114.74	6	8	2.7E+03
Ni XIX			
9.140	1	3	3.1E+04
9.153	1	3	5.2E+03
9.977	1	3	1.1E+05
10.110	1	3	9.4E+04
10.283	1	3	4.7E+03
10.433	1	3	5.1E+03
11.539	1	3	4.8E+04
11.599	1	3	6.3E+03
12.435	1	3	3.66E+05
12.656	1	3	1.0E+05
13.779	1	3	1.23E+04
14.043	1	3	1.31E+04
40.7	3	3	6.4E+03
40.7	3	1	8.4E+03
41.132	7	9	9.4E+03

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
Ni XXI			
11.13	3	3	1.7E+04
11.23	5	3	1.7E+04
11.239	5	7	5.7E+04
11.28	3	1	2.2E+05
11.318	5	7	2.8E+05
11.48	3	1	1.1E+05
11.48	1	3	4.0E+05
11.517	5	7	1.4E+05
11.539	5	7	1.2E+05
11.67	1	3	8.0E+04
11.72	3	3	2.3E+04
12.454	5	3	3.3E+04
12.472	3	3	1.8E+04
12.502	5	5	2.8E+04
Ni XXII			
72.52	4	2	2.84E+02
84.06	6	4	1.2E+03
84.24	4	2	5.6E+02
85.86	4	2	4.9E+02
88.00	4	2	1.2E+03
95.95	2	2	4.4E+02
98.16	4	4	5.2E+02
98.58	4	4	2.45E+02
100.60	6	6	3.9E+02
101.31	6	4	4.83E+02
103.31	4	2	2.66E+02
106.04	4	4	2.36E+02
106.16	4	2	5.1E+02
124.31	2	2	3.7E+02
126.32	4	4	3.3E+02
Ni XXIII			
87.66	3	3	2.8E+02
88.11	5	3	8.3E+02
90.49	3	3	1.77E+02
90.96	5	3	2.5E+02
91.83	5	3	7.5E+02
92.32	3	1	4.39E+02
100.42	1	3	2.1E+02
102.08	5	5	5.3E+02
103.23	3	3	2.4E+02
103.67	5	5	1.78E+02
104.70	3	1	2.94E+02
106.02	5	5	2.87E+02
108.27	7	5	3.32E+02
111.23	3	1	2.26E+02
111.78	5	3	2.19E+02
111.86	1	3	1.7E+02
112.55	3	1	1.0E+03
128.87	5	5	4.02E+02
133.54	3	3	1.86E+02
137.55	3	1	2.53E+02
Ni XXIV			
101.13	6	4	1.63E+02
102.11	4	4	5.4E+02
103.43	2	4	1.3E+02
103.53	4	2	4.17E+02
104.64	2	2	4.7E+02
106.68	4	2	3.67E+02
113.14	4	4	1.65E+02
118.52	2	4	1.5E+02
122.72	6	4	2.17E+02
134.73	6	6	1.44E+02
135.47	4	4	8.0E+01
137.01	4	4	2.6E+02
138.80	4	6	7.2E+01
153.47	2	2	1.27E+02
159.69	2	4	8.9E+01
Ni XXV			
9.30	3	1	9.3E+04
9.31	5	7	8.2E+04
9.32	3	5	7.8E+04
9.34	1	3	1.1E+05
9.42	3	1	9.0E+04
9.49	3	5	8.9E+04
9.60	1	3	1.8E+05
9.63	3	5	2.4E+05
9.64	3	3	1.3E+05
9.71	3	1	2.3E+05
9.71	3	3	1.8E+05
9.74	5	7	3.0E+05
9.75	3	5	1.3E+05
9.76	1	3	3.03E+05
9.76	5	3	7.5E+04
9.78	5	7	2.9E+05
9.86	5	7	4.8E+05
9.87	3	5	2.03E+05
9.92	5	5	1.3E+05
9.94	5	7	1.29E+05
9.97	3	5	2.5E+05
10.08	1	3	2.80E+05
Ni XXVI			
1.5930	4	2	3.4E+06
1.5935	2	2	4.0E+06
1.5973	4	4	8.1E+06
1.5977	2	4	4.4E+06
1.5982	2	2	7.3E+06
1.5996	2	2	2.7E+06
1.6005	4	6	2.7E+06
1.6036	4	2	2.1E+06
9.390	2	4	2.59E+05
9.535	4	6	2.96E+05
Ni XXVII			
1.2534	1	3	3.35E+05
1.2824	1	3	6.38E+05
1.3500	1	3	1.63E+06
1.3516	1	3	2.4E+05
1.531	3	3	2.0E+05
1.534	3	1	6.9E+06
1.537	5	5	2.3E+06
1.537	1	3	3.7E+06
1.538	3	5	3.9E+06
1.539	1	3	2.6E+06
1.539	3	5	2.6E+06
1.540	3	3	1.7E+06
1.541	3	5	5.5E+06
1.542	3	3	3.6E+06
1.542	5	5	3.5E+06
1.544	5	3	3.2E+06
1.546	3	5	1.6E+06
1.547	3	3	2.1E+05
1.549	1	3	2.0E+05
1.551	3	1	8.2E+05
1.558	3	1	6.5E+05
1.5883	1	3	6.02E+06
1.5963	1	3	7.70E+05
Nitrogen			
N I			
1163.88	6	6	7.52E-01
1164.00	4	6	1.27E-02
1164.21	6	4	5.17E-02
1164.32	4	4	6.94E-01
1167.45	6	8	1.29E+00
1168.42	6	6	4.24E-02
1168.54	4	6	1.24E+00
1176.51	6	4	9.22E-01
1176.63	4	4	1.02E-01
1177.69	4	2	1.02E+00
1199.55	4	6	4.01E+00
1200.22	4	4	3.99E+00
1200.71	4	2	3.98E+00
1310.54	4	6	8.42E-01
1316.29	4	6	1.42E-02
1492.63	6	4	3.13E+00
1492.82	4	4	3.51E-01
1494.68	4	2	3.72E+00
3822.03	2	2	3.70E-02
3830.43	4	4	4.67E-02
3834.22	4	2	1.89E-02
4099.94	2	4	3.48E-02
4109.95	4	6	3.90E-02
4113.97	4	4	6.62E-03
4137.64	2	4	2.80E-03
4143.43	4	4	6.09E-03
4151.48	6	4	1.01E-02
4249.87	4	2	2.59E-02
4264.00	6	4	2.26E-02
4356.29	6	8	5.10E-02
4385.54	2	2	8.84E-03
4392.41	4	2	1.76E-02
4435.43	2	4	7.51E-03
4442.45	4	4	3.81E-02
4669.89	4	4	7.49E-03
4914.94	2	2	8.08E-03
4935.12	4	2	1.76E-02
5199.84	2	2	1.87E-02
5201.61	2	4	1.87E-02
5281.20	6	6	2.45E-03
5344.05	6	6	6.10E-04
5356.62	4	6	1.41E-03

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
5367.01	4	4	1.07E-03
5372.61	2	4	8.34E-04
5378.27	2	2	1.66E-03
6606.18	4	6	8.87E-04
6622.54	6	6	7.93E-03
6626.99	2	4	2.20E-03
6636.94	4	4	1.40E-02
6644.96	8	6	3.49E-02
6646.50	2	2	2.18E-02
6653.46	6	4	2.74E-02
6656.51	4	2	2.17E-02
6926.67	4	6	7.75E-03
6945.18	6	6	1.83E-02
6951.60	2	4	1.03E-02
6960.50	4	4	4.67E-03
6973.07	2	2	3.83E-03
6979.18	6	4	9.83E-03
6982.03	4	2	2.04E-02
7423.64	2	4	5.95E-02
7442.30	4	4	1.24E-01
7468.31	6	4	1.93E-01
7898.98	6	4	2.82E-01
7899.28	4	4	3.28E-02
7915.42	4	2	3.13E-01
8184.86	4	6	8.58E-02
8188.01	2	4	1.27E-01
8200.36	2	2	4.95E-02
8210.72	4	4	4.84E-02
8216.34	6	6	2.23E-01
8223.13	4	2	2.64E-01
8242.39	6	4	1.36E-01
8567.74	2	4	4.92E-02
8594.00	2	2	2.09E-01
8629.24	4	4	2.66E-01
8655.88	4	2	1.05E-01
8680.28	6	8	2.46E-01
8683.40	4	6	1.80E-01
8686.15	2	4	1.09E-01
8703.25	2	2	2.10E-01
8711.70	4	4	1.28E-01
8718.84	6	6	6.75E-02
8728.90	4	2	3.76E-02
8747.37	6	4	1.04E-02
9028.92	2	2	3.02E-01
9045.88	6	8	2.80E-01
9049.49	6	6	1.88E-02
9049.89	4	6	2.60E-01
9060.48	2	4	2.95E-01
9187.45	6	6	2.44E-01
9187.86	4	6	1.76E-02
9207.59	6	4	2.70E-02
9208.00	4	4	2.33E-01
9386.81	2	4	2.24E-01
9392.79	4	6	2.63E-01
9460.68	4	4	3.98E-02
9776.90	2	4	1.18E-02
9786.78	4	6	1.13E-02
9788.29	2	2	2.99E-02
9798.56	4	4	2.75E-02
9810.01	4	2	5.30E-02
9814.02	6	8	6.56E-03
9822.75	6	6	4.95E-02
9834.61	6	4	4.50E-02
9863.33	8	8	9.62E-02
9872.15	8	6	2.97E-02
9883.38	2	2	2.93E-02
9905.52	4	2	3.11E-03
9909.22	2	4	7.58E-03
9931.47	4	4	3.64E-02
9947.07	6	8	1.08E-02
9965.75	4	6	7.60E-03
9968.51	6	4	4.50E-03
9980.42	4	6	8.10E-03
9997.73	8	8	9.20E-03
N II			
474.891	5	5	9.66E+00
475.647	1	3	1.17E+01
475.698	3	5	1.58E+01
475.757	3	3	8.75E+00
475.803	5	7	2.10E+01
475.884	5	5	5.25E+00
508.697	5	5	1.91E+00
510.758	5	7	1.87E+01
513.849	5	5	1.24E+01
529.355	1	3	7.23E+00
529.413	3	1	2.43E+01
529.491	3	3	6.75E+00
529.637	3	5	4.92E+00
529.722	5	3	1.03E+01
529.867	5	5	1.94E+01
533.511	1	3	2.39E+01
533.581	3	5	3.20E+01
533.650	3	3	1.66E+01
533.729	5	7	4.13E+01
533.815	5	5	9.19E+00
547.818	5	3	2.16E+00
559.762	1	3	1.14E+01
574.650	5	7	3.60E+01
582.156	5	5	2.85E+01
635.197	1	3	2.33E+01
644.634	1	3	1.21E+01
644.837	3	3	3.64E+01
645.178	5	3	6.07E+01
660.286	5	3	3.69E+01
671.016	3	5	2.47E+00
671.386	5	5	7.40E+00
671.411	1	3	3.04E+00
671.630	3	3	2.27E+00
671.773	3	1	9.85E+00
672.001	5	3	3.87E+00
745.841	1	3	1.25E+01
746.984	5	3	3.85E+01
748.369	5	3	3.83E+00
775.965	5	5	3.08E+01
915.612	1	3	4.38E+00
915.962	3	1	1.32E+01
1083.99	1	3	2.18E+00
1085.55	5	5	9.47E-01
1085.70	5	7	3.87E+00
3408.13	3	1	2.19E-01
3437.14	3	1	2.07E+00
3593.60	3	5	1.21E-01
3609.10	3	3	1.41E-01
3615.86	3	1	1.53E-01
3829.80	3	5	2.42E-01
3838.37	5	5	6.98E-01
3842.19	1	3	3.06E-01
3847.40	3	3	2.22E-01
3855.10	3	1	8.82E-01
3856.06	5	3	3.71E-01
3919.00	3	3	6.76E-01
3955.85	3	5	1.31E-01
3995.00	3	5	1.35E+00
4114.33	3	3	1.42E-03
4124.08	3	5	3.20E-01
4133.67	5	5	5.30E-01
4145.77	7	5	7.36E-01
4374.99	3	5	5.55E-03
4447.03	3	5	1.14E+00
4459.94	3	1	1.12E-01
4465.53	3	3	2.36E-02
4477.68	5	3	8.85E-02
4488.09	5	5	1.30E-02
4507.56	7	5	1.00E-01
4564.76	3	5	1.41E-02
4601.48	3	5	2.35E-01
4607.15	1	3	3.26E-01
4613.87	3	3	2.26E-01
4621.39	3	1	9.55E-01
4630.54	5	5	7.72E-01
4643.09	5	3	4.51E-01
4654.53	3	5	2.43E-02
4667.21	3	3	2.99E-02
4674.91	3	1	1.05E-01
4694.27	1	3	1.23E-01
4695.90	3	5	1.29E-01
4697.64	3	3	3.06E-02
4698.55	3	1	3.67E-01
4700.03	5	7	1.05E-01
4702.50	5	5	9.15E-02
4704.25	5	3	2.13E-01
4706.40	7	9	6.09E-02
4709.58	7	7	1.82E-01
4712.07	7	5	1.46E-01
4718.38	9	9	3.02E-01
4721.58	9	7	7.75E-02
4774.24	3	5	3.24E-02
4779.72	3	3	2.52E-01
4781.19	5	7	2.05E-02
4788.14	5	5	2.52E-01
4793.65	5	3	7.77E-02
4803.29	7	7	3.18E-01
4810.30	7	5	4.75E-02
4860.17	3	5	1.61E-02
4987.38	3	1	7.48E-01
4991.24	3	5	3.54E-01

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
4994.36	5	7	2.62E-01
4994.37	3	3	7.60E-01
4997.22	3	3	1.96E-01
5001.13	3	5	9.76E-01
5001.47	5	7	1.05E+00
5002.70	1	3	8.45E-02
5005.15	7	9	1.16E+00
5005.30	5	5	6.51E-02
5007.33	3	5	7.89E-01
5010.62	3	3	2.19E-01
5011.31	5	3	5.84E-01
5012.04	7	7	5.19E-01
5016.38	5	5	1.62E-01
5023.05	7	5	3.61E-01
5025.66	7	7	1.07E-01
5040.71	7	5	3.78E-03
5045.10	5	3	3.42E-01
5073.59	3	3	2.59E-02
5168.05	3	5	3.06E-01
5170.16	3	3	6.54E-01
5171.27	3	1	8.71E-01
5171.47	5	7	5.81E-01
5172.34	3	5	6.01E-01
5172.97	1	3	5.01E-01
5173.39	5	7	7.36E-01
5174.46	5	5	5.07E-01
5175.89	7	9	8.93E-01
5176.57	5	3	2.17E-01
5177.06	3	3	5.00E-01
5179.34	7	9	8.67E-01
5179.52	9	11	1.07E+00
5180.36	5	5	4.28E-01
5183.20	7	7	2.88E-01
5184.96	7	7	3.20E-01
5185.09	5	3	7.11E-02
5186.21	7	5	5.76E-02
5190.38	9	9	1.77E-01
5191.96	7	5	4.25E-02
5199.50	9	7	1.51E-02
5313.42	3	3	1.41E-01
5320.20	5	3	4.20E-01
5320.96	3	5	2.52E-01
5327.76	5	5	4.65E-02
5338.73	5	7	1.85E-01
5340.21	7	5	2.59E-01
5351.23	7	7	3.67E-01
5383.72	3	5	3.31E-03
5452.07	1	3	8.89E-02
5454.22	3	1	3.34E-01
5462.58	3	3	1.00E-01
5478.09	3	5	4.75E-02
5480.05	5	3	1.30E-01
5495.65	5	5	2.40E-01
5526.23	3	5	2.13E-01
5530.24	5	7	4.04E-01
5535.35	7	9	6.04E-01
5535.38	3	3	4.53E-01
5540.06	3	1	6.03E-01
5543.47	5	5	3.51E-01
5551.92	7	7	2.00E-01
5552.68	5	3	1.50E-01
5565.26	7	5	3.97E-02
5666.63	3	5	3.74E-01
5676.02	1	3	2.96E-01
5679.56	5	7	5.25E-01
5686.21	3	3	1.94E-01
5710.77	5	5	1.24E-01
5730.66	5	3	1.34E-02
5747.30	3	5	3.40E-02
5767.45	3	3	2.44E-02
5893.15	5	7	2.88E-01
5897.25	3	5	2.16E-01
5899.83	1	3	1.60E-01
5927.81	1	3	3.22E-01
5931.78	3	5	4.27E-01
5940.24	3	3	2.26E-01
5941.65	5	7	5.54E-01
5952.39	5	5	1.27E-01
5960.91	5	3	1.34E-02
6065.00	3	5	2.21E-03
6284.32	5	3	7.74E-02
6379.62	3	3	6.11E-02
6482.05	3	3	3.01E-01
6610.56	5	7	6.34E-01
6857.03	5	3	2.53E-01
6869.58	5	5	2.51E-01
6887.83	5	7	2.49E-01
7762.24	5	5	8.74E-02
8438.74	1	3	2.24E-01
8831.75	1	3	8.42E-03
8855.30	3	3	2.51E-02
8893.29	5	3	4.12E-02
N III			
374.198	2	4	9.89E+01
451.871	2	2	1.03E+01
452.227	4	2	2.05E+01
684.998	2	4	9.63E+00
685.515	2	2	3.83E+01
685.817	4	4	4.54E+01
686.336	4	2	1.95E+01
763.334	2	2	9.58E+00
764.351	4	2	1.85E+01
771.545	2	4	8.19E+00
771.901	4	4	1.64E+01
772.384	6	4	2.45E+01
772.889	6	4	2.09E+01
772.955	4	2	2.34E+01
979.832	4	4	8.84E+00
979.905	6	6	9.21E+00
989.799	2	4	4.18E+00
991.511	4	4	8.17E-01
991.577	4	6	4.97E+00
1747.85	2	4	1.28E+00
1751.22	4	4	2.48E-01
1751.66	4	6	1.51E+00
2972.55	2	2	6.67E-01
2977.33	4	2	3.32E-01
2978.84	2	4	1.66E-01
2983.64	4	4	8.24E-01
3342.76	2	2	3.80E-01
3353.98	2	4	7.66E-01
3354.32	4	6	5.51E-01
3355.46	4	2	7.51E-01
3358.78	2	2	3.05E-01
3360.98	4	4	2.44E-01
3365.80	4	2	1.52E+00
3367.36	6	6	1.27E+00
3374.07	6	4	8.13E-01
3745.95	2	4	1.90E-01
3752.63	2	2	6.67E-02
3754.69	4	4	3.78E-01
3762.60	4	4	4.24E-02
3771.03	6	4	5.59E-01
3771.36	6	4	8.28E-02
3792.97	8	6	1.03E-01
3934.50	2	4	7.49E-01
3938.51	4	6	8.96E-01
3942.88	4	4	1.49E-01
4097.36	2	4	8.70E-01
4103.39	2	2	8.67E-01
4195.74	2	4	9.37E-01
4200.07	4	6	1.12E+00
4215.77	4	4	1.85E-01
4318.78	2	4	5.40E-02
4321.22	2	2	1.08E-01
4321.39	4	6	5.03E-02
4325.43	4	4	8.60E-02
4327.69	6	8	3.06E-02
4327.88	4	2	1.07E-01
4332.95	6	6	1.23E-01
4337.01	6	4	7.47E-02
4345.81	8	8	1.82E-01
4351.11	8	6	4.01E-02
4510.88	2	4	2.84E-01
4510.96	4	6	4.77E-01
4514.85	6	8	6.80E-01
4518.14	2	2	5.65E-01
4523.56	4	4	3.61E-01
4530.86	4	2	1.12E-01
4534.58	6	6	2.01E-01
4547.30	6	4	3.33E-02
4634.13	2	4	6.36E-01
4640.64	4	6	7.60E-01
4641.85	4	4	1.26E-01
4858.70	2	4	4.35E-01
4858.98	4	6	4.66E-01
4861.27	6	8	5.32E-01
4867.12	4	4	1.73E-01
4867.17	8	10	6.18E-01
4873.60	6	6	1.50E-01
4881.78	6	4	1.22E-02
4884.14	8	8	8.71E-02
4896.58	8	6	5.86E-03
5260.86	2	2	2.80E-02
5270.57	2	4	6.95E-02
5272.68	4	2	1.39E-01

