

Predicted XUV Line Intensities  
CHIANTI database - Version 11.0

Calculated with Constant pressure= 1.00e+16 (cm<sup>-3</sup> K)  
150.1 to 910.9 Å

Number of lines: 496

Minimum intensity = 1270.00

Units are: erg cm<sup>-2</sup> sr<sup>-1</sup> s<sup>-1</sup>

Lines marked with a "s" are satellite lines from autoionizing levels.

Lines marked with a \* do not have observed energy levels  
and have approximate wavelengths.

Calculated: Tue Dec 3 11:04:58 2024

Ionization Fractions file: temp.ioneq  
ionization equilibrium filename: temp.ioneq  
the following ions have advanced models:  
c\_1 included in density effects model  
c\_2 included in density effects model  
c\_3 included in density effects model  
c\_4 included in density effects model  
c\_5 included in density effects model  
n\_1 included in density effects model  
n\_2 included in density effects model  
n\_3 included in density effects model  
n\_4 included in density effects model  
n\_5 included in density effects model  
n\_6 included in density effects model  
o\_1 included in density effects model  
o\_2 included in density effects model  
o\_3 included in density effects model  
o\_4 included in density effects model  
o\_5 included in density effects model  
o\_6 included in density effects model  
o\_7 included in density effects model  
ne\_1 included in density effects model  
ne\_2 included in density effects model  
ne\_3 included in density effects model  
ne\_4 included in density effects model  
ne\_5 included in density effects model  
ne\_6 included in density effects model  
ne\_7 included in density effects model  
ne\_8 included in density effects model  
ne\_9 included in density effects model  
mg\_1 included in density effects model

mg\_2 included in density effects model  
mg\_3 included in density effects model  
mg\_4 included in density effects model  
mg\_5 included in density effects model  
mg\_6 included in density effects model  
mg\_7 included in density effects model  
mg\_8 included in density effects model  
mg\_9 included in density effects model  
mg\_10 included in density effects model  
mg\_11 included in density effects model  
si\_1 included in density effects model  
si\_2 included in density effects model  
si\_3 included in density effects model  
si\_4 included in density effects model  
si\_5 included in density effects model  
si\_6 included in density effects model  
si\_7 included in density effects model  
si\_8 included in density effects model  
si\_9 included in density effects model  
si\_10 included in density effects model  
si\_11 included in density effects model  
si\_12 included in density effects model  
si\_13 included in density effects model  
s\_1 included in density effects model  
s\_2 included in density effects model  
s\_3 included in density effects model  
s\_4 included in density effects model  
s\_5 included in density effects model  
s\_6 included in density effects model  
s\_7 included in density effects model  
s\_8 included in density effects model  
s\_9 included in density effects model  
s\_10 included in density effects model  
s\_11 included in density effects model  
s\_12 included in density effects model  
s\_13 included in density effects model  
s\_14 included in density effects model  
s\_15 included in density effects model

Model used constant pressure= 1.00000e+16

Produced as part of the CHIANTI atomic data base collaboration

Created on Tue Dec 3 11:03:31 2024

Elemental Abundance file: sun\_photospheric\_2021\_asplund.abund  
created for the CHIANTI atomic database by Enrico Landi, 21-Jul-2022

abundances: Asplund, M., Amarsi, A.M., & Grevesse, N. 2021, A&A, 653, A141

comment: This compilation upgrades Asplund et al. (2009) with the advances in

photospheric modeling and atomic data in the last decade. Notably, it preserves a low O abundance but increases Ne/O to 0.24, in line with Young 2018 and Landi & Testa 2017 determinations in the solar atmosphere.

Minimum abundance = 3.63078e-08

Differential Emission Measure file: flare\_ext.dem

filename: flare.dem

dem: Dere, K.P., Cook, J.W., 1979, ApJ, 229, 772

comment: composite of August 9 1553 and 1554 UT data of an M2 X-ray class flare

comment: modifies at high temperature (7.3 to 8.0) by G.Del Zanna to calculate

the emissivities of the hottest ions.

produced as part of the Arcetri/Cambridge/NRL 'CHIANTI' atomic data base collaboration

K.P.Dere and G. Del Zanna - Aug 2002

Calculation performed with population lookup tables.

Table 1: *Line List*

Ion	$\lambda$ (Å)	Transition	T <sub>max</sub>	Int
O VI	150.0890	1s <sup>2</sup> 2s <sup>2</sup> S <sub>1/2</sub> - 1s <sup>2</sup> 3p <sup>2</sup> P <sub>3/2</sub>	5.45	3.01e+03
O VI	150.1250	1s <sup>2</sup> 2s <sup>2</sup> S <sub>1/2</sub> - 