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
5282.43	4	4	2.21E-02
5297.75	4	6	4.93E-02
5298.95	6	4	7.38E-02
5314.36	6	6	1.14E-01
5320.87	6	8	5.68E-01
5327.19	4	6	5.29E-01
5352.46	6	6	3.72E-02
6365.84	2	2	2.18E-01
6394.75	2	4	2.15E-01
6445.34	2	4	8.89E-02
6450.79	2	2	1.77E-01
6454.08	4	6	1.49E-01
6463.09	4	4	1.13E-01
6467.02	6	8	2.11E-01
6468.57	4	2	3.52E-02
6478.76	6	6	6.31E-02
6487.84	6	4	1.05E-02
7371.51	4	4	3.53E-02
7404.54	6	6	3.61E-02
8307.51	2	4	1.65E-02
8344.95	2	2	6.52E-02
8386.39	4	4	8.03E-02
8424.56	4	2	3.17E-02
N IV			
247.205	1	3	1.19E+02
*283.52	9	15	3.05E+02
*322.64	9	3	8.99E+01
335.047	3	5	1.845E+02
387.356	3	1	2.55E+01
765.147	1	3	2.320E+01
*923.16	9	9	1.759E+01
955.334	3	1	2.919E+01
1718.55	3	5	2.321E+00
2649.88	3	3	1.07E+00
3052.20	1	3	1.33E-01
3059.60	3	3	3.95E-01
3075.19	5	3	6.48E-01
3443.61	3	5	3.46E-01
3445.22	1	3	4.60E-01
3454.65	3	3	3.42E-01
3461.36	3	1	1.36E+00
3463.36	5	5	1.02E+00
3474.53	5	3	5.61E-01
3478.72	3	5	1.06E+00
*3480.8	3	9	1.06E+00
3483.00	3	3	1.06E+00
3484.93	3	1	1.06E+00
3689.94	3	1	9.10E-02
3694.14	3	3	2.27E-02
3707.39	5	3	6.73E-02
3714.43	5	5	1.34E-02
3735.43	7	5	7.37E-02
3747.54	3	5	9.92E-01
4057.76	3	5	6.62E-01
4740.26	3	5	1.53E-02
4747.96	3	3	7.60E-02
4752.49	5	7	1.13E-02
4762.09	5	5	6.99E-02
4769.86	5	3	2.50E-02
4786.92	7	7	8.79E-02
4796.66	7	5	1.53E-02
5200.41	3	5	2.67E-01
5204.28	5	7	3.55E-01
5205.15	1	3	1.97E-01
5226.70	3	3	1.46E-01
5245.60	5	5	8.66E-02
5272.35	5	3	9.48E-03
5288.25	5	3	3.22E-02
5736.93	3	5	1.84E-01
5776.31	1	3	1.85E-02
5784.76	3	1	5.51E-02
5795.09	3	3	1.37E-02
5812.31	3	5	1.36E-02
5826.43	5	3	2.25E-02
5843.84	5	5	4.01E-02
6380.75	1	3	1.42E-01
7103.24	1	3	6.28E-02
7109.35	3	5	8.46E-02
7111.28	3	3	4.70E-02
*7116.8	9	15	1.12E-01
7122.98	5	7	1.12E-01
7127.25	5	5	2.80E-02
7127.25	5	3	3.11E-03
9165.07	3	5	4.23E-02
9182.16	5	7	4.45E-02
9222.99	7	9	4.95E-02
9247.04	5	5	7.66E-03
9311.55	7	7	5.36E-03
N V			
*209.29	2	6	1.21E+02
*247.66	6	10	4.26E+02
1238.82	2	4	3.40E+00
1242.80	2	2	3.37E+00
4603.74	2	4	4.14E-01
4619.97	2	2	4.10E-01
N VI			
24.8980	1	3	5.158E+03
28.7870	1	3	1.809E+04
*161.220	3	9	2.859E+02
173.275	1	3	2.697E+02
*173.93	9	15	8.756E+02
185.192	3	5	8.205E+02
*1901	3	9	6.780E-01
2896.4	1	3	2.079E-01
*6991.1	3	9	8.384E-02
9622.0	1	3	3.276E-02
Oxygen			
O I			
791.973	5	5	4.94E+00
792.938	1	3	2.19E+00
792.967	3	5	1.64E+00
877.798	5	3	2.85E+00
877.879	5	5	5.12E+00
922.008	5	7	1.23E+00
935.193	5	5	1.33E+00
1028.16	1	3	4.22E-01
1152.15	5	5	5.28E+00
1217.65	1	3	2.06E+00
1302.17	5	3	3.41E+00
1304.86	3	3	2.03E+00
1306.03	1	3	6.76E-01
3823.41	7	7	6.63E-03
3823.87	5	3	1.87E-03
3824.35	5	5	5.19E-03
3825.02	3	3	5.59E-03
3825.19	5	7	8.31E-04
3855.01	5	5	1.63E-02
3947.29	5	7	4.91E-03
3947.48	5	5	4.88E-03
3947.59	5	3	4.87E-03
3951.93	3	1	3.10E-03
3952.98	5	3	1.29E-03
3953.00	1	3	1.03E-03
3954.52	3	5	7.73E-04
3954.61	5	5	2.32E-03
3997.95	5	3	2.41E-02
4217.09	3	1	5.44E-03
4222.77	5	3	2.26E-03
4222.82	1	3	1.81E-03
4233.27	5	5	4.04E-03
4368.19	3	1	7.56E-03
4368.24	3	5	7.59E-03
4967.38	3	5	4.43E-03
4967.88	5	7	8.44E-03
4968.79	7	9	1.27E-02
5019.29	5	5	7.13E-03
5020.22	7	5	9.98E-03
5329.11	3	5	9.48E-03
5329.69	5	7	1.81E-02
5330.74	7	9	2.71E-02
5435.18	3	5	7.74E-03
5435.77	5	5	1.29E-02
5436.86	7	5	1.80E-02
5512.60	3	5	2.69E-03
5512.77	5	7	3.58E-03
5554.83	3	3	5.83E-03
5555.00	5	3	9.71E-03
5958.39	3	5	6.80E-03
5958.58	5	7	9.06E-03
6046.23	3	3	1.05E-02
6046.44	5	3	1.75E-02
6046.49	1	3	3.50E-03
6155.99	3	5	2.67E-02
6156.78	5	7	5.08E-02
6158.19	7	9	7.62E-02
6324.84	7	5	3.76E-05
6453.60	3	5	1.65E-02
6454.44	5	5	2.75E-02
6455.98	7	5	3.85E-02
6726.28	5	5	1.18E-05
6726.54	5	3	6.44E-06
7001.92	3	5	2.65E-02
7002.23	5	7	3.53E-02

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
7254.15	3	3	2.24E-02
7254.45	5	3	3.73E-02
7254.53	1	3	7.45E-03
7771.94	5	7	3.69E-01
7774.17	5	5	3.69E-01
7775.39	5	3	3.69E-01
7981.94	3	3	2.33E-04
7982.40	1	3	3.09E-04
7986.98	3	5	4.19E-04
7987.33	5	5	1.41E-04
7995.07	5	7	5.63E-04
8221.82	7	7	2.89E-01
8227.65	5	3	8.13E-02
8230.00	5	5	2.26E-01
8233.00	3	3	2.43E-01
8235.35	3	5	4.86E-02
8446.25	3	1	3.22E-01
8446.36	3	5	3.22E-01
8446.76	3	3	3.22E-01
8820.42	5	7	2.93E-01
9260.81	3	1	4.46E-01
9260.85	3	3	3.34E-01
9260.94	3	5	1.56E-01
9262.58	5	3	1.11E-01
9262.67	5	5	2.60E-01
9262.78	5	7	2.97E-01
9265.83	7	5	2.97E-02
9265.93	7	7	1.48E-01
9266.01	7	9	4.45E-01
9482.89	5	3	2.34E-01
9622.11	5	3	5.22E-04
9622.16	3	3	1.57E-03
9625.26	7	5	3.25E-04
9625.30	7	7	1.85E-03
9694.66	5	7	4.54E-04
9694.91	5	5	4.54E-04
9695.06	5	3	4.54E-04
O II			
429.918	4	2	4.25E+01
430.041	4	4	4.13E+01
430.176	4	6	4.36E+01
483.760	4	2	2.05E+01
483.980	6	4	1.80E+01
484.027	4	4	3.22E+00
485.087	6	8	2.60E+01
485.470	6	6	1.20E+00
485.518	4	6	1.93E+01
2290.85	2	4	7.41E-02
2293.30	2	2	3.25E-01
2300.33	4	4	4.17E-01
2302.81	4	2	1.67E-01
2365.14	4	2	1.52E-01
2375.72	6	4	1.35E-01
2406.38	6	4	1.85E-01
2407.48	4	4	2.25E-01
2411.60	4	2	2.05E-01
2411.64	2	2	1.10E-01
2415.13	4	2	2.20E-01
2418.46	6	6	2.30E-01
2425.57	6	6	1.77E-01
2433.54	2	4	4.21E-01
2436.06	4	4	1.69E-01
2444.25	4	4	7.56E-02
2445.53	4	6	4.98E-01
2517.96	4	6	7.72E-02
2523.21	2	2	9.63E-02
2526.87	4	4	1.20E-01
2530.28	6	8	8.16E-02
2571.46	2	4	1.15E-01
2575.28	4	6	1.37E-01
3134.73	8	6	1.23E+00
3273.43	8	6	9.99E-01
3377.15	2	2	1.27E+00
3390.21	2	4	1.22E+00
3407.28	6	6	1.02E+00
3712.74	2	4	2.84E-01
3727.32	4	4	5.81E-01
3749.48	6	4	9.31E-01
3833.07	6	8	1.02E-02
3842.81	2	4	7.45E-02
3843.58	4	6	3.55E-02
3847.89	2	2	1.95E-01
3850.80	4	6	6.00E-03
3851.03	4	4	1.59E-01
3851.47	8	8	2.72E-02
3856.13	4	2	2.28E-01
3857.16	6	6	6.59E-02
3863.50	6	8	6.49E-02
3864.13	2	2	9.12E-02
3864.43	6	6	2.15E-01
3864.67	6	4	1.80E-01
3874.09	2	4	3.26E-02
3875.80	8	6	3.38E-02
3882.19	8	8	5.50E-01
3882.45	4	4	8.94E-02
3883.14	8	6	1.13E-01
3893.52	4	6	1.89E-02
3907.45	6	6	8.64E-02
3911.96	6	4	1.09E+00
3912.12	4	4	1.41E-01
3919.27	4	2	1.22E+00
3945.04	2	4	2.05E-01
3954.36	2	2	8.57E-01
3973.26	4	4	1.04E+00
3982.71	4	2	4.27E-01
4069.62	2	4	1.52E+00
4069.88	4	6	1.53E+00
4072.15	6	8	1.98E+00
4075.86	8	10	2.11E+00
4078.84	4	4	5.52E-01
4084.65	6	8	7.28E-02
4085.11	6	6	4.55E-01
4092.93	8	8	2.65E-01
4094.14	6	4	4.70E-02
4096.53	4	6	1.73E-01
4097.22	2	4	3.62E-01
4103.00	2	2	5.09E-01
4104.72	4	6	3.14E-01
4104.99	4	4	9.14E-01
4106.02	8	6	1.70E-02
4109.84	6	6	1.21E-02
4110.19	6	4	2.54E-01
4110.79	4	2	7.70E-01
4112.02	6	6	1.81E-01
4113.83	8	6	2.41E-01
4119.22	6	8	1.33E+00
4120.28	6	6	2.15E-01
4120.55	6	4	2.60E-01
4121.46	2	2	5.60E-01
4129.32	4	2	1.79E-01
4132.80	2	4	9.13E-01
4140.70	4	4	4.09E-02
4153.30	4	6	7.91E-01
4156.53	6	4	2.11E-01
4169.22	6	6	2.71E-01
4185.44	6	8	1.91E+00
4189.58	8	8	7.06E-02
4189.79	8	10	1.98E+00
4192.51	6	4	3.21E-01
4196.27	4	4	3.56E-02
4196.70	4	2	3.56E-01
4317.14	2	4	3.70E-01
4319.63	4	6	2.55E-01
4319.87	2	2	5.62E-01
4325.76	2	2	1.47E-01
4327.46	6	6	6.76E-01
4327.85	6	4	7.24E-02
4328.59	4	2	1.12E+00
4331.47	4	6	4.82E-02
4331.86	4	4	6.50E-01
4336.86	4	4	1.57E-01
4345.56	4	2	8.31E-01
4347.22	6	4	1.19E-01
4347.41	4	4	9.32E-01
4349.43	6	6	6.91E-01
4351.26	6	6	9.89E-01
4351.46	4	6	5.82E-02
4359.40	4	6	1.44E-02
4366.89	6	4	3.98E-01
4369.27	4	4	3.57E-01
4395.93	6	6	3.91E-01
4405.98	6	4	4.30E-02
4414.90	4	6	8.34E-01
4416.97	2	4	7.13E-01
4443.01	6	6	5.05E-01
4443.52	6	8	1.89E-02
4447.68	8	6	2.52E-02
4448.19	8	8	5.10E-01
4452.38	4	4	1.37E-01
4466.24	2	4	9.00E-01
4467.46	2	2	9.00E-01
4563.18	4	4	7.18E-03
4590.97	6	8	8.85E-01
4595.96	6	6	4.87E-02
4596.18	4	6	8.34E-01
4638.86	2	4	3.71E-01

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
4641.81	4	6	5.96E-01
4649.13	6	8	7.81E-01
4650.84	2	2	6.86E-01
4661.63	4	4	4.10E-01
4673.73	4	2	1.35E-01
4676.23	6	6	2.05E-01
4690.89	2	4	1.86E-01
4691.42	2	2	7.43E-01
4696.35	6	4	3.25E-02
4698.44	6	6	6.59E-02
4699.01	6	8	9.88E-01
4699.22	4	6	9.36E-01
4701.18	4	4	9.23E-01
4701.71	4	2	3.69E-01
4703.16	4	6	9.20E-01
4705.35	6	8	1.10E+00
4710.01	4	6	2.98E-01
4741.70	6	6	4.71E-02
4751.28	6	8	6.39E-02
4752.69	6	6	1.45E-02
4844.92	4	6	1.02E-02
4856.39	4	6	5.58E-02
4856.76	4	4	1.00E-01
4860.97	2	4	4.70E-01
4864.88	4	2	8.07E-02
4871.52	4	6	5.60E-01
4872.02	4	4	9.34E-02
4890.86	4	2	4.80E-01
4906.83	4	4	4.54E-01
4924.53	4	6	5.43E-01
4941.07	2	4	5.87E-01
4943.01	4	6	7.78E-01
4955.71	4	4	1.82E-01
5159.94	2	2	3.29E-01
5175.90	4	2	1.49E-01
5190.50	2	4	1.26E-01
5206.65	4	4	3.58E-01
5583.22	2	4	2.17E-02
5611.07	2	2	2.14E-02
6627.37	4	4	1.73E-01
6641.03	2	2	9.88E-02
6666.66	4	2	6.78E-02
6677.87	2	4	3.37E-02
6717.75	2	2	1.33E-01
6721.39	4	2	1.81E-01
6810.48	6	8	1.64E-03
6844.10	4	6	2.97E-03
6846.80	8	8	3.17E-02
6869.48	6	6	5.35E-02
6884.88	4	4	6.12E-02
6895.10	10	8	2.72E-01
6906.44	8	6	2.48E-01
6907.87	4	2	3.03E-01
6910.56	6	4	2.43E-01
O III			
263.694	1	3	3.32E+01
263.727	3	5	4.48E+01
263.773	3	3	2.49E+01
263.817	5	7	5.97E+01
263.861	5	5	1.49E+01
277.386	5	7	9.43E+01
279.788	5	5	4.25E+01
295.942	1	3	5.56E+01
303.413	1	3	4.29E+01
303.461	3	1	1.29E+02
303.517	3	3	3.21E+01
303.622	3	5	3.21E+01
303.695	5	3	5.34E+01
303.800	5	5	9.61E+01
305.596	1	3	1.20E+02
305.656	3	5	1.62E+02
305.702	3	3	9.01E+01
305.767	5	7	2.16E+02
305.836	5	5	5.40E+01
320.978	5	7	2.17E+02
328.448	5	5	1.04E+02
345.312	1	3	1.35E+02
374.073	5	5	2.85E+01
395.557	5	3	2.80E+01
507.388	1	3	1.61E+01
507.680	3	3	4.82E+01
508.178	5	3	8.04E+01
525.794	5	3	9.60E+01
597.814	1	3	1.49E+01
599.590	5	5	5.41E+01
702.337	1	3	6.06E+00
702.838	3	1	1.83E+01
832.929	1	3	3.41E+00
835.092	5	5	1.44E+00
835.289	5	7	5.99E+00
1679.03	3	5	6.57E-01
1686.73	3	3	6.48E-01
1760.41	3	5	8.38E-01
1764.46	5	5	2.50E+00
1766.63	1	3	1.11E+00
1772.28	3	1	3.29E+00
1772.97	5	3	1.37E+00
2390.43	3	3	1.62E+00
2454.97	3	1	3.43E+00
2665.68	3	5	6.75E-01
2674.58	5	5	1.11E+00
2683.66	3	1	1.85E+00
2686.15	7	5	1.54E+00
2687.55	3	3	1.84E+00
2695.48	3	5	1.82E+00
2794.14	3	1	1.82E-01
2798.93	3	3	4.52E-02
2809.66	5	3	1.34E-01
2818.70	5	5	2.66E-02
2836.31	7	5	1.46E-01
2959.69	3	5	1.83E+00
2983.78	3	5	2.15E+00
2992.08	3	5	9.32E-02
2996.48	3	3	4.64E-01
2997.69	5	7	6.88E-02
3004.34	5	5	4.27E-01
3008.78	5	3	1.53E-01
3017.62	7	7	5.38E-01
3023.43	3	5	4.79E-01
3024.36	7	5	9.39E-02
3024.54	1	3	6.16E-01
3035.41	3	3	4.59E-01
3042.07	3	1	1.94E+00
3047.10	5	5	1.49E+00
3059.28	5	3	8.72E-01
3064.98	1	3	2.17E-01
3068.13	3	1	6.49E-01
3068.26	3	3	5.41E-02
3068.67	3	5	2.27E-01
3074.14	5	7	1.84E-01
3074.72	5	3	3.76E-01
3075.13	5	5	1.61E-01
3075.95	7	9	1.07E-01
3083.65	7	7	3.20E-01
3084.64	7	5	2.55E-01
3088.04	9	9	5.30E-01
3095.79	9	7	1.35E-01
3115.67	3	1	1.39E+00
3121.63	3	3	1.38E+00
3132.79	3	5	1.37E+00
3198.18	3	5	9.57E-02
3201.14	3	3	4.77E-01
3202.51	5	7	7.08E-02
3207.61	5	5	4.40E-01
3210.58	5	3	1.58E-01
3216.07	7	7	5.58E-01
3221.21	7	5	9.75E-02
3260.86	5	7	1.68E+00
3265.33	7	9	1.88E+00
3267.20	3	5	1.58E+00
3281.83	5	5	2.89E-01
3284.45	7	7	2.06E-01
3299.39	1	3	1.64E-01
3312.33	3	3	4.60E-01
3326.06	3	3	2.65E-01
3330.30	3	5	6.81E-01
3330.32	3	5	4.76E-01
3332.41	5	3	7.92E-01
3332.93	5	7	5.04E-01
3336.67	3	3	3.76E-01
3336.69	5	5	8.77E-02
3340.76	5	3	6.57E-01
3344.20	5	5	1.25E-01
3344.51	5	7	3.48E-01
3347.98	7	5	4.86E-01
3350.62	5	3	1.12E+00
3350.92	7	7	9.91E-01
3355.86	7	7	6.89E-01
3362.31	7	5	6.87E-01
3376.61	3	1	1.49E+00
3376.76	3	3	1.12E+00
3377.26	3	5	5.20E-01
3382.61	5	7	9.86E-01
3383.31	5	3	3.70E-01
3383.81	5	5	8.62E-01
3384.90	7	9	1.48E+00

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
3394.22	7	7	4.88E-01
3395.43	7	5	9.75E-02
3406.88	1	3	1.93E-01
3408.13	3	1	5.79E-01
3415.26	3	3	1.44E-01
3428.63	3	5	1.42E-01
3430.57	5	3	2.37E-01
3444.05	5	5	4.21E-01
3446.68	3	5	9.71E-01
3447.15	1	3	8.09E-01
3447.97	5	7	1.19E+00
3450.91	7	9	1.44E+00
3451.30	3	3	8.06E-01
3454.84	5	5	6.89E-01
3454.99	9	11	1.72E+00
3459.48	5	3	1.14E-01
3459.94	7	7	5.14E-01
3466.13	9	9	2.84E-01
3466.85	7	5	6.82E-02
3475.24	9	7	2.42E-02
3520.94	1	3	1.50E-01
3531.22	3	1	4.45E-01
3533.38	3	3	1.11E-01
3534.90	3	5	1.11E-01
3555.24	5	3	1.82E-01
3556.78	5	5	3.26E-01
3695.38	3	5	4.01E-01
3698.72	5	7	7.62E-01
3703.36	7	9	1.14E+00
3704.75	3	3	8.53E-01
3707.27	3	5	7.34E-01
3709.54	3	1	1.13E+00
3712.49	5	5	6.59E-01
3714.03	3	3	4.06E-01
3715.09	5	7	9.73E-01
3720.89	7	7	3.74E-01
3721.95	5	3	2.80E-01
3725.31	5	5	2.41E-01
3728.51	5	7	1.29E+00
3728.84	7	9	1.45E+00
3729.80	3	5	1.22E+00
3732.13	5	3	2.67E-02
3734.83	7	5	7.40E-02
3742.63	5	5	2.24E-01
3746.90	7	7	1.59E-01
3754.70	3	5	7.53E-01
3757.23	1	3	5.56E-01
3759.88	5	7	9.79E-01
3774.03	3	3	3.91E-01
3791.28	5	5	2.24E-01
3810.98	5	3	2.37E-02
3816.75	5	3	9.63E-02
3961.57	5	7	1.25E+00
4072.64	1	3	3.37E-01
4073.98	3	5	4.54E-01
4081.02	5	7	6.02E-01
4089.30	3	3	2.49E-01
4103.07	5	5	1.48E-01
4118.60	5	3	1.63E-02
4440.09	5	3	4.42E-01
4447.69	5	5	4.40E-01
4461.61	5	7	4.36E-01
4524.22	3	1	3.38E-01
4532.78	5	3	1.40E-01
4535.29	3	3	8.40E-02
4555.39	5	5	2.49E-01
4557.91	3	5	8.27E-02
5268.30	1	3	3.50E-01
5508.24	5	5	1.06E-01
5592.25	3	3	3.27E-01
O IV			
238.360	2	4	2.96E+02
238.570	4	6	3.54E+02
238.579	4	4	5.90E+01
279.631	2	2	2.68E+01
279.933	4	2	5.34E+01
553.329	2	4	1.22E+01
554.076	2	2	4.86E+01
554.513	4	4	6.06E+01
555.263	4	2	2.41E+01
608.397	2	2	1.21E+01
609.829	4	2	2.40E+01
616.952	6	4	2.60E+01
617.005	4	4	2.89E+00
617.036	4	2	2.89E+01
624.619	2	4	1.07E+01
625.127	4	4	2.13E+01
625.853	6	4	3.19E+01
779.736	6	4	1.46E+00
779.820	4	4	1.31E+01
779.912	6	6	1.36E+01
779.997	4	6	9.70E-01
787.710	2	4	5.95E+00
790.112	4	4	1.18E+00
790.199	4	6	7.08E+00
921.296	2	4	2.21E+00
921.365	2	2	8.83E+00
923.367	4	4	1.10E+01
923.436	4	2	4.39E+00
1338.61	2	4	2.17E+00
1342.99	4	4	4.29E-01
1343.51	4	6	2.57E+00
2120.58	2	2	1.05E+00
2132.64	4	4	1.29E+00
2493.39	2	4	1.18E+00
2493.75	4	6	8.48E-01
2493.99	2	2	6.09E-01
2499.27	2	2	4.68E-01
2501.81	4	4	3.73E-01
2507.73	4	2	2.32E+00
2509.22	6	6	1.94E+00
2510.58	4	2	1.19E+00
2517.37	6	4	1.24E+00
2781.22	2	2	1.03E-01
2803.57	6	4	1.26E-01
2805.87	2	4	2.90E-01
2812.50	6	6	3.58E-02
2816.53	4	4	5.74E-01
2829.17	8	6	1.56E-01
2836.27	6	4	8.43E-01
2916.31	2	4	1.06E+00
2921.46	4	6	1.27E+00
2926.18	4	4	2.11E-01
3063.43	2	4	1.30E+00
3071.60	2	2	1.29E+00
3177.89	2	4	7.59E-02
3180.77	2	2	1.51E-01
3180.99	4	6	7.06E-02
3185.74	4	4	1.21E-01
3188.22	6	8	4.28E-02
3188.64	4	2	1.50E-01
3194.78	6	6	1.71E-01
3199.58	6	4	1.04E-01
3209.65	8	8	2.53E-01
3216.31	8	6	5.56E-02
3348.06	2	4	8.51E-01
3349.11	4	6	1.02E+00
3354.27	4	2	7.71E-01
3362.55	4	4	7.65E-01
3375.40	4	6	7.56E-01
3378.02	4	4	1.66E-01
3381.21	4	6	7.19E-01
3381.30	2	4	4.28E-01
3385.52	6	8	1.02E+00
3390.19	2	2	8.49E-01
3396.80	4	4	5.40E-01
3405.77	4	2	1.67E-01
3409.70	6	6	3.00E-01
3411.30	4	4	1.69E-01
3411.69	4	6	1.02E+00
3425.55	6	4	4.94E-02
3489.89	4	6	7.29E-01
3492.21	2	4	6.06E-01
3493.43	4	4	1.21E-01
3560.39	4	6	1.03E+00
3563.33	6	8	1.10E+00
3593.08	6	6	7.15E-02
3725.89	2	4	5.61E-01
3725.94	4	6	6.01E-01
3729.03	6	8	6.86E-01
3736.68	4	4	2.23E-01
3736.85	8	10	7.95E-01
3744.89	6	6	1.92E-01
3758.39	8	8	1.11E-01
3930.68	2	2	3.80E-02
3942.06	2	4	9.42E-02
3945.31	4	2	1.88E-01
3956.77	4	4	2.98E-02
3974.58	4	6	6.62E-02
3977.09	6	4	9.91E-02
3995.08	6	6	1.52E-01
4687.03	2	4	2.79E-01
4772.60	2	4	1.23E-01
4779.10	2	2	2.45E-01
4783.42	4	6	2.06E-01
4794.18	4	4	1.56E-01

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
4798.27	6	8	2.91E-01
4813.15	6	6	8.65E-02
5305.51	4	4	6.10E-02
5362.51	6	6	6.12E-02
6876.49	2	4	1.88E-02
6931.60	2	2	7.35E-02
7004.11	4	4	8.90E-02
7061.30	4	2	3.48E-02
O V			
172.169	1	3	2.94E+02
*192.85	9	15	6.90E+02
*215.17	9	3	1.83E+02
220.353	3	5	4.292E+02
248.460	3	1	5.59E+01
629.732	1	3	2.872E+01
758.677	3	5	5.547E+00
759.442	1	3	7.373E+00
760.227	3	3	5.514E+00
760.446	5	5	1.652E+01
761.128	3	1	2.197E+01
762.004	5	3	9.125E+00
774.518	3	1	3.804E+01
1371.30	3	5	3.336E+00
2729.31	3	5	4.52E-01
2731.45	1	3	5.90E-01
2743.61	3	3	4.38E-01
2752.23	3	1	1.82E+00
2755.13	5	5	1.37E+00
2769.69	5	3	7.88E-01
2781.01	3	5	1.40E+00
*2784.0	3	9	1.40E+00
2786.99	3	3	1.39E+00
2789.85	3	1	1.38E+00
3058.68	3	5	1.39E+00
3144.66	3	5	8.86E-01
3219.24	3	1	1.54E-01
3222.29	1	3	1.16E-01
3227.54	3	3	3.38E-02
3239.21	3	3	3.28E-01
3248.28	5	3	1.18E-01
3263.54	5	5	1.86E-02
3275.64	5	3	4.76E-01
3297.62	7	5	1.30E-01
3690.17	3	5	1.97E-02
3698.36	3	3	1.03E-01
3702.72	5	7	1.41E-02
3717.31	5	5	9.63E-02
3725.63	5	3	2.91E-02
3746.64	7	7	1.18E-01
3761.58	7	5	1.61E-02
4119.37	3	5	3.66E-01
4120.49	3	1	3.33E-01
4123.96	5	7	4.81E-01
4125.49	1	3	2.70E-01
4134.11	3	3	3.34E-01
4153.27	3	3	1.92E-01
4158.86	3	5	3.39E-01
4178.46	5	5	1.12E-01
4213.35	5	3	1.19E-02
4522.66	5	3	1.02E-02
4554.53	3	5	2.41E-01
5114.06	1	3	1.80E-01
5339.94	1	3	1.85E-02
5349.74	3	1	7.04E-02
5372.71	3	3	1.42E-02
5414.59	3	5	9.29E-03
5428.38	5	3	2.68E-02
5471.12	5	5	4.86E-02
5571.81	1	3	8.33E-02
5580.12	3	5	1.11E-01
5583.23	3	3	6.20E-02
*5589.9	9	15	1.49E-01
5597.89	5	7	1.48E-01
5604.27	5	5	3.68E-02
5607.41	5	3	4.08E-03
6330.05	5	7	1.21E-01
6460.12	3	5	9.37E-02
6466.14	5	7	1.01E-01
6500.24	7	9	1.11E-01
6543.77	5	5	1.64E-02
6601.28	7	7	1.14E-02
6764.72	1	3	4.37E-02
6789.62	3	5	5.79E-02
6817.40	3	3	3.00E-02
6828.95	5	7	7.35E-02
6878.76	5	5	1.65E-02
O VI			
*150.10	2	6	2.62E+02
*173.03	6	10	8.78E+02
1031.91	2	4	4.16E+00
1037.61	2	2	4.09E+00
3811.35	2	4	5.14E-01
3834.24	2	2	5.05E-01
O VII			
18.6270	1	3	9.365E+03
21.6020	1	3	3.309E+04
*120.33	3	9	5.334E+02
128.411	1	3	8.982E+02
*128.46	9	15	1.615E+03
135.820	3	5	1.523E+03
*1630.3	3	9	7.935E-01
2448.98	1	3	2.514E-01
*5933.1	3	9	1.002E-01
8241.76	1	3	3.864E-02
Phosphorus			
P I			
1671.7	4	2	3.9E-01
1674.6	4	4	4.0E-01
1679.7	4	6	3.9E-01
1775.0	4	6	2.17E+00
1782.9	4	4	2.14E+00
1787.7	4	2	2.13E+00
2135.5	4	4	2.11E-01
2136.2	6	4	2.83E+00
2149.1	4	2	3.18E+00
2152.9	2	4	4.85E-01
2154.1	4	4	1.73E-01
2154.1	4	6	5.8E-01
2534.0	2	4	2.00E-01
2535.6	4	4	9.5E-01
2553.3	2	2	7.1E-01
2554.9	4	2	3.00E-01
P II			
1301.9	1	3	5.0E-01
1304.5	3	1	1.5E+00
1304.7	3	3	3.7E-01
1305.5	3	5	3.8E-01
1309.9	5	3	6.2E-01
1310.7	5	5	1.1E+00
4475.3	5	7	1.3E+00
4499.2	5	7	1.4E+00
4530.8	3	5	1.0E+00
4554.8	3	5	9.6E-01
4588.0	5	7	1.7E+00
4589.9	3	5	1.6E+00
4602.1	7	9	1.9E+00
4943.5	7	5	6.3E-01
5253.5	3	5	1.0E+00
5425.9	5	5	6.9E-01
6024.2	3	5	5.1E-01
6043.1	5	7	6.8E-01
P III			
1334.8	2	4	5.5E-01
1344.3	4	6	6.4E-01
1344.8	4	4	1.1E-01
4057.4	4	4	1.0E-01
4059.3	6	4	9.0E-01
4080.1	4	2	9.9E-01
Potassium			
K I			
4044.1	2	4	1.24E-02
4047.2	2	2	1.24E-02
5084.2	2	2	3.50E-03
5099.2	4	2	7.0E-03
5323.3	2	2	6.3E-03
5339.7	4	2	1.26E-02
5343.0	2	4	4.0E-03
5359.6	4	6	4.6E-03
5782.4	2	2	1.23E-02
5801.8	4	2	2.46E-02
5812.2	2	4	2.8E-03
5831.9	4	6	3.2E-03
6911.1	2	2	2.72E-02
6938.8	4	2	5.4E-02
7664.9	2	4	3.87E-01
7699.0	2	2	3.82E-01
K II			
607.93	1	3	1.3E-02

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
K III			
2550.0	6	4	2.0E+00
2635.1	4	4	1.2E+00
2992.4	6	8	2.5E+00
3052.1	4	6	1.7E+00
3202.0	4	4	1.8E+00
3289.1	4	6	2.0E+00
3322.4	6	6	1.3E+00
3421.8	2	4	1.5E+00
K XVI			
206.27	1	3	9.4E+01
K XVII			
22.020	2	4	4.7E+04
22.163	4	6	5.6E+04
22.18	4	4	9.3E+03
22.60	2	2	2.5E+03
22.76	4	2	4.7E+03
Praseodymium			
Pr II			
3997.0	15	15	1.87E-01
4062.8	13	15	1.00E+00
4100.7	17	19	8.4E-01
4143.1	15	17	5.8E-01
4179.4	13	15	5.2E-01
4222.9	11	13	3.91E-01
4241.0	17	15	2.30E-01
4359.8	15	15	1.1E-01
4405.8	17	17	9.0E-02
4429.3	15	15	2.28E-01
4449.8	13	13	1.24E-01
4468.7	11	13	1.54E-01
4510.2	13	15	1.16E-01
4534.2	15	17	4.9E-02
4734.2	15	13	2.5E-02
4879.1	15	15	1.8E-02
4886.0	15	15	1.3E-02
4912.6	17	15	5.7E-02
5034.4	19	19	1.1E-01
5110.8	21	19	2.78E-01
5135.1	17	17	1.25E-01
5173.9	19	17	3.18E-01
5219.1	15	15	9.5E-02
5220.1	17	15	2.35E-01
5251.7	15	13	1.1E-02
5259.7	15	13	2.24E-01
5292.6	13	13	9.3E-02
5810.6	17	19	2.3E-02
5879.3	15	15	7.6E-02
6200.8	15	17	1.8E-02
6278.7	13	15	2.6E-02
6398.0	11	13	1.9E-02
Rhodium			
Rh I			
3083.96	8	6	4.8E-02
3114.91	6	4	4.45E-02
3121.76	6	6	1.1E-01
3123.70	10	8	4.6E-02
3137.71	4	6	3.3E-02
3189.05	6	6	3.03E-01
3197.13	6	4	4.35E-02
3263.14	6	6	1.3E-01
3271.61	6	4	2.0E-01
3280.55	8	8	2.36E-01
3283.57	6	8	4.4E-01
3289.14	4	4	1.0E-01
3323.09	8	10	6.3E-01
3331.09	4	2	5.40E-02
3338.54	8	6	3.5E-02
3360.80	4	4	1.2E-01
3368.38	6	4	1.1E-01
3396.82	10	10	6.5E-01
3399.70	6	8	1.2E-01
3462.04	6	6	6.2E-01
3470.66	4	4	8.5E-01
3478.91	6	6	3.32E-01
3484.04	6	8	9.3E-03
3498.73	4	6	2.12E-01
3502.52	10	10	4.3E-01
3507.32	6	8	3.4E-01
3528.02	8	8	8.5E-01
3543.95	4	4	4.65E-01
3549.54	6	6	2.22E-01
3570.18	4	6	1.82E-01
3583.10	8	10	2.6E-01
3596.19	6	4	5.5E-01
3597.15	6	8	5.9E-01
3612.47	4	2	8.90E-01
3620.46	6	4	8.5E-02
3654.87	8	8	6.0E-02
3657.99	8	6	8.8E-01
3666.22	6	8	8.4E-02
3690.70	6	4	3.23E-01
3692.36	10	8	9.1E-01
3700.91	8	10	3.9E-01
3713.02	4	4	8.3E-02
3788.47	4	6	1.4E-01
3793.22	8	6	4.2E-01
3799.31	8	8	5.5E-01
3806.76	6	6	6.2E-02
3818.19	6	4	5.8E-01
3822.26	6	6	8.5E-01
3828.48	6	6	6.2E-01
3833.89	6	4	5.8E-01
3856.52	8	10	5.9E-01
3872.39	4	6	6.7E-03
3877.34	8	6	3.7E-02
3913.51	8	8	2.5E-03
3922.19	4	2	6.25E-02
3934.23	8	8	1.58E-01
3942.72	4	2	7.15E-01
3958.86	6	8	5.5E-01
3984.40	4	4	1.1E-01
3995.61	4	6	4.7E-02
4053.44	2	2	2.8E-02
4056.34	6	4	9.5E-03
4082.78	6	4	1.4E-01
4097.52	2	4	7.0E-02
4121.68	6	6	9.8E-02
4128.87	6	8	1.73E-01
4135.27	8	8	1.0E-01
4196.50	6	8	3.9E-02
4211.14	8	10	1.62E-01
4244.44	4	4	6.5E-03
4278.60	4	6	9.2E-03
4288.71	6	8	6.1E-02
4373.04	2	4	1.8E-02
4374.80	8	10	1.64E-01
4379.92	6	6	2.48E-02
4492.47	6	6	4.5E-03
4528.72	6	8	1.35E-02
4548.73	4	6	5.5E-03
4551.64	4	4	4.00E-02
4565.19	4	4	1.1E-02
4569.00	6	8	1.0E-02
4608.12	2	2	2.1E-02
4675.03	8	8	6.4E-03
4721.00	6	4	3.43E-03
4745.11	6	6	5.2E-03
4755.58	4	4	6.0E-03
4842.43	6	8	1.6E-03
4963.71	2	2	3.0E-02
4977.75	4	4	9.8E-03
4979.18	4	6	1.0E-02
5090.63	6	6	5.0E-03
5120.69	6	8	3.1E-03
5130.76	4	4	4.35E-03
5155.54	2	4	9.8E-03
5184.19	6	8	1.6E-03
5212.73	4	2	5.95E-03
5292.14	10	10	3.7E-03
5390.44	4	6	9.5E-03
5424.72	4	4	5.0E-03
5599.42	6	8	1.3E-02
5983.60	10	10	2.1E-02
Rubidium			
Rb I			
3022.5	2	4	4.13E-05
3032.0	2	4	4.93E-05
3044.2	2	4	8.2E-05
3060.2	2	4	1.05E-04
3082.0	2	4	1.49E-04
3112.6	2	4	2.5E-04
3113.1	2	2	1.3E-04
3157.5	2	4	3.38E-04
3158.3	2	2	2.0E-04
3228.0	2	4	6.4E-04
3229.2	2	2	3.8E-04
3348.7	2	4	1.37E-03
3350.8	2	2	8.9E-04
3587.1	2	4	3.97E-03
3591.6	2	2	2.9E-03
4201.8	2	4	1.8E-02

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
4215.5	2	2	1.5E-02
7800.3	2	4	3.70E-01
7947.6	2	2	3.40E-01
Scandium			
Sc I			
2116.7	4	4	2.0E-01
2120.4	6	6	2.0E-01
2262.3	4	4	5.8E-02
2266.6	4	2	4.8E-01
2270.9	6	4	4.6E-01
2280.8	4	6	2.8E-01
2289.6	6	6	4.1E-02
2311.29	4	6	4.1E-02
2315.69	4	4	2.5E-01
2320.32	6	6	2.4E-01
2324.75	6	4	4.1E-02
2328.19	4	6	4.6E-02
2334.67	4	2	1.7E-01
2346.03	6	4	1.3E-01
2429.19	4	4	2.8E-01
2438.63	6	6	2.1E-01
2468.40	4	2	4.9E-02
2692.78	4	2	1.61E-01
2699.02	4	6	2.4E-02
2706.74	4	4	3.1E-01
2707.93	6	4	1.49E-01
2711.34	6	6	3.2E-01
2965.88	4	6	7.5E-02
2974.01	4	4	5.5E-01
2980.76	6	6	5.4E-01
2988.97	6	4	6.9E-02
3015.37	4	6	7.8E-01
3019.35	6	8	8.7E-01
3030.76	6	6	1.00E-01
3255.68	4	4	3.2E-01
3269.90	4	2	3.13E+00
3273.63	6	4	2.81E+00
3907.48	4	6	1.66E+00
3911.81	6	8	1.79E+00
3933.38	6	6	1.62E-01
3996.60	4	6	1.65E-01
4020.39	4	4	1.63E+00
4023.22	4	4	3.0E-01
4023.68	6	6	1.65E+00
4031.38	6	6	2.9E-01
4036.86	6	4	7.9E-02
4043.80	8	8	3.11E-01
4047.80	6	4	1.54E-01
4051.83	8	6	7.7E-02
4054.54	4	2	1.67E-01
4067.00	6	8	1.91E-01
4067.63	10	8	4.1E-02
4074.96	4	6	3.7E-01
4078.56	2	4	4.3E-01
4080.57	4	4	6.6E-02
4082.39	6	4	2.73E-01
4086.66	6	8	3.7E-01
4087.47	4	6	1.12E-01
4093.12	4	4	1.23E-01
4094.86	6	6	1.44E-01
4098.36	8	8	8.7E-02
4132.98	4	6	1.19E+00
4140.27	6	8	1.17E+00
4147.38	6	6	1.74E-01
4161.85	8	8	1.77E-01
4171.53	6	4	1.36E-01
4186.42	6	8	8.4E-02
4187.61	8	6	1.28E-01
4193.53	4	6	6.1E-02
4204.52	6	8	3.5E-02
4205.20	10	8	1.12E-01
4212.32	4	6	1.58E-01
4212.48	6	6	8.6E-02
4216.08	2	4	2.36E-01
4218.23	4	4	2.26E-01
4225.54	6	8	9.5E-02
4225.69	4	6	7.6E-02
4231.64	4	4	1.31E-01
4233.59	6	6	4.0E-01
4238.05	8	8	7.1E-01
4239.55	6	4	2.27E-01
4246.14	8	6	1.15E-01
4542.55	6	4	1.28E-01
4544.67	8	6	1.33E-01
4706.94	4	6	2.81E-01
4709.31	6	8	4.0E-01
4711.72	2	4	1.81E-01
4714.30	4	4	2.14E-01
4719.31	6	6	1.04E-01
4728.77	8	8	1.16E-01
4729.20	4	4	2.20E-01
4729.24	6	6	1.93E-01
4734.11	4	2	1.10E+00
4737.65	6	4	8.8E-01
4741.02	8	6	9.1E-01
4743.82	10	8	9.8E-01
4973.67	4	2	8.4E-01
4980.36	6	4	5.6E-01
4983.43	4	4	2.58E-01
4991.91	6	6	3.8E-01
4995.00	4	6	5.9E-02
5018.41	6	4	2.09E-01
5021.52	4	4	2.30E-01
5064.31	8	10	7.3E-02
5066.38	6	6	3.6E-02
5070.17	6	8	1.16E-01
5072.71	2	4	2.0E-02
5075.82	4	6	1.15E-01
5080.22	4	4	4.1E-02
5081.56	10	10	7.6E-01
5083.72	8	8	6.2E-01
5085.55	6	6	5.7E-01
5086.94	4	4	6.6E-01
5096.72	6	4	1.69E-01
5099.27	4	6	1.50E-01
5101.12	10	8	8.8E-02
5331.79	4	4	1.11E-01
5339.43	6	6	1.06E-01
5341.07	4	2	3.8E-01
5349.34	6	4	5.9E-01
5350.28	8	8	6.8E-02
5355.79	6	4	3.0E-01
5356.10	8	6	5.7E-01
5375.37	8	6	3.4E-01
5392.06	10	8	4.2E-01
5416.16	4	6	4.4E-02
5416.41	6	6	2.0E-02
5425.55	6	8	4.5E-02
5429.42	2	4	9.0E-02
5432.98	4	4	5.4E-02
5433.25	6	4	9.7E-02
5438.28	4	6	3.4E-02
5439.04	2	2	1.74E-01
5442.62	4	2	2.15E-01
5446.20	8	8	2.8E-01
5451.37	6	6	1.50E-01
5455.24	4	4	6.6E-02
5464.95	4	2	3.2E-02
5468.40	6	4	9.7E-02
5472.19	8	6	9.7E-02
5482.01	8	8	5.2E-01
5484.63	6	6	5.2E-01
5514.23	6	8	4.1E-01
5520.52	8	10	4.3E-01
5526.10	4	4	7.1E-02
5541.07	6	6	5.5E-02
5631.04	2	4	3.0E-02
5671.83	10	12	5.4E-01
5686.86	8	10	4.9E-01
5700.19	6	8	4.6E-01
5708.64	10	10	4.7E-02
5711.79	4	6	4.5E-01
5717.31	8	8	7.5E-02
5724.13	6	6	7.4E-02
5988.43	6	6	6.6E-02
6026.16	4	4	7.2E-02
6146.20	6	8	4.2E-02
6198.43	4	6	3.5E-02
6249.96	6	8	3.2E-02
6262.22	4	6	8.4E-02
6280.16	2	4	4.0E-02
6284.16	6	6	3.9E-02
6284.73	4	4	7.1E-02
6293.02	2	2	1.04E-01
7741.16	10	10	3.8E-02
7800.42	8	8	5.1E-02
Sc II			
1880.6	5	3	5.0E+00
2064.3	7	5	2.2E+00
2068.0	5	3	2.0E+00
2273.1	1	3	7.7E+00
2545.20	5	5	4.0E-01
2552.35	7	5	2.21E+00
2555.79	3	3	6.9E-01
2560.23	5	3	2.01E+00

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
2563.19	3	1	2.70E+00
2611.19	5	5	2.2E+00
2667.70	3	5	1.5E+00
2746.36	3	1	3.9E+00
2782.31	5	5	1.3E+00
2789.15	7	7	1.3E+00
2801.31	9	9	1.3E+00
2819.49	3	5	2.3E+00
2822.12	5	7	2.5E+00
2826.64	7	9	2.8E+00
2870.85	5	3	1.1E+00
2912.98	5	3	1.1E+00
2979.68	3	5	1.2E+00
2988.92	5	7	2.9E+00
3039.92	7	9	3.5E+00
3045.73	5	7	3.68E+00
3052.92	7	9	3.92E+00
3060.54	7	7	3.0E-01
3065.12	9	11	4.00E+00
3075.36	9	9	2.5E-01
3128.27	3	3	1.9E+00
3133.07	5	5	1.8E+00
3139.72	7	7	2.1E+00
3190.98	3	3	1.1E+00
3199.33	5	3	1.9E+00
3312.72	5	7	1.2E+00
3320.40	5	3	1.2E+00
3343.23	9	7	1.1E+00
3353.72	5	7	1.51E+00
3359.67	5	5	2.16E-01
3361.26	3	3	3.4E-01
3361.93	3	1	1.17E+00
3368.94	5	3	8.3E-01
3372.15	7	5	9.9E-01
3379.16	3	3	2.5E+00
3535.71	5	3	6.1E-01
3558.53	5	7	3.0E-01
3567.70	3	5	3.5E-01
3572.53	7	7	1.38E+00
3576.34	5	5	1.06E+00
3580.93	3	3	1.23E+00
3589.63	5	3	4.6E-01
3590.47	7	5	2.9E-01
3613.83	7	9	1.48E+00
3630.74	5	7	1.20E+00
3642.78	3	5	1.13E+00
3645.31	7	7	2.74E-01
3651.80	5	5	3.0E-01
3859.59	7	5	1.1E+00
4246.82	5	5	1.29E+00
4314.08	9	7	4.1E-01
4320.75	7	5	4.0E-01
4325.00	5	3	4.3E-01
4374.46	9	9	1.48E-01
4400.39	7	7	1.43E-01
4415.54	5	5	1.47E-01
4670.41	5	7	1.16E-01
5031.01	5	3	3.5E-01
5239.81	1	3	1.39E-01
5526.79	9	7	3.3E-01
5657.91	5	5	1.04E-01
5669.06	3	1	1.31E-01
Silicon			
Si I			
1977.6	1	3	1.8E-01
1979.2	3	1	5.1E-01
1980.6	3	3	1.3E-01
1983.2	3	5	1.4E-01
1986.4	5	3	2.1E-01
1989.0	5	5	4.1E-01
2208.0	1	3	3.11E-01
2210.9	3	5	4.16E-01
2211.7	3	3	2.32E-01
2216.7	5	7	5.5E-01
2218.1	5	5	1.38E-01
2506.9	3	5	4.66E-01
2514.3	1	3	6.1E-01
2516.1	5	5	1.21E+00
2519.2	3	3	4.56E-01
2524.1	3	1	1.81E+00
2528.5	5	3	7.7E-01
2532.4	1	3	2.6E-01
2631.3	1	3	9.7E-01
2881.6	5	3	1.89E+00
3905.5	1	3	1.18E-01
4738.8	3	3	1.0E-02
4783.0	5	3	1.7E-02
4792.3	5	5	1.7E-02
4818.1	5	7	1.1E-02
4821.2	3	5	8.0E-03
4947.6	3	1	4.2E-02
5006.1	3	5	2.8E-02
5622.2	3	3	1.6E-02
5690.4	3	3	1.2E-02
5708.4	5	5	1.4E-02
5754.2	5	3	1.5E-02
5772.1	3	1	3.6E-02
5948.5	3	5	2.2E-02
7226.2	3	5	7.9E-03
7405.8	3	5	3.7E-02
7409.1	5	7	2.3E-02
7680.3	3	5	4.6E-02
7918.4	3	5	5.2E-02
7932.3	5	7	5.1E-02
7944.0	7	9	5.8E-02
7970.3	5	5	7.1E-03
Si II			
989.87	2	4	6.7E+00
992.68	4	6	8.0E+00
1020.7	2	2	1.3E+00
1190.4	2	4	6.9E+00
1193.3	2	2	2.8E+01
1194.5	4	4	3.6E+01
1197.4	4	2	1.4E+01
1248.4	4	4	1.3E+01
1251.2	6	4	1.9E+01
1260.4	2	4	2.0E+01
1264.7	4	6	2.3E+01
1304.4	2	2	3.6E+00
1309.3	4	2	7.0E+00
1526.7	2	2	3.73E+00
1533.5	4	2	7.4E+00
1808.0	2	4	3.7E-02
2904.3	4	6	6.7E-01
2905.7	6	8	7.1E-01
3210.0	4	6	4.6E-01
4128.1	4	6	1.32E+00
4130.9	6	8	1.42E+00
5041.0	2	4	9.8E-01
5056.0	4	6	1.2E+00
5957.6	2	2	4.2E-01
5978.9	4	2	8.1E-01
6347.1	2	4	7.0E-01
6371.4	2	2	6.9E-01
7848.8	4	6	3.9E-01
7849.7	6	8	4.2E-01
Si III			
883.40	5	7	6.3E+01
994.79	3	3	7.89E+00
997.39	5	3	1.31E+01
1141.6	3	5	3.0E+01
1144.3	5	7	3.9E+01
1161.6	5	5	1.6E+01
1206.5	1	3	2.59E+01
1206.5	3	5	4.89E+01
1207.5	5	5	1.9E+01
1294.5	3	5	5.42E+00
1296.7	1	3	7.19E+00
1298.9	3	3	5.36E+00
1299.0	5	5	1.61E+01
1301.2	3	1	2.13E+01
1303.3	5	3	8.85E+00
1328.8	1	3	2.7E+01
1417.2	3	1	2.60E+01
1435.8	5	7	2.1E+01
1589.0	5	3	1.1E+01
1778.7	7	9	4.4E+00
1783.1	5	7	3.8E+00
3241.6	5	3	2.3E+00
*3486.9	15	21	1.8E+00
3590.5	3	5	3.9E+00
4552.6	3	5	1.26E+00
4554.0	5	3	7.6E-01
4567.8	3	3	1.25E+00
4683.0	5	5	9.5E-01
4716.7	5	7	2.8E+00
5451.5	3	5	6.0E-01
5473.1	5	7	7.9E-01
5716.3	9	7	1.9E-01
5739.7	1	3	4.7E-01
7462.6	5	3	4.9E-01
7466.3	7	5	5.4E-01
7612.4	3	5	1.1E+00

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
Si IV			
457.82	2	4	3.6E+00
458.16	2	2	3.6E+00
515.12	2	2	4.1E+00
516.35	4	2	8.2E+00
*560.50	6	10	1.0E+00
*749.94	10	14	1.45E+01
815.05	2	2	1.23E+01
818.13	4	2	2.44E+01
*860.74	10	6	1.8E+00
*1066.6	10	14	3.91E+01
1122.5	2	4	2.05E+01
1128.3	4	4	4.03E+00
1128.3	4	6	2.42E+01
1393.8	2	4	7.73E+00
1402.8	2	2	7.58E+00
*1724.1	10	6	5.5E+00
Si V			
96.439	1	3	4.8E+02
97.143	1	3	2.0E+03
117.86	1	3	3.0E+02
Si VI			
246.00	4	2	1.7E+02
249.12	2	2	8.5E+01
Si VII			
217.83	5	3	4.3E+02
272.64	5	3	5.1E+01
274.18	3	1	1.2E+02
275.35	5	5	8.9E+01
275.67	3	3	3.0E+01
276.84	1	3	3.9E+01
278.45	3	5	2.9E+01
Si VIII			
214.76	4	2	4.1E+02
216.92	6	4	3.6E+02
232.86	2	2	8.0E+01
235.56	4	4	9.7E+01
250.45	2	2	7.7E+01
250.79	4	2	1.6E+02
314.31	4	2	5.2E+01
316.20	4	4	5.0E+01
319.83	4	6	4.9E+01
Si IX			
223.73	1	3	4.2E+01
225.03	3	3	1.2E+02
227.01	5	3	2.0E+02
227.30	5	3	2.3E+02
258.10	5	5	1.04E+02
*294.37	9	9	5.9E+01
*347.36	9	15	2.2E+01
Si X			
253.77	2	4	2.9E+01
256.57	2	2	1.1E+02
258.35	4	4	1.4E+02
261.05	4	2	5.4E+01
272.00	2	2	3.0E+01
277.26	4	2	5.7E+01
287.08	2	4	2.6E+01
289.19	4	4	5.0E+01
292.22	6	4	7.3E+01
*347.73	10	10	4.3E+01
*353.09	6	10	2.1E+01
Si XI			
43.763	1	3	6.11E+03
*49.116	9	3	2.45E+03
49.222	3	5	8.9E+03
52.296	3	1	7.6E+02
303.30	1	3	6.42E+01
358.29	3	1	1.03E+02
358.63	3	5	1.38E+01
361.41	1	3	1.80E+01
364.50	3	3	1.32E+01
365.42	5	5	3.90E+01
368.28	3	1	5.1E+01
371.48	5	3	2.07E+01
604.14	3	5	1.12E+01
2300.8	1	3	4.34E-01
Si XII			
*40.924	2	6	4.42E+03
*44.118	6	10	1.4E+04
499.43	2	4	9.56E+00
520.72	2	2	8.47E+00
1862	2	4	1.15E+00
1949	2	2	1.0E+00
4620	2	4	4.6E-02
4942	4	6	4.5E-02
Silver			
Ag I			
2061.2	2	4	3.1E-02
2069.9	2	2	1.5E-02
3280.7	2	4	1.4E+00
3382.9	2	2	1.3E+00
5209.1	2	4	7.5E-01
5465.5	4	6	8.6E-01
5471.6	4	4	1.4E-01
Sodium			
Na I			
3302.4	2	4	2.81E-02
3303.0	2	2	2.81E-02
4390.0	2	4	7.7E-03
4393.3	4	4	1.6E-03
4393.3	4	6	9.2E-03
4494.2	2	4	1.2E-02
4497.7	4	6	1.4E-02
4497.7	4	4	2.4E-03
4664.8	2	4	2.33E-02
4668.6	4	4	4.1E-03
4668.6	4	6	2.5E-02
4747.9	2	2	6.3E-03
4751.8	4	2	1.27E-02
4978.5	2	4	4.1E-02
4982.8	4	4	8.2E-03
4982.8	4	6	4.89E-02
5148.8	2	2	1.17E-02
5153.4	4	2	2.33E-02
5682.6	2	4	1.03E-01
5688.2	4	6	1.2E-01
5688.2	4	4	2.1E-02
5890.0	2	4	6.11E-01
5895.9	2	2	6.10E-01
6154.2	2	2	2.6E-02
6160.8	4	2	5.2E-02
8183.3	2	4	4.53E-01
8194.8	4	6	5.4E-01
8194.8	4	4	9.0E-02
11381	2	2	8.9E-02
11404	4	2	1.76E-01
Na II			
300.15	1	3	3.0E+01
301.44	1	3	4.9E+01
372.08	1	3	3.4E+01
Na III			
378.14	4	2	7.7E+01
380.10	2	2	3.7E+01
1991.0	4	6	8.3E+00
2004.2	2	4	4.6E+00
2011.9	6	8	8.4E+00
2151.5	2	4	4.4E+00
2174.5	4	6	5.3E+00
2230.3	6	8	3.7E+00
2232.2	4	4	3.3E+00
2246.7	4	6	2.4E+00
2459.3	4	6	3.0E+00
2468.9	2	4	2.4E+00
2497.0	6	6	1.7E+00
Na V			
*307.89	10	6	2.0E+02
*333.46	6	6	5.6E+01
*369.01	10	6	1.2E+02
*400.72	10	10	5.0E+01
*445.14	6	10	7.1E+00
459.90	4	2	2.3E+01
461.05	4	4	2.3E+01
463.26	4	6	2.2E+01
510.10	2	2	5.6E+01
511.19	4	4	6.8E+01
Na VI			
313.75	5	3	1.3E+02
361.25	5	5	7.7E+01
*416.53	9	9	3.7E+01
*492.80	9	15	1.3E+01
1550.6	5	5	4.35E+00
1567.8	5	3	2.68E+00

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
1608.5	3	1	2.6E+00
1649.4	5	5	2.05E+00
1741.5	3	5	2.59E+00
1747.5	5	7	3.1E+00
Na VII			
*94.409	6	10	2.7E+03
*105.27	6	2	4.5E+02
353.29	4	4	1.0E+02
381.30	4	2	4.0E+01
397.49	4	4	3.5E+01
399.18	6	4	5.2E+01
*483.28	10	10	2.9E+01
486.74	2	4	1.1E+01
491.95	4	6	1.3E+01
555.80	4	4	2.3E+01
777.83	4	6	6.8E+00
Na VIII			
*83.34	9	15	3.94E+03
*89.88	9	3	8.09E+02
90.536	3	5	2.86E+03
411.15	1	3	4.42E+01
1239.4	3	3	3.02E+00
1802.7	3	1	2.70E+00
1867.7	3	5	2.01E+00
2059.1	3	5	1.80E+00
2558.2	5	3	2.26E-02
2772.0	3	5	4.19E-01
3021.0	5	7	4.90E-01
3108.9	1	3	2.58E-01
3182.3	1	3	2.92E-01
Na IX			
70.615	2	4	1.35E+03
70.653	2	2	1.35E+03
77.764	2	4	3.6E+03
77.911	4	6	4.3E+03
681.72	2	4	6.63E+00
694.17	2	2	6.30E+00
2487.7	2	4	8.32E-01
2535.8	2	2	7.89E-01
6841.8	2	4	2.59E-02
7103.4	4	6	2.78E-02
Strontium			
Sr I			
2206.2	1	3	6.6E-03
2211.3	1	3	8.5E-03
2217.8	1	3	1.2E-02
2226.3	1	3	1.6E-02
2237.7	1	3	2.3E-02
2253.3	1	3	3.7E-02
2275.3	1	3	6.7E-02
2307.3	1	3	1.2E-01
2354.3	1	3	1.8E-01
2428.1	1	3	1.7E-01
2569.5	1	3	5.3E-02
2931.8	1	3	1.9E-02
4607.3	1	3	2.01E+00
Sr II			
2018.7	2	2	1.2E-01
2051.9	4	2	2.4E-01
2282.0	2	4	8.3E-01
2322.4	4	6	9.1E-01
2324.5	4	4	1.5E-01
2423.5	2	2	2.4E-01
2471.6	4	2	4.8E-01
3464.5	4	6	3.1E+00
3474.9	4	4	5.1E-01
4077.7	2	4	1.42E+00
4161.8	2	2	6.5E-01
4215.5	2	2	1.27E+00
4305.5	4	2	1.4E+00
4414.8	4	6	1.1E-01
4417.5	4	4	1.8E-02
4585.9	4	2	7.0E-02
5303.1	2	4	1.9E-01
5379.1	4	6	2.2E-01
5385.5	4	4	3.7E-02
5723.7	2	2	7.1E-02
5819.0	4	2	1.4E-01
8688.9	4	6	5.5E-01
8719.6	4	4	9.7E-02
Sulfur			
S I			
1295.7	5	5	4.9E+00
1296.2	5	3	2.7E+00
1302.3	3	5	1.8E+00
1302.9	3	3	1.6E+00
1303.1	3	1	6.6E+00
1303.4	5	3	1.9E+00
1305.9	1	3	2.4E+00
1401.5	5	3	9.1E-01
1409.3	3	3	5.0E-01
1412.9	1	3	1.6E-01
1425.0	5	7	4.5E+00
1425.2	5	5	1.2E+00
1433.3	3	5	3.3E+00
1433.3	3	3	1.9E+00
1437.0	1	3	2.4E+00
1448.2	5	3	7.3E+00
1473.0	5	7	4.2E-01
1474.0	5	7	1.6E+00
1474.4	5	5	5.0E-01
1474.6	5	3	6.2E-02
1481.7	3	5	1.7E-01
1483.0	3	5	1.2E+00
1483.2	3	3	7.5E-01
1487.2	1	3	8.7E-01
1666.7	5	5	6.3E+00
1687.5	1	3	9.4E-01
1782.3	1	3	1.9E+00
1807.3	5	3	3.8E+00
1820.3	3	3	2.2E+00
1826.2	1	3	7.2E-01
4694.1	5	7	6.7E-03
4695.4	5	5	6.7E-03
4696.2	5	3	6.5E-03
6403.6	3	5	5.7E-03
6408.1	5	5	9.5E-03
6415.5	7	5	1.3E-02
*6751.2	15	25	7.9E-02
7679.6	3	5	1.2E-02
7686.1	5	5	2.0E-02
7696.7	7	5	2.8E-02
S II			
1124.4	2	4	1.0E+00
1125.0	4	4	4.6E+00
1131.0	2	2	3.5E+00
1131.6	4	2	1.4E+00
1250.5	4	2	4.6E-01
1253.8	4	4	4.2E-01
1259.5	4	6	3.4E-01
4463.6	8	6	5.3E-01
4483.4	6	4	3.1E-01
4486.7	4	2	6.6E-01
4524.7	4	4	9.3E-02
4525.0	6	4	1.2E+00
4552.4	4	2	1.2E+00
4656.7	2	4	9.0E-02
4716.2	4	4	2.9E-01
4815.5	6	4	8.8E-01
4885.6	2	4	1.7E-01
4917.2	2	2	6.6E-01
4924.1	4	6	2.2E-01
4925.3	2	4	2.4E-01
4942.5	2	2	1.5E-01
4991.9	4	4	1.5E-01
5009.5	4	2	7.0E-01
5014.0	4	4	8.4E-01
5027.2	4	2	2.6E-01
5032.4	6	6	8.1E-01
5047.3	4	2	3.6E-01
5103.3	6	4	5.0E-01
5142.3	2	2	1.9E-01
5201.0	4	4	7.5E-01
5201.3	6	4	6.5E-02
5212.6	4	6	9.8E-02
5212.6	6	6	8.5E-01
5320.7	6	8	9.2E-01
5345.7	4	6	8.8E-01
5345.7	6	6	1.1E-01
5428.6	2	4	4.2E-01
5432.8	4	6	6.8E-01
5453.8	6	8	8.5E-01
5473.6	2	2	7.3E-01
5509.7	4	4	4.0E-01
5526.2	8	8	8.1E-02
5536.8	4	6	6.6E-02
5556.0	4	2	1.1E-01
5564.9	6	6	1.7E-01
5578.8	6	6	1.1E-01
5606.1	10	8	5.4E-01

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
5616.6	4	4	1.2E-01
5640.0	4	6	6.6E-01
5645.6	6	4	1.8E-02
5647.0	2	4	5.7E-01
5659.9	6	4	4.6E-01
5664.7	4	2	5.8E-01
5819.2	4	4	8.5E-02
6305.5	8	6	1.8E-01
6312.7	6	4	3.0E-01
S III			
2496.2	7	5	2.5E+00
2508.2	5	3	2.3E+00
2636.9	3	5	4.5E-01
2665.4	5	5	1.4E+00
2680.5	1	3	6.2E-01
2691.8	3	3	4.6E-01
2702.8	3	1	1.9E+00
2718.9	3	3	1.2E+00
2721.4	5	3	7.7E-01
2726.8	3	5	6.0E-01
2731.1	5	5	1.1E+00
2756.9	7	7	1.4E+00
2785.5	3	3	6.1E-01
2856.0	5	7	5.1E+00
2863.5	7	9	5.7E+00
2872.0	3	5	4.7E+00
2950.2	3	5	3.0E+00
2964.8	5	7	4.0E+00
3662.0	3	3	6.4E-01
3717.8	5	3	1.0E+00
3778.9	3	5	4.4E-01
3831.8	1	3	5.6E-01
3837.8	3	3	4.2E-01
3838.3	5	5	1.3E+00
3860.6	3	1	1.6E+00
3899.1	5	3	6.7E-01
4253.6	5	7	1.2E+00
4285.0	3	5	9.0E-01
S IV			
551.17	2	2	2.06E+01
554.07	4	2	4.08E+01
3097.5	2	4	2.6E+00
3117.7	2	2	2.5E+00
S V			
437.37	1	3	1.12E+01
438.19	3	3	3.33E+01
439.65	5	3	5.5E+01
*661.52	9	15	6.44E+01
*679.01	9	15	8.6E+01
*690.75	9	9	5.0E+01
786.48	1	3	5.25E+01
*854.85	9	9	4.18E+01
S VI			
248.99	2	4	3.1E+01
249.27	2	2	3.1E+01
388.94	2	2	4.5E+01
390.86	4	2	8.8E+01
706.48	2	4	4.17E+01
712.68	4	6	4.85E+01
712.84	4	4	8.1E+00
933.38	2	4	1.7E+01
944.52	2	2	1.6E+01
S VII			
60.161	1	3	9.46E+03
60.804	1	3	5.1E+02
72.029	1	3	8.61E+02
S VIII			
198.55	4	2	2.5E+02
202.61	2	2	1.2E+02
S XI			
*189.90	9	3	4.3E+02
190.37	5	3	2.8E+02
215.95	5	5	1.4E+02
217.63	1	3	7.2E+01
239.81	1	3	2.6E+01
242.57	3	5	1.9E+01
242.82	3	3	1.9E+01
246.90	5	5	5.4E+01
247.12	5	3	3.0E+01
*288.49	9	15	2.9E+01
S XII			
212.14	2	4	3.7E+01
215.18	2	2	1.4E+02
218.20	4	4	1.7E+02
221.44	4	2	6.4E+01
227.50	2	2	3.7E+01
234.48	4	2	6.8E+01
S XIII			
32.236	1	3	1.09E+04
37.600	3	1	1.3E+03
256.66	1	3	8.7E+01
299.89	3	5	1.78E+01
303.37	1	3	2.28E+01
307.36	3	3	1.64E+01
308.91	5	5	4.82E+01
312.68	3	1	6.3E+01
316.84	5	3	2.50E+01
500.42	3	5	1.43E+01
S XIV			
*30.434	2	6	8.28E+03
*32.517	6	10	2.6E+04
417.67	2	4	1.2E+01
445.71	2	2	1.0E+01
1550	2	4	1.4E+00
1663	2	2	1.2E+00
3967	2	4	5.4E-02
4153	4	6	5.7E-02
Tantalum			
Ta I			
3127.9	4	6	5.7E-03
3168.3	4	4	6.0E-03
3170.3	8	10	8.5E-02
3205.5	6	8	5.6E-03
3260.2	4	4	5.8E-03
3337.8	6	6	1.3E-02
3383.9	6	4	5.3E-03
3406.9	4	6	6.8E-02
3419.7	8	8	1.91E-02
3463.8	4	6	2.62E-02
3484.6	4	4	8.5E-03
3488.8	6	4	7.3E-03
3497.9	6	8	4.9E-02
3505.0	8	6	2.72E-02
3553.4	4	6	3.3E-03
3607.4	6	8	4.6E-02
3625.2	10	8	1.0E-02
3626.6	8	10	7.1E-02
3642.1	10	12	5.5E-02
3657.5	6	6	4.3E-03
3731.0	4	6	5.3E-03
3754.5	8	8	6.5E-03
3784.3	4	6	4.3E-02
3792.1	4	4	9.0E-03
3826.9	6	6	5.2E-03
3836.6	8	10	4.0E-03
3848.1	10	8	1.30E-02
3858.6	10	10	2.5E-03
3918.5	4	2	2.5E-02
3922.8	4	4	3.98E-02
3996.2	2	4	3.35E-02
3999.3	4	4	1.8E-02
4003.7	10	8	3.1E-03
4006.8	6	8	7.6E-03
4026.9	4	4	3.60E-02
4029.9	10	10	2.8E-02
4030.7	8	10	2.3E-03
4040.9	10	12	7.3E-03
4061.4	2	4	6.5E-02
4064.6	4	4	3.83E-02
4067.2	6	4	6.8E-03
4067.9	6	8	8.4E-03
4097.2	10	10	2.1E-03
4105.0	6	4	1.1E-02
4136.2	8	6	1.82E-02
4147.9	10	8	1.79E-02
4175.2	6	8	2.8E-02
4205.9	8	10	8.9E-03
4303.0	6	6	2.08E-02
4378.8	8	6	4.8E-03
4386.1	4	6	1.0E-02
4402.5	6	6	2.28E-02
4415.7	2	4	2.53E-02
4441.0	4	6	7.5E-03

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
4441.7	10	8	9.0E-03
4473.5	6	8	1.36E-02
4511.0	10	12	1.56E-02
4511.5	10	8	3.6E-03
4514.2	10	10	3.1E-03
4521.1	10	10	2.3E-03
4530.9	4	6	2.42E-02
4547.2	4	6	5.3E-03
4553.7	6	8	9.5E-03
4565.9	8	8	2.5E-02
4574.3	4	4	1.2E-02
4580.7	8	10	2.1E-03
4619.5	6	4	5.3E-02
4633.1	4	4	1.2E-02
4669.1	6	4	2.85E-02
4681.9	6	6	1.5E-02
4684.9	10	8	2.8E-03
4685.3	6	8	3.4E-03
4691.9	2	4	4.08E-02
4706.1	6	6	1.4E-02
4740.2	4	4	5.0E-02
4758.0	4	6	7.5E-03
4769.0	8	8	2.8E-02
4780.9	10	8	2.16E-02
4812.8	4	4	1.2E-02
4825.4	6	6	2.63E-02
4832.2	4	4	1.7E-02
4852.2	4	4	1.7E-02
4884.0	6	8	1.1E-02
4904.6	12	10	1.95E-02
4920.9	8	10	2.1E-03
4921.3	2	4	1.2E-02
4926.0	4	4	1.5E-02
4936.4	8	6	4.5E-02
4969.7	4	4	1.0E-02
5012.5	4	4	1.9E-02
5037.4	10	8	4.4E-02
5043.3	6	4	2.73E-02
5067.9	8	6	2.92E-02
5069.9	10	12	1.7E-03
5082.3	10	12	1.9E-03
5087.4	6	4	1.5E-02
5090.7	8	6	9.5E-03
5095.3	6	6	5.0E-03
5136.5	2	2	4.5E-02
5141.6	4	2	1.2E-02
5143.7	6	4	1.7E-02
5147.6	6	4	9.0E-03
5161.8	4	6	6.3E-03
5218.7	8	6	8.2E-03
5235.4	6	6	4.7E-03
5295.0	6	6	7.5E-03
5336.1	6	8	5.5E-03
5349.6	6	4	2.2E-02
5354.7	4	4	6.5E-03
5396.0	6	8	2.5E-03
5402.5	4	2	1.4E-02
5435.3	4	6	1.1E-02
5499.4	10	10	6.1E-03
5518.9	8	10	3.8E-02
5620.7	8	10	6.0E-03
5640.2	6	8	4.9E-03
5645.9	6	8	1.43E-02
5699.2	6	6	4.2E-03
5767.9	6	8	2.6E-03
5780.7	4	6	3.3E-03
5811.1	8	6	5.7E-03
5849.7	10	8	2.8E-03
5877.4	10	12	2.3E-02
5939.8	2	4	1.6E-02
5944.0	4	6	2.13E-02
5997.2	10	10	2.4E-02
6020.7	2	4	1.0E-02
6045.4	6	8	2.6E-02
6047.3	8	10	9.0E-03
6249.8	6	6	3.5E-03
6258.7	6	8	3.3E-03
6309.6	4	6	1.83E-02
6360.8	6	8	4.6E-03
6428.6	6	6	6.0E-03
6430.8	8	8	2.9E-02
6450.4	8	10	2.2E-02
6485.4	10	10	5.8E-02
6514.4	6	4	2.2E-02
6516.1	6	8	1.25E-02
6612.0	6	4	1.9E-02
6673.7	2	4	9.0E-03
6771.7	4	4	5.8E-03
6866.2	8	6	2.58E-02
6927.4	10	12	1.01E-02
6928.5	10	8	1.69E-02
6951.3	10	10	3.7E-03
6953.9	6	8	8.3E-03
6966.1	8	8	1.2E-02
6969.5	10	10	2.9E-03
7407.9	6	4	2.0E-02
Thallium			
Tl I			
2104.6	2	4	4.0E-02
2118.9	2	2	2.0E-02
2129.3	2	4	5.8E-02
2151.9	2	2	3.1E-02
2168.6	2	4	9.8E-02
2237.8	2	4	1.9E-01
2316.0	2	2	7.8E-02
2379.7	2	4	4.4E-01
2507.9	4	2	1.1E-02
2538.2	4	2	1.6E-02
2580.1	2	2	1.8E-01
2609.0	4	6	1.0E-01
2609.8	4	4	1.9E-02
2665.6	4	2	5.7E-02
2709.2	4	6	1.7E-01
2710.7	4	4	3.7E-02
2767.9	2	4	1.26E+00
2826.2	4	2	8.0E-02
2918.3	4	6	4.2E-01
2921.5	4	4	7.6E-02
3229.8	4	2	1.73E-01
3519.2	4	6	1.24E+00
3529.4	4	4	2.20E-01
3775.7	2	2	6.25E-01
5350.5	4	2	7.05E-01
Thulium			
Tm I			
2513.8	8	10	6.9E-02
2527.0	8	8	1.7E-01
2596.5	8	10	1.6E-01
2601.1	8	6	1.7E-01
2622.5	8	10	6.1E-02
2841.1	6	6	2.0E-01
2854.2	8	6	2.7E-01
2914.8	8	8	7.7E-02
2933.0	8	6	1.0E-01
2973.2	8	8	2.3E-01
3046.9	8	8	1.8E-01
3081.1	8	8	1.9E-01
3122.5	6	6	5.2E-01
3142.4	6	6	8.8E-02
3172.7	8	8	1.8E-01
3233.7	8	10	5.1E-02
3247.0	6	8	3.0E-01
3251.8	6	4	5.2E-01
3380.7	6	8	2.0E-01
3406.0	6	8	1.5E-01
3410.1	8	10	1.0E-01
3416.6	8	8	5.7E-02
3418.6	6	6	1.1E-01
3563.9	8	6	9.8E-02
3567.4	8	10	4.2E-02
3744.1	8	8	9.5E-01
3751.8	8	10	1.9E-01
3798.5	6	4	1.2E+00
3807.7	6	6	3.9E-01
3883.1	8	6	1.0E+00
3887.4	8	8	3.8E-01
3916.5	6	8	1.5E+00
3949.3	6	6	1.0E+00
4022.6	6	8	4.0E-02
4044.5	6	4	2.9E-01
4094.2	8	6	9.0E-01
4105.8	8	10	6.0E-01
4138.3	6	4	7.0E-01
4158.6	6	8	5.5E-02
4187.6	8	8	6.1E-01
4203.7	8	10	2.5E-01
4222.7	6	8	1.5E-01
4271.7	6	6	1.1E-01
4359.9	8	6	1.3E-01
4386.4	8	8	4.2E-02
4394.4	6	4	1.1E-01
4643.1	6	6	3.4E-02
4681.9	6	8	3.9E-02
4691.1	6	6	3.9E-02
5307.1	8	10	2.3E-02

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
5658.3	6	8	1.0E-02
5675.8	8	10	1.3E-02
5760.2	6	6	1.3E-02
Tin			
Sn I			
2073.1	1	3	3.6E-02
2199.3	3	5	2.9E-01
2209.7	5	5	5.6E-01
2246.1	1	3	1.6E+00
2268.9	5	7	1.2E+00
2286.7	5	5	3.1E-01
2317.2	5	7	2.0E+00
2334.8	3	3	6.6E-01
2354.8	3	5	1.7E+00
2380.7	3	5	3.1E-02
2408.2	5	3	1.8E-01
2421.7	5	7	2.5E+00
2429.5	5	7	1.5E+00
2433.5	5	3	8.0E-03
2455.2	5	5	1.1E-02
2476.4	5	3	1.1E-02
2483.4	5	5	2.1E-01
2491.8	1	3	1.7E-01
2495.7	5	5	6.2E-01
2523.9	5	3	7.4E-02
2546.6	1	3	2.1E-01
2558.0	1	3	3.4E-01
2571.6	5	7	4.5E-01
2594.4	5	5	3.0E-01
2636.9	1	3	1.1E-01
2661.2	3	3	1.1E-01
2706.5	3	5	6.6E-01
2761.8	5	5	3.7E-03
2779.8	5	7	1.8E-01
2785.0	5	3	1.4E-01
2788.0	1	3	1.4E-01
2812.6	1	3	2.3E-01
2813.6	5	5	1.2E-01
2840.0	5	5	1.7E+00
2850.6	5	5	3.3E-01
2863.3	1	3	5.4E-01
2913.5	1	3	8.3E-01
3009.1	3	3	3.8E-01
3032.8	1	3	6.2E-01
3034.1	3	1	2.0E+00
3141.8	1	3	1.9E-01
3175.1	5	3	1.0E+00
3218.7	1	3	4.7E-02
3223.6	5	5	1.2E-03
3262.3	5	3	2.7E+00
3330.6	5	5	2.0E-01
3655.8	1	3	4.1E-02
3801.0	5	3	2.8E-01
4524.7	1	3	2.6E-01
5631.7	1	3	2.4E-02
5970.3	5	3	9.6E-02
6037.7	5	5	5.0E-02
6069.0	1	3	4.6E-02
6073.5	3	1	6.3E-02
6171.5	3	3	4.9E-02
Sn II			
2368.3	4	2	4.4E-03
2449.0	4	6	3.7E-01
2487.0	6	8	5.5E-01
3283.2	4	6	1.0E+00
3352.0	6	8	1.0E+00
3472.5	2	4	1.6E-01
3575.5	4	6	1.3E-01
5332.4	2	4	8.6E-01
5562.0	4	6	1.2E+00
5588.9	4	6	8.5E-01
5596.2	4	4	1.5E-01
5797.2	6	6	2.8E-01
5799.2	6	8	8.1E-01
6453.5	2	4	1.2E+00
6761.5	2	2	3.2E-01
6844.1	2	2	6.6E-01
Titanium			
Ti I			
2276.75	7	5	1.3E+00
2280.00	9	7	9.4E-01
2299.86	5	5	6.9E-01
2302.75	7	7	5.7E-01
2305.69	9	9	5.2E-01
2424.26	9	9	1.7E-01
2520.54	5	3	3.8E-01
2529.87	7	5	3.8E-01
2541.92	9	7	4.3E-01
2599.91	5	5	6.7E-01
2605.16	7	7	6.4E-01
2611.29	9	9	6.4E-01
2611.47	7	5	3.3E-01
2619.94	9	7	2.1E-01
2631.55	7	7	1.7E-01
2632.42	5	5	2.7E-01
2641.12	5	3	1.8E+00
2644.28	7	5	1.4E+00
2646.65	9	7	1.5E+00
2733.27	5	5	1.9E+00
2735.30	3	1	4.1E+00
2912.07	5	7	1.3E+00
2942.00	5	5	1.0E+00
2948.26	7	7	9.3E-01
2956.13	9	9	9.7E-01
2956.80	7	5	1.8E-01
3186.45	5	7	8.0E-01
3191.99	7	9	8.5E-01
3199.92	9	11	9.4E-01
3341.88	5	7	6.5E-01
3354.63	7	9	6.9E-01
3370.44	5	3	7.6E-01
3371.45	9	11	7.2E-01
3377.58	7	5	6.9E-01
3385.94	9	7	5.0E-01
3635.46	5	7	8.04E-01
3642.68	7	9	7.74E-01
3653.50	9	11	7.54E-01
3724.57	9	9	9.1E-01
3725.16	5	3	7.3E-01
3729.81	5	5	4.27E-01
3741.06	7	7	4.17E-01
3752.86	9	9	5.04E-01
3786.04	5	3	1.4E+00
3948.67	5	3	4.85E-01
3956.34	7	5	3.00E-01
3958.21	9	7	4.05E-01
3981.76	5	5	3.76E-01
3989.76	7	7	3.79E-01
3998.64	9	9	4.08E-01
4013.24	7	5	2.0E-01
4055.01	1	3	2.8E-01
4060.26	3	5	2.4E-01
4064.20	3	3	2.4E-01
4065.09	3	1	7.0E-01
4186.12	9	9	2.10E-01
4266.23	5	5	3.1E-01
4284.99	5	5	3.2E-01
4289.07	5	5	3.0E-01
4290.93	3	3	4.5E-01
4295.75	3	1	1.3E+00
4393.93	9	11	3.3E-01
4417.27	11	9	3.6E-01
4449.14	11	11	9.7E-01
4450.90	9	9	9.6E-01
4453.31	5	5	5.98E-01
4453.71	7	7	4.7E-01
4455.32	7	7	4.8E-01
4457.43	9	9	5.6E-01
4465.81	5	7	3.28E-01
4481.26	7	7	5.7E-01
4496.15	7	5	4.4E-01
4518.02	7	9	1.72E-01
4522.80	5	7	1.9E-01
4527.31	3	5	2.2E-01
4533.24	11	11	8.83E-01
4534.78	9	9	6.87E-01
4544.69	5	3	3.3E-01
4548.76	7	5	2.85E-01
4552.45	9	7	2.1E-01
4563.43	9	11	2.1E-01
4617.27	7	9	8.51E-01
4623.10	5	7	5.74E-01
4639.94	3	3	6.64E-01
4640.43	3	1	5.0E-01
4645.19	3	1	8.57E-01
4650.02	5	3	2.6E-01
4742.79	9	9	5.3E-01
4758.12	11	11	7.13E-01
4759.27	13	13	7.40E-01
4778.26	9	9	2.0E-01
4805.42	5	7	5.8E-01
4840.87	5	5	1.76E-01
4856.01	13	15	5.2E-01
4885.08	11	13	4.90E-01

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
4913.62	7	9	4.44E-01
4928.34	3	5	6.2E-01
4981.73	11	13	6.60E-01
4989.14	7	5	3.25E-01
4991.07	9	11	5.84E-01
4999.50	7	9	5.27E-01
5000.99	9	7	3.52E-01
5007.21	5	7	4.92E-01
5014.28	3	5	6.8E-01
5036.47	7	9	3.94E-01
5038.40	5	7	3.87E-01
5062.11	5	3	2.98E-01
5210.39	9	9	3.57E-02
5222.69	3	3	1.95E-01
5224.30	11	11	3.6E-01
5259.98	5	7	2.3E-01
5351.07	7	7	3.4E-01
5503.90	11	9	2.6E-01
5774.04	9	11	5.5E-01
5785.98	11	13	6.1E-01
5804.27	13	15	6.8E-01
6098.66	9	7	2.5E-01
6220.46	9	7	1.8E-01
Ti II			
2440.91	4	4	5.1E-01
2451.18	6	6	4.5E-01
2525.59	10	8	5.6E-01
2531.28	8	6	4.9E-01
2534.63	6	4	5.4E-01
2535.89	4	2	6.8E-01
2555.99	6	8	3.2E-01
2635.44	4	4	1.9E+00
2638.56	6	6	1.7E+00
2642.02	8	8	1.9E+00
2645.86	10	10	2.7E+00
2746.54	6	8	2.6E+00
2751.59	8	10	3.7E+00
2752.68	8	10	1.1E+00
2757.62	6	8	7.2E-01
2758.35	4	6	9.9E-01
2758.79	2	4	4.4E-01
2764.28	4	4	7.4E-01
2804.82	6	8	4.6E+00
2810.30	8	10	5.1E+00
2817.83	10	12	3.8E+00
2819.87	8	8	6.5E-01
2821.26	6	8	7.9E-01
2827.12	8	10	1.0E+00
2828.06	12	14	4.4E+00
2828.64	6	6	1.2E+00
2828.83	10	10	9.1E-01
2834.02	10	12	7.9E-01
2836.47	8	8	1.2E+00
2839.64	12	12	8.3E-01
2845.93	10	10	1.2E+00
2851.11	2	4	4.1E-01
2856.10	12	12	1.5E+00
2862.33	4	6	4.0E-01
2877.47	8	8	5.7E-01
2884.13	10	10	5.2E-01
2910.65	8	8	4.6E-01
2926.64	10	8	8.9E-01
2931.10	6	6	3.2E+00
2936.02	4	6	2.7E+00
2938.57	6	8	2.4E+00
2941.90	8	10	1.8E+00
2942.97	8	8	1.1E+00
2945.30	10	12	2.7E+00
2952.00	8	8	3.0E-01
2954.59	10	12	4.0E+00
2958.80	8	10	4.0E+00
2979.06	4	6	1.2E+00
2990.06	6	8	5.6E-01
3017.17	12	12	3.6E-01
3022.64	10	10	1.2E+00
3023.67	8	8	1.0E+00
3029.76	10	10	3.5E-01
3056.75	2	4	3.2E-01
3058.08	6	6	5.0E-01
3066.34	4	4	3.3E-01
3071.25	6	4	3.6E-01
3072.99	4	2	1.6E+00
3075.23	6	4	1.13E+00
3078.65	8	6	1.09E+00
3081.52	10	8	1.1E+00
3088.04	10	8	1.25E+00
3089.44	8	6	1.3E+00
3097.20	4	6	4.4E-01
3103.81	10	8	1.1E+00
3105.10	2	4	6.3E-01
3106.26	6	6	7.8E-01
3117.67	4	2	1.1E+00
3119.83	6	4	5.9E-01
3127.86	6	6	1.6E+00
3128.50	8	8	1.1E+00
3161.23	4	2	5.9E-01
3161.80	6	4	4.6E-01
3162.59	8	6	3.9E-01
3168.55	10	8	4.1E-01
3181.73	6	8	4.6E-01
3182.54	4	6	4.3E-01
3189.49	4	4	9.2E-01
3190.91	6	8	1.3E+00
3202.56	4	6	1.1E+00
3224.25	12	10	7.0E-01
3228.62	4	2	2.0E+00
3232.29	8	6	6.0E-01
3234.51	10	10	1.38E+00
3236.13	4	4	7.0E-01
3236.58	8	8	1.11E+00
3239.04	6	6	9.87E-01
3239.66	6	4	9.4E-01
3241.99	4	4	1.16E+00
3251.91	6	4	3.38E-01
3252.92	8	6	3.9E-01
3272.07	2	4	3.2E-01
3278.28	4	4	9.6E-01
3278.91	6	4	1.0E+00
3282.32	2	2	1.6E+00
3287.66	8	10	1.4E+00
3315.32	2	4	3.8E-01
3321.70	4	4	7.2E-01
3322.94	10	10	3.96E-01
3329.46	8	8	3.25E-01
3332.11	6	4	1.1E+00
3340.34	4	4	3.6E-01
3361.23	8	10	1.1E+00
3372.80	6	8	1.11E+00
3383.77	4	6	1.09E+00
3452.49	2	2	7.7E-01
3456.40	4	4	8.2E-01
3465.56	4	2	4.1E-01
3483.63	10	8	9.7E-01
3492.37	8	6	9.8E-01
3504.90	10	10	8.2E-01
3510.86	8	8	9.3E-01
3520.27	2	4	4.8E-01
3535.41	4	6	5.5E-01
3641.33	4	2	4.9E-01
3706.23	4	4	3.1E-01
3741.64	6	6	6.2E-01
3757.70	4	4	4.1E-01
3759.30	8	8	9.4E-01
3761.33	6	6	9.9E-01
4911.18	6	4	3.2E-01
Ti III			
865.79	5	3	6.6E+01
1002.37	5	5	7.6E+00
1004.67	7	5	4.3E+01
1005.80	3	3	1.3E+01
1007.16	5	3	3.8E+01
1008.12	3	1	5.1E+01
1286.37	9	9	2.0E+00
1289.30	7	7	2.2E+00
1291.62	5	5	2.4E+00
1293.23	9	7	1.0E+00
1298.97	7	5	4.9E+00
1327.59	5	3	3.2E+00
1420.44	1	3	1.2E+00
1421.63	3	1	4.0E+00
1422.41	5	5	3.0E+00
1424.14	5	3	1.6E+00
1455.19	9	7	6.4E+00
1498.70	5	5	2.8E+00
2007.36	3	3	3.4E+00
2007.60	1	3	1.2E+00
2010.80	5	3	5.4E+00
2097.30	5	7	3.3E+00
2099.86	3	5	2.5E+00
2104.86	3	3	1.1E+00
2105.09	1	3	1.7E+00
2199.22	3	3	5.7E+00
2237.77	7	7	2.4E+00
2331.35	3	1	4.3E+00
2331.66	3	3	1.2E+00

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
2339.00	5	3	3.0E+00
2346.79	7	5	3.3E+00
2374.99	5	3	4.0E+00
2413.99	5	7	3.8E+00
2516.05	7	9	3.4E+00
2567.56	3	3	2.3E+00
2984.75	5	5	1.9E+00
3066.51	3	3	2.5E+00
3228.89	3	3	1.5E+00
3278.31	7	9	3.4E+00
3320.94	3	5	2.8E+00
3340.20	7	9	3.7E+00
3346.18	9	11	3.7E+00
3354.71	11	13	4.4E+00
3397.24	3	1	1.8E+00
3404.46	3	3	1.8E+00
3417.62	3	5	1.9E+00
3915.47	9	11	2.1E+00
4119.14	5	5	9.9E-01
4213.26	9	11	2.2E+00
4215.53	9	11	2.2E+00
4247.62	11	13	1.1E+00
4248.54	5	7	2.3E+00
4250.09	3	5	9.5E-01
4259.01	11	13	9.4E-01
4269.84	9	11	1.7E+00
4285.61	13	15	3.0E+00
4288.66	11	13	1.1E+00
4296.70	11	13	1.6E+00
4319.56	9	11	1.1E+00
4343.25	3	1	1.0E+00
4378.94	3	5	1.6E+00
4433.91	11	13	1.8E+00
4440.66	1	3	1.2E+00
4533.26	3	5	1.5E+00
4576.53	9	7	1.3E+00
4628.07	3	1	1.5E+00
4652.86	7	9	2.6E+00
4874.00	5	7	1.5E+00
4914.32	3	3	1.1E+00
4971.19	9	11	2.1E+00
5083.80	5	3	9.7E-01
5278.33	3	3	9.4E-01
7506.87	11	13	1.1E+00
Ti IV			
423.49	4	6	4.9E+01
424.16	6	8	5.3E+01
433.63	4	2	5.5E+00
433.76	6	4	5.0E+00
729.36	4	2	5.7E+00
1183.64	2	2	6.9E+00
1195.21	4	2	1.4E+01
1451.74	2	4	1.8E+01
1467.34	4	6	2.1E+01
2067.56	2	4	5.1E+00
2103.16	2	2	5.0E+00
2541.79	4	6	6.9E+00
2546.88	6	8	7.4E+00
2862.60	4	2	4.1E+00
3576.44	4	6	4.6E+00
Ti VIII			
249	6	4	1.0E+01
258.610	6	8	7.5E+02
269.533	4	6	6.0E+02
272.037	4	4	4.3E+02
272.843	6	4	6.2E+01
276.701	2	4	9.3E+01
277.813	4	4	3.8E+02
289.375	2	4	3.6E+01
478.971	4	4	1.7E+01
480.376	6	6	1.5E+01
Ti IX			
267.941	5	7	5.1E+02
278.713	5	7	4.7E+02
281.446	3	1	3.2E+02
285.128	1	3	4.1E+02
433.567	1	3	6.9E+00
439.513	3	3	7.5E+00
439.745	3	1	2.1E+01
447.484	5	5	1.6E+01
447.701	5	3	6.5E+00
507.174	3	5	6.5E+00
516.215	5	7	6.9E+00
Ti X			
253	4	6	2.1E+02
254	6	8	2.3E+02
281	2	2	1.1E+02
289.579	2	4	2.5E+02
290.294	4	6	1.1E+02
291	4	2	1.8E+02
291	2	2	2.3E+02
292	6	8	1.1E+02
293.684	6	8	2.97E+02
293.798	6	6	1.7E+02
295.584	4	6	2.9E+02
296	4	6	1.4E+02
297	4	6	9.9E+01
298	4	6	4.3E+02
302	2	2	1.6E+02
305	2	4	2.5E+02
317	2	2	1.5E+02
355.815	2	2	1.3E+02
360.133	4	4	2.19E+02
363	4	2	2.1E+02
363	6	6	1.3E+02
365.628	4	2	1.2E+02
382	4	6	1.8E+02
385	6	8	1.8E+02
389.99	6	4	1.1E+02
Ti XI			
65.403	1	3	5.1E+02
87.725	1	3	8.5E+02
266	5	7	1.8E+02
308.250	3	5	1.3E+02
313.229	5	7	1.6E+02
318	3	1	1.4E+02
322.75	5	7	1.99E+02
323	1	3	1.8E+02
327.192	3	5	2.9E+02
332	3	1	3.25E+02
386.140	1	3	1.48E+02
408	7	9	1.37E+02
425.74	3	1	1.2E+02
446.69	3	1	1.2E+02
453	5	7	1.3E+02
Ti XII			
52.896	2	4	1.61E+02
53.140	4	6	1.9E+02
53.433	2	4	2.1E+02
53.457	2	2	2.1E+02
55.181	2	4	2.4E+02
55.443	4	6	2.81E+02
59.133	2	4	3.72E+02
59.435	4	6	4.41E+02
60.701	2	4	3.4E+02
60.762	2	2	3.5E+02
61.286	4	2	1.8E+02
62.433	4	6	2.08E+02
62.470	6	8	2.22E+02
65.540	4	6	3.2E+02
65.577	6	8	3.5E+02
67.171	2	4	6.2E+02
67.555	4	6	7.2E+02
70.986	4	6	5.7E+02
71.031	6	8	6.1E+02
71.545	2	2	1.8E+02
71.987	4	2	3.48E+02
82.121	2	4	5.9E+02
82.307	4	6	1.13E+03
82.344	2	2	5.8E+02
82.368	6	8	1.2E+03
89.844	2	4	9.9E+02
90.512	4	6	1.16E+03
90.547	4	4	1.9E+02
116.497	4	6	3.0E+03
116.597	6	8	3.2E+03
116.62	6	6	2.1E+02
139.884	6	4	2.6E+02
140.361	4	2	2.9E+02
141.6	4	6	1.7E+02
141.7	6	8	1.7E+02
169.7	4	6	2.8E+02
169.8	6	8	2.9E+02
207.2	2	4	1.5E+02
208.5	4	6	1.8E+02
252.8	4	6	4.8E+02
253.1	6	8	5.2E+02
257.5	4	2	2.4E+02
Ti XIII			
23.356	1	3	1.02E+05

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
23.698	1	3	1.2E+04
23.991	1	3	3.4E+02
26.641	1	3	4.06E+03
26.960	1	3	3.06E+03
117.1	3	3	1.3E+02
117.3	3	1	2.8E+02
120.2	5	3	5.4E+02
120.2	7	5	4.4E+02
128.7	3	3	1.2E+02
Ti XIV			
21.341	4	6	9.8E+03
21.522	2	4	4.5E+04
21.657	4	4	1.3E+04
21.733	4	4	8.8E+04
21.82	4	2	6.4E+04
21.883	2	4	7.0E+04
21.958	2	4	1.2E+04
22.05	2	2	1.4E+04
24.592	4	2	6.1E+03
24.891	2	2	7.5E+03
Ti XV			
20.19	5	7	6.9E+03
20.234	5	7	1.9E+04
20.234	3	3	4.9E+04
20.246	1	3	4.2E+04
20.250	5	3	6.5E+03
20.29	3	3	1.1E+04
20.30	1	3	3.4E+04
20.30	1	1	5.8E+04
20.313	5	3	7.5E+04
20.418	5	7	8.0E+04
20.538	3	3	3.8E+04
20.54	3	1	4.1E+04
20.551	1	3	1.3E+04
20.689	5	7	4.3E+04
20.698	1	3	1.1E+05
20.771	5	3	1.1E+04
20.897	5	7	2.85E+04
20.928	5	5	8.4E+03
21.065	3	3	1.1E+04
21.079	1	3	1.58E+04
21.102	3	5	1.3E+04
22.482	5	3	6.4E+03
22.936	5	5	1.1E+04
22.966	5	3	1.1E+04
23.034	1	3	6.3E+03
Ti XVI			
110.561	4	2	3.36E+02
116.198	4	4	1.45E+02
118.215	6	4	7.4E+02
121.382	4	2	2.4E+02
124.805	4	2	6.1E+02
129.075	4	2	3.81E+02
134.724	2	2	2.6E+02
138.800	6	4	3.5E+02
143.459	4	4	2.8E+02
145.665	6	6	2.3E+02
157.812	4	2	1.32E+02
161.168	4	4	1.2E+02
163.610	4	2	1.92E+02
169.740	4	6	1.0E+02
176.267	2	2	2.45E+02
178.240	4	4	2.52E+02
Ti XVII			
18.05	3	3	4.5E+04
18.13	5	3	2.4E+04
18.13	1	3	8.1E+04
18.176	5	7	9.2E+04
123.654	3	3	2.3E+02
124.553	5	3	5.2E+02
127.782	5	3	4.6E+02
135.202	3	1	2.93E+02
136.160	5	3	1.95E+02
136.393	3	3	1.14E+02
141.948	5	5	3.87E+02
142.589	1	3	1.35E+02
144.405	5	5	9.4E+01
146.067	7	5	2.6E+02
154.133	3	1	1.63E+02
156.54	3	1	1.44E+02
158.469	5	5	1.4E+02
159.62	5	3	1.03E+02
163.049	3	1	6.2E+02
186.863	5	5	2.66E+02
207.73	3	1	1.07E+02
Ti XVIII			
17.22	2	4	7.3E+04
17.365	4	6	8.6E+04
17.39	4	4	1.4E+04
133.852	2	4	5.2E+01
144.759	4	4	3.2E+02
150.15	6	4	1.15E+02
153.15	4	2	1.97E+02
153.23	2	4	6.7E+01
159.00	4	4	1.16E+02
166.225	6	4	1.54E+02
179.902	2	4	6.3E+01
189.663	6	6	9.6E+01
191.23	4	4	6.6E+01
197.838	4	6	4.56E+01
208.07	4	4	1.2E+02
Ti XIX			
15.67	3	1	3.3E+04
15.68	5	5	2.7E+04
15.74	5	7	2.7E+04
15.75	3	5	2.4E+04
15.83	1	3	3.2E+04
15.86	1	3	2.9E+04
16.02	3	1	3.1E+04
16.18	3	5	3.8E+04
16.41	1	3	6.1E+04
16.43	3	5	8.2E+04
16.46	3	3	4.4E+04
16.51	5	7	1.0E+05
16.55	5	5	2.7E+04
16.61	3	1	8.0E+04
16.64	3	3	5.3E+04
16.69	1	3	1.02E+05
16.71	3	5	7.3E+04
16.72	5	3	3.3E+04
16.72	5	5	7.3E+04
16.74	5	7	1.2E+05
16.77	3	3	2.6E+04
16.80	5	7	1.81E+05
16.85	3	5	4.4E+04
17.08	3	5	8.3E+04
17.36	1	3	9.5E+04
Ti XX			
2.629	2	4	4.9E+04
2.6295	4	4	3.2E+06
2.631	2	2	6.1E+05
2.6319	2	4	1.5E+06
2.632	2	2	2.7E+06
2.6355	4	6	1.2E+06
8.621	4	2	1.1E+06
9.788	4	6	5.26E+03
10.046	2	4	7.29E+03
10.109	4	6	8.6E+03
*10.278	2	6	8.4E+03
10.620	2	4	1.34E+04
10.690	4	6	1.58E+04
*11.452	2	6	1.7E+04
11.872	2	4	2.8E+04
11.958	4	6	3.4E+04
11.958	4	4	5.6E+03
15.211	2	4	3.50E+04
15.253	2	2	3.58E+04
15.907	2	4	8.84E+04
16.049	4	6	1.05E+05
16.067	4	4	1.8E+04
31.586	4	6	5.49E+03
45.650	2	4	9.6E+03
45.996	4	6	1.1E+04
Ti XXI			
2.0633	1	3	1.32E+05
2.1108	1	3	2.60E+05
2.2211	1	3	6.35E+05
2.497	3	1	2.4E+06
2.505	5	5	3.5E+05
2.505	1	3	1.4E+06
2.507	3	5	1.4E+06
2.508	3	5	7.9E+05
2.510	3	3	6.9E+05
2.510	1	3	9.6E+05
2.511	3	3	1.4E+06
2.512	5	5	1.8E+06
2.512	3	1	1.4E+06
2.513	3	1	2.7E+06
2.513	3	5	2.4E+06

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
2.514	5	3	1.2E+06
2.520	3	5	2.6E+05
2.527	3	1	1.2E+05
2.539	3	1	4.1E+05
2.6102	1	3	2.40E+06
2.6227	1	3	1.12E+05
Tungsten			
W I			
2879.4	1	3	2.4E-01
2911.0	1	3	7.7E-02
2923.5	7	9	1.54E-02
2935.0	3	5	1.5E-01
3013.8	7	9	6.4E-02
3016.5	9	11	9.27E-02
3017.4	7	9	1.21E-01
3024.9	3	3	1.4E-01
3046.4	3	5	5.8E-02
3049.7	7	5	1.7E-01
3064.9	5	7	1.1E-02
3084.9	5	5	1.3E-02
3093.5	7	9	4.4E-02
3107.2	5	7	2.33E-02
3108.0	7	9	1.58E-02
3145.5	9	9	4.8E-03
3170.2	7	5	6.0E-03
3176.6	3	5	2.12E-02
3183.5	7	7	2.64E-03
3184.4	5	3	2.3E-02
3191.6	1	3	3.2E-02
3198.8	7	9	4.6E-02
3207.3	7	9	3.0E-02
3208.3	5	5	4.4E-02
3215.6	9	11	2.1E-01
3221.9	5	7	1.61E-02
3223.1	5	3	3.53E-03
3232.5	9	9	2.4E-02
3235.1	7	5	2.68E-03
3259.7	7	7	1.3E-02
3300.8	7	9	8.1E-02
3311.4	7	5	5.6E-02
3363.3	9	7	6.6E-03
3371.0	7	5	1.0E-02
3371.4	3	3	6.7E-03
3386.1	7	7	2.64E-03
3413.0	7	9	9.7E-03
3459.5	9	9	2.04E-03
3510.0	7	9	5.2E-03
3545.2	1	3	3.2E-02
3570.6	5	3	6.7E-03
3606.1	3	5	9.6E-03
3617.5	7	7	1.1E-01
3631.9	3	5	1.3E-02
3675.6	9	11	1.20E-02
3682.1	9	11	2.0E-02
3707.9	7	7	2.9E-02
3757.9	7	9	1.38E-02
3760.1	5	7	1.99E-02
3768.5	3	3	3.47E-02
3780.8	7	5	4.2E-02
3809.2	7	5	9.0E-03
3817.5	7	7	3.1E-02
3829.1	3	3	3.83E-03
3835.1	5	5	5.2E-02
3846.3	3	5	2.14E-02
3847.5	1	3	8.3E-03
3864.3	5	5	5.6E-03
3868.0	7	9	4.6E-02
3881.4	7	7	3.6E-02
3968.5	1	3	5.07E-03
3975.5	9	11	4.1E-03
4001.4	9	9	5.6E-03
4008.8	7	9	1.63E-01
4019.3	5	3	6.7E-03
4028.8	1	3	2.0E-02
4045.6	7	5	2.88E-02
4055.2	7	9	1.79E-03
4070.0	7	5	3.60E-02
4070.6	3	5	5.6E-03
4074.4	7	7	1.0E-01
4088.3	5	3	4.13E-03
4102.7	9	7	4.9E-02
4115.6	11	11	4.8E-03
4137.5	5	7	8.4E-03
4171.2	7	9	8.6E-03
4203.8	9	7	4.9E-03
4219.4	9	7	6.1E-03
4244.4	9	11	1.38E-02
4269.4	7	5	3.04E-02
4283.8	9	7	1.69E-03
4294.6	7	5	1.2E-01
4302.1	7	7	3.6E-02
4355.2	9	9	5.1E-03
4361.8	9	7	1.64E-03
4378.5	7	5	3.48E-03
4458.1	3	5	4.2E-03
4466.3	7	5	1.5E-02
4472.5	13	11	1.55E-03
4484.2	3	5	5.6E-03
4492.3	9	11	3.6E-03
4495.3	11	11	3.3E-03
4504.8	9	7	7.0E-03
4552.5	9	9	1.42E-03
4586.8	1	3	4.20E-03
4592.6	7	9	3.4E-03
4609.9	7	9	1.42E-02
4613.3	9	9	2.9E-03
4634.8	9	9	8.8E-03
4659.9	1	3	1.0E-02
4680.5	7	7	1.4E-02
4720.4	3	5	3.22E-03
4729.6	7	5	7.8E-03
4752.6	3	3	5.20E-03
4757.5	7	5	2.72E-03
4757.8	11	9	4.1E-03
4788.4	9	11	2.6E-03
4843.8	5	5	1.9E-02
4886.9	9	11	8.1E-03
4924.6	13	11	1.75E-03
4931.6	7	5	1.0E-02
4948.6	9	11	1.36E-03
4972.6	9	11	3.9E-03
4982.6	1	3	4.17E-03
4986.9	11	9	6.3E-03
5006.2	9	7	1.2E-02
5015.3	7	9	5.4E-03
5040.4	3	5	5.2E-03
5053.3	3	3	1.9E-02
5071.5	13	11	3.4E-03
5117.6	11	11	1.61E-03
5124.2	5	5	4.0E-03
5141.2	7	9	1.12E-03
5224.7	7	5	1.2E-02
5243.0	9	7	1.1E-02
5254.5	7	5	3.86E-03
5268.6	9	9	1.4E-03
5500.5	11	9	6.9E-03
5514.7	5	3	7.3E-03
5537.7	9	11	2.2E-03
5617.1	7	7	1.47E-03
5631.9	9	7	1.43E-03
5660.7	13	11	6.8E-03
5675.4	5	5	2.20E-03
5796.5	9	7	2.21E-03
5891.6	7	7	1.47E-03
5947.6	5	7	2.40E-03
5965.9	7	5	1.0E-02
6021.5	5	3	8.7E-03
6081.4	5	3	4.7E-03
6203.5	7	7	3.0E-03
6285.9	7	5	6.6E-03
6292.0	3	5	2.26E-03
6303.2	9	9	1.84E-03
6404.2	5	7	1.50E-03
6439.7	9	9	1.29E-03
6445.1	7	5	6.4E-03
6532.4	3	5	4.6E-03
6538.1	11	9	2.7E-03
6563.2	5	5	2.04E-03
6814.9	9	9	1.46E-03
7285.8	13	11	1.47E-03
7569.9	5	3	3.73E-03
7664.9	5	3	3.80E-03
8017.2	5	7	1.6E-03
8358.7	5	7	1.89E-03
9381.4	9	7	1.53E-03
Uranium			
U I			
3553.0	13	13	2.0E-02
3553.0	9	7	1.4E-02
3553.4	15	13	2.2E-02
3554.5	11	9	8.4E-03
3554.9	15	17	7.9E-03
3555.3	13	15	2.7E-02
3555.8	13	11	4.1E-03
3556.9	13	11	7.5E-03

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
3557.8	13	13	2.9E-02
3558.0	11	13	1.6E-02
3558.6	9	7	3.9E-02
3559.4	7	9	1.5E-02
3560.3	9	7	6.4E-02
3561.4	15	13	5.5E-02
3561.5	9	9	2.5E-02
3561.8	13	11	5.7E-02
3563.7	13	13	2.9E-02
3563.8	7	7	1.1E-02
3565.0	13	11	2.9E-02
3566.0	13	15	1.7E-02
3566.6	11	11	2.4E-01
3568.8	13	13	3.8E-02
3569.1	17	15	1.1E-01
3569.4	9	9	1.5E-02
3570.1	13	11	1.3E-02
3570.2	11	9	5.3E-03
3570.6	13	15	2.7E-02
3570.7	15	15	1.2E-02
3571.2	11	11	6.3E-03
3571.6	17	15	1.3E-01
3572.9	13	15	1.5E-02
3573.9	13	11	4.0E-02
3574.1	13	15	3.5E-02
3574.8	13	15	1.9E-02
3577.1	17	15	4.3E-02
3577.5	15	13	7.8E-03
3577.8	11	11	8.3E-03
3577.9	13	13	2.3E-02
3578.3	13	11	2.0E-02
3580.0	9	9	1.2E-02
3580.2	11	9	2.9E-02
3580.4	11	13	7.5E-03
3580.9	13	13	2.1E-02
3582.6	13	13	2.9E-02
3584.6	7	5	2.4E-02
3584.9	13	15	1.8E-01
3585.4	11	11	1.9E-02
3585.8	11	9	2.8E-02
3587.8	9	11	1.3E-02
3588.3	7	9	1.8E-02
3589.7	11	13	2.1E-02
3589.8	15	13	5.9E-02
3590.7	9	7	2.2E-02
3591.7	11	9	5.3E-02
3593.0	11	11	1.4E-02
3593.2	13	15	4.2E-02
3593.7	11	11	7.2E-02
Vanadium			
V I			
3043.12	6	8	2.3E-01
3050.39	10	8	5.3E-01
3053.65	4	4	1.3E+00
3056.33	6	6	1.3E+00
3060.46	8	8	1.4E+00
3066.37	10	10	2.1E+00
3066.53	6	4	3.2E-01
3075.93	4	6	2.8E-01
3080.33	2	4	2.7E-01
3083.54	6	8	2.5E-01
3087.06	2	2	9.2E-01
3088.11	4	6	4.9E-01
3089.13	4	4	5.3E-01
3093.79	6	6	4.1E-01
3094.69	2	4	4.3E-01
3112.92	4	2	5.0E-01
3183.41	6	8	2.4E+00
3183.96	8	10	2.5E+00
3183.98	4	6	2.4E+00
3185.38	10	12	2.7E+00
3198.01	6	6	3.9E-01
3202.39	8	8	4.0E-01
3205.58	8	10	1.3E+00
3207.41	10	10	2.6E-01
3212.43	10	12	1.4E+00
3218.87	8	6	3.5E-01
3233.19	10	8	3.2E-01
3273.03	8	8	2.7E-01
3284.36	10	10	2.8E-01
3309.18	4	4	3.2E-01
3329.85	6	4	7.7E-01
3356.35	4	6	3.1E-01
3365.55	2	4	4.8E-01
3376.05	4	4	3.2E-01
3377.39	4	2	9.0E-01
3377.62	6	6	6.0E-01
3397.58	6	4	2.3E-01
3400.39	8	8	2.5E-01
3529.73	4	6	4.1E-01
3533.68	6	8	5.2E-01
3533.76	2	4	3.7E-01
3543.49	2	2	6.7E-01
3545.33	4	4	3.7E-01
3553.27	6	6	2.2E-01
3555.14	4	2	2.6E-01
3663.60	4	6	3.1E+00
3667.74	6	8	2.7E+00
3672.41	12	12	9.2E-01
3673.41	8	10	2.7E+00
3676.70	14	14	1.3E+00
3680.12	10	12	2.2E+00
3686.26	10	12	2.3E-01
3687.50	12	14	2.9E+00
3688.07	8	8	3.5E-01
3690.28	2	4	4.5E-01
3692.22	6	6	5.4E-01
3695.34	14	16	2.8E+00
3695.86	4	4	6.6E-01
3703.57	10	8	9.2E-01
3704.70	8	6	6.6E-01
3705.04	6	4	3.6E-01
3706.03	10	10	5.2E-01
3708.71	12	12	4.4E-01
3790.46	10	8	2.3E-01
3794.96	10	10	2.3E-01
3806.79	10	10	2.5E-01
3818.24	4	2	6.73E-01
3828.56	6	4	5.33E-01
3840.75	8	6	5.48E-01
3855.36	4	4	3.30E-01
3855.85	10	8	5.78E-01
3863.86	8	6	3.1E-01
3864.86	6	6	2.70E-01
3871.07	10	8	2.8E-01
3875.07	8	8	2.36E-01
3902.26	10	10	2.68E-01
3921.86	4	2	2.7E-01
3922.43	6	6	2.6E-01
3930.02	10	10	3.3E-01
3934.01	8	8	6.2E-01
3992.80	12	10	1.2E+00
3998.73	14	12	1.0E+00
4050.96	10	10	1.4E+00
4051.35	12	12	1.3E+00
4090.57	8	10	8.5E-01
4092.68	8	10	2.30E-01
4095.48	6	8	7.2E-01
4099.78	6	8	4.10E-01
4102.15	4	6	7.1E-01
4104.77	10	8	2.1E+00
4105.16	4	6	4.9E-01
4109.78	2	4	5.00E-01
4111.78	10	10	1.01E+00
4115.18	8	8	5.80E-01
4116.47	6	6	3.2E-01
4116.59	2	2	2.90E-01
4123.50	4	2	1.00E+00
4128.06	6	4	7.70E-01
4131.99	8	6	5.5E-01
4134.49	10	8	2.90E-01
4232.46	10	10	9.8E-01
4232.95	8	8	7.7E-01
4268.64	14	14	1.2E+00
4271.55	12	12	9.6E-01
4276.95	10	10	9.4E-01
4284.05	8	8	1.2E+00
4291.82	12	14	8.8E-01
4296.10	10	12	7.7E-01
4297.67	8	10	7.0E-01
4298.03	6	8	7.8E-01
4379.23	10	12	1.1E+00
4384.71	8	10	1.1E+00
4389.98	6	8	6.9E-01
4395.22	4	6	5.5E-01
4400.57	2	4	3.4E-01
4406.64	10	10	2.2E-01
4407.63	8	8	4.4E-01
4408.20	6	6	6.0E-01
4416.47	4	2	2.6E-01
4452.01	14	16	9.2E-01
4457.75	10	12	2.7E-01
4460.33	10	8	3.0E-01
4462.36	12	14	7.6E-01
4468.00	8	10	2.3E-01
4469.71	10	12	6.2E-01

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
4474.04	10	8	4.7E-01
4496.06	8	6	4.0E-01
4514.18	6	4	3.3E-01
4524.21	12	10	3.0E-01
4525.17	4	2	4.1E-01
4529.58	10	8	2.4E-01
4545.40	10	12	7.6E-01
4560.72	8	10	7.0E-01
4571.79	6	8	6.0E-01
4578.73	4	6	6.8E-01
4706.16	6	4	2.4E-01
4757.47	4	2	7.6E-01
4766.62	6	4	5.6E-01
4776.36	8	6	5.1E-01
4786.50	10	8	4.7E-01
4796.92	12	10	4.8E-01
4807.52	14	12	5.8E-01
5193.00	12	12	4.0E-01
5195.39	8	8	2.3E-01
5234.08	10	10	4.9E-01
5240.87	12	12	4.3E-01
5415.25	12	14	3.1E-01
5487.91	12	10	2.9E-01
5507.75	10	8	3.5E-01
6090.21	8	6	2.60E-01
V II			
2527.90	13	13	6.1E-01
2528.47	9	9	5.2E-01
2528.83	11	11	5.3E-01
2554.04	9	9	5.4E-01
2589.10	9	9	7.7E-01
2640.86	5	7	1.2E+00
2677.80	3	5	3.4E-01
2679.33	7	7	3.4E-01
2683.09	1	3	3.4E-01
2687.96	9	9	7.6E-01
2689.88	3	1	9.2E-01
2690.25	7	5	3.4E-01
2690.79	5	3	5.2E-01
2700.94	9	11	3.5E-01
2706.17	7	9	3.4E-01
2734.22	9	7	6.2E-01
2753.41	13	11	4.2E-01
2784.20	9	9	1.3E+00
2787.91	7	9	5.0E-01
2825.86	9	7	1.2E+00
2843.82	7	5	9.9E-01
2847.57	9	7	4.6E-01
2854.34	11	9	5.0E-01
2862.31	11	11	3.6E-01
2868.11	5	3	2.1E+00
2869.13	13	11	4.8E-01
2882.49	5	5	4.2E-01
2884.78	3	3	5.6E-01
2889.61	3	1	1.9E+00
2891.64	5	3	1.4E+00
2892.43	9	9	3.6E-01
2892.65	7	5	1.3E+00
2893.31	9	7	1.2E+00
2903.07	3	5	3.4E-01
2906.45	7	7	7.8E-01
2908.81	11	9	1.6E+00
2910.01	5	5	1.1E+00
2910.38	3	3	1.2E+00
2911.05	7	9	3.7E-01
2912.46	11	9	5.0E-01
2915.88	9	7	4.9E-01
2924.02	11	11	1.7E+00
2924.63	9	9	1.2E+00
2930.80	7	7	5.8E-01
2941.37	11	9	3.5E-01
2944.57	9	7	7.6E-01
2948.08	9	11	4.0E-01
2952.07	7	5	7.2E-01
2955.58	7	9	3.3E-01
2968.37	7	9	7.0E-01
2972.26	5	7	5.2E-01
2973.98	9	11	3.5E-01
2985.18	7	9	4.4E-01
3001.20	7	7	7.5E-01
3014.82	5	3	8.9E-01
3016.78	7	5	5.0E-01
3020.21	9	7	5.0E-01
3048.21	11	13	7.0E-01
3063.25	9	11	1.0E+00
3100.94	7	7	5.8E-01
3113.56	11	11	5.0E-01
3122.89	11	13	7.6E-01
3134.93	13	13	5.9E-01
3136.50	11	11	5.3E-01
3139.73	9	9	5.2E-01
3151.32	3	5	4.4E-01
3190.69	9	9	3.3E-01
3250.78	11	9	5.2E-01
3251.87	5	7	3.5E-01
3271.12	7	9	6.9E-01
3276.12	9	11	5.2E-01
3279.84	9	11	5.8E-01
3287.71	5	7	7.5E-01
3337.85	5	7	5.3E-01
3517.30	9	7	3.8E-01
3530.77	5	3	4.5E-01
3545.19	7	5	4.3E-01
3556.80	9	7	5.1E-01
3592.01	7	5	4.4E-01
3618.92	3	5	3.3E-01
V III			
2318.06	8	10	4.6E+00
2323.82	6	8	3.8E+00
2330.42	10	10	3.2E+00
2331.75	8	8	2.5E+00
2334.21	6	6	2.2E+00
2337.13	4	4	2.7E+00
2343.10	6	8	3.6E+00
2358.73	6	8	4.2E+00
2366.31	8	10	4.2E+00
2371.06	10	12	5.2E+00
2373.06	4	6	2.9E+00
2382.46	8	10	5.0E+00
2393.58	6	8	4.3E+00
2404.18	4	6	2.5E+00
2516.14	10	10	3.7E+00
2521.55	8	8	3.5E+00
2548.21	6	4	2.0E+00
2554.22	8	6	1.2E+00
2593.05	6	6	2.8E+00
2595.10	8	8	2.8E+00
V IV			
677.345	9	9	6.7E+00
680.632	9	7	1.2E+01
681.145	7	5	1.1E+01
682.455	7	7	6.5E+00
682.923	5	5	6.9E+00
684.450	7	5	7.7E+00
691.530	5	3	1.1E+01
723.537	3	1	1.5E+01
724.068	5	5	1.1E+01
724.809	5	3	5.6E+00
737.854	9	7	2.4E+01
750.110	5	5	1.0E+01
884.146	1	3	4.7E+00
1071.05	5	5	6.1E+00
1110.72	3	3	5.0E+00
1112.20	7	7	6.3E+00
1112.44	5	5	5.0E+00
1127.84	7	5	8.9E+00
1131.26	9	7	9.4E+00
1194.46	7	5	1.0E+01
1226.52	5	5	1.5E+01
1243.72	3	1	9.4E+00
1247.07	5	3	4.7E+00
1272.97	3	1	2.7E+01
1304.17	3	5	1.5E+01
1305.42	5	7	7.0E+00
1308.06	7	9	7.9E+00
1309.50	5	5	8.7E+00
1312.72	7	7	8.6E+00
1317.57	5	7	8.7E+00
1321.92	7	9	9.9E+00
1326.81	3	5	4.0E+00
1329.29	5	5	1.5E+01
1329.97	3	3	4.8E+00
1330.36	1	3	6.0E+00
1331.67	3	1	1.7E+01
1332.46	5	3	7.5E+00
1334.49	9	9	8.3E+00
1355.13	7	9	2.5E+01
1356.53	5	3	4.9E+00
1395.00	5	7	1.4E+01
1400.42	5	7	7.5E+00
1403.62	7	9	8.4E+00
1412.69	3	3	1.1E+01
1414.41	5	7	1.2E+01
1414.84	5	5	4.6E+00

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
1418.53	7	7	5.2E+00
1419.58	7	9	1.3E+01
1423.72	3	5	7.1E+00
1426.65	9	11	2.2E+01
1429.11	5	5	5.0E+00
1434.84	7	7	5.4E+00
1451.04	3	3	7.0E+00
1454.00	5	3	1.1E+01
1520.14	5	7	7.2E+00
1522.49	3	5	5.5E+00
1601.92	3	3	1.2E+01
1611.88	7	7	5.2E+00
1806.18	5	3	7.3E+00
1809.85	3	1	7.2E+00
1817.68	5	3	4.8E+00
1825.84	7	5	5.3E+00
1861.56	5	7	6.6E+00
1939.07	7	9	5.8E+00
1951.43	5	7	5.0E+00
1963.10	3	5	4.8E+00
1997.72	7	7	4.7E+00
2084.43	5	5	4.0E+00
2120.05	7	9	8.1E+00
2141.20	3	5	7.0E+00
2146.83	7	9	6.6E+00
2149.85	5	7	5.1E+00
2151.09	7	9	4.3E+00
2155.34	11	13	1.2E+01
2446.80	9	11	5.3E+00
2570.72	9	11	7.6E+00
3284.56	7	9	5.3E+00
3496.42	7	9	4.4E+00
3514.25	9	11	4.7E+00
Xenon			
Xe I			
1043.8	1	3	5.9E-01
1047.1	1	3	1.3E+00
1050.1	1	3	8.5E-02
1056.1	1	3	2.45E+00
1061.2	1	3	1.9E-01
1068.2	1	3	3.99E+00
1085.4	1	3	4.10E-01
1099.7	1	3	4.34E-01
1110.7	1	3	1.5E+00
1129.3	1	3	4.4E-02
1170.4	1	3	1.6E+00
1192.0	1	3	6.2E+00
1250.2	1	3	1.4E-01
1295.6	1	3	2.46E+00
1469.6	1	3	2.81E+00
4501.0	5	3	6.2E-03
4524.7	5	5	2.1E-03
4624.3	5	5	7.2E-03
4671.2	5	7	1.0E-02
4807.0	3	1	2.4E-02
7119.6	7	9	6.6E-02
7967.3	1	3	3.0E-03
8409.2	5	3	1.0E-02
Xe II			
4180.1	4	4	2.2E+00
4330.5	6	8	1.4E+00
4414.8	6	6	1.0E+00
4603.0	4	4	8.2E-01
4844.3	6	8	1.1E+00
4876.5	6	8	6.3E-01
5260.4	2	4	2.2E-01
5262.0	4	4	8.5E-01
5292.2	6	6	8.9E-01
5372.4	4	2	7.1E-01
5419.2	4	6	6.2E-01
5439.0	4	2	7.4E-01
5472.6	8	8	9.9E-02
5531.1	8	6	8.8E-02
5719.6	4	6	6.1E-02
5976.5	4	4	2.8E-01
6036.2	6	6	7.5E-02
6051.2	8	6	1.7E-01
6097.6	6	4	2.6E-01
6270.8	4	6	1.8E-01
6277.5	4	6	3.6E-02
6805.7	8	6	6.1E-02
6990.9	10	8	2.7E-01
Ytterbium			
Yb I			
2464.5	1	3	9.1E-01
2672.0	1	3	1.18E-01
3464.4	1	3	6.2E-01
3988.0	1	3	1.76E+00
5556.5	1	3	1.14E-02
Yb II			
3289.4	2	4	1.8E+00
3694.2	2	2	1.4E+00
Yttrium			
Y I			
2948.41	4	4	3.5E-01
2974.59	4	6	3.5E-01
2984.25	6	8	4.8E-01
2995.26	6	4	5.1E-02
2996.94	4	6	8.4E-02
3005.26	4	4	4.8E-02
3022.28	6	6	6.6E-02
3045.36	6	6	1.07E-01
3053.95	6	4	1.9E-03
3155.65	4	6	2.7E-03
3172.84	4	4	9.9E-03
3185.96	6	8	1.2E-03
3209.38	6	6	3.0E-03
3227.16	6	4	1.10E-03
3484.05	4	6	1.2E-02
3549.66	6	6	1.0E-03
3552.69	4	4	2.3E-01
4077.36	4	6	1.1E+00
4083.71	4	4	2.5E-01
4102.36	6	8	1.3E+00
4128.30	6	6	1.6E+00
4142.84	4	4	1.6E+00
4167.51	6	6	2.38E-01
4235.93	6	4	3.0E-01
4352.40	4	4	6.7E-03
4379.33	6	4	7.83E-01
4385.47	4	4	6.9E-02
4394.01	8	8	1.9E-02
4409.70	4	6	2.7E-03
4417.43	10	8	3.2E-02
4437.34	6	6	8.64E-02
4443.65	10	8	1.1E-01
4459.01	4	6	1.8E-02
4476.95	8	6	2.8E-01
4491.74	10	10	2.3E-02
4514.01	4	6	3.34E-01
4527.78	8	6	8.33E-01
4534.09	6	8	4.4E-02
4544.31	6	6	4.10E-01
4559.36	2	4	4.0E-01
4581.33	6	4	1.5E-01
4613.00	6	4	1.8E-01
4643.70	4	6	1.8E-01
4653.78	4	6	1.6E-01
4674.85	6	8	1.3E-01
4725.84	4	4	1.5E-01
4762.96	6	4	4.2E-02
4780.16	2	4	8.9E-02
4781.03	8	10	1.0E-01
4799.30	6	8	1.6E-01
4804.31	6	4	2.6E-01
4804.80	4	4	3.84E-01
4821.63	6	6	1.0E-01
4845.67	8	8	6.8E-01
4852.68	6	6	6.2E-01
4856.71	6	6	2.0E-01
4859.84	4	4	7.26E-01
4893.44	6	4	2.2E-01
4900.08	8	6	2.0E-01
4906.11	10	8	1.2E-01
4950.01	8	6	2.0E-02
4963.49	4	4	1.4E-02
4981.97	4	6	4.7E-03
5004.44	6	4	1.2E-02
5205.01	4	4	8.4E-03
5258.47	6	6	2.9E-03
5271.82	8	6	1.1E-02
5380.63	6	4	3.2E-01
5381.24	4	4	9.9E-03
5388.39	6	8	1.1E-02
5390.81	8	6	2.9E-02
5401.88	6	8	6.0E-03
5424.36	6	4	3.47E-01
5466.24	4	4	1.0E-01
5466.47	10	12	6.3E-01
5469.10	4	6	3.6E-03
5513.65	6	6	2.39E-01
5519.88	4	6	1.2E-02
5526.43	6	4	3.9E-03

λ Å	Weights g_i	Weights g_k	A 10^8 s^{-1}
5527.56	8	10	5.4E-01
5541.63	8	8	5.2E-02
5551.00	4	4	6.9E-02
5573.03	6	4	1.8E-02
5594.12	6	8	5.0E-02
5606.34	10	10	5.84E-02
5619.96	6	4	2.0E-02
5630.14	4	6	4.9E-01
5641.78	2	4	1.9E-02
5675.27	6	6	9.3E-02
5675.64	4	6	4.3E-02
5693.63	4	4	1.1E-01
5714.94	8	6	2.0E-02
5729.25	6	6	2.2E-03
5732.09	6	6	7.5E-02
5740.22	8	6	4.0E-02
5757.59	4	6	7.6E-03
5788.36	4	4	9.4E-03
5844.13	6	4	5.6E-03
5879.93	4	2	8.5E-02
5902.91	6	8	4.0E-02
6087.94	6	4	1.1E-01
6191.72	4	4	4.7E-02
6222.58	4	6	5.9E-03
6402.01	6	4	2.7E-03
6435.02	6	6	4.0E-02
6437.17	10	8	4.8E-02
6538.57	10	10	1.5E-01
6622.48	8	6	4.5E-03
6815.15	2	4	7.18E-02
7009.89	2	4	4.4E-02
7035.15	4	4	6.3E-02
Y II			
3112.03	1	3	1.3E-02
3179.42	3	5	3.8E-02
3195.62	3	3	8.23E-01
3200.27	5	5	4.8E-01
3203.32	3	1	2.77E+00
3216.69	5	3	2.0E+00
3242.28	7	5	2.0E+00
3448.81	5	5	4.1E-02
3467.88	5	3	2.7E-02
3496.08	1	3	3.49E-01
3549.01	5	7	3.97E-01
3584.51	3	5	4.02E-01
3600.74	7	7	1.4E+00
3601.91	3	3	1.13E+00
3611.04	5	5	1.04E+00
3628.70	5	3	3.3E-01
3664.62	7	5	3.7E-01
3710.29	7	9	1.5E+00
3747.55	3	3	1.9E-01
3774.34	5	7	1.1E+00
3776.56	5	3	2.42E-01
3788.70	3	5	8.1E-01
3818.34	5	5	9.70E-02
3832.90	7	7	3.0E-01
3878.29	7	5	2.9E-02
3930.66	5	5	2.1E-02
3950.36	3	5	2.80E-01
3951.59	5	3	1.5E-02
3982.60	5	5	2.7E-01
4124.91	5	7	1.8E-02
4177.54	5	5	5.27E-01
4199.27	3	5	5.36E-03
4204.69	1	3	2.20E-02
4235.73	5	5	2.3E-02
4309.62	7	5	1.29E-01
4358.73	3	3	5.55E-02
4374.95	5	5	9.97E-01
4398.01	5	3	1.16E-01
4422.59	3	1	1.83E-01
4682.33	5	5	1.9E-02
4786.58	7	7	2.1E-02
4823.31	5	5	4.3E-02
4854.87	5	3	3.9E-01
4881.44	5	3	1.5E-03
4883.69	9	7	4.7E-01
4900.11	7	5	4.51E-01
4982.13	7	9	1.5E-02
5087.42	9	9	2.0E-01
5119.11	5	7	1.6E-02
5200.41	5	5	1.3E-01
5205.73	7	7	1.6E-01
5289.82	7	5	6.7E-03
5320.78	9	7	3.9E-03
5473.39	3	5	4.3E-02
5480.73	1	3	7.62E-02
5497.41	5	5	1.2E-01
5509.90	5	5	4.24E-02
5544.61	3	1	1.8E-01
5546.01	5	3	5.8E-02
5728.89	5	5	3.0E-02
6613.74	5	7	1.7E-02
6832.48	5	5	3.3E-03
7264.16	5	3	1.3E-02
Zinc			
Zn I			
748.29	1	3	6.0E-02
765.60	1	3	7.6E-02
792.05	1	3	5.7E-02
793.85	1	3	1.8E-01
809.92	1	3	2.6E-01
1109.1	1	3	3.05E-01
2138.6	1	3	7.09E+00
3075.9	1	3	3.29E-04
3282.3	1	3	9.0E-01
3302.6	3	5	1.2E+00
3302.9	3	3	6.7E-01
3345.0	5	7	1.7E+00
3345.6	5	5	4.0E-01
3345.9	5	3	4.5E-02
6362.3	3	5	4.74E-01
11054	3	1	2.43E-01
Zn II			
2025.5	2	4	3.3E+00
2064.2	2	4	4.6E+00
2099.9	4	6	5.6E+00
2102.2	4	4	9.3E-01
4911.6	4	6	1.6E+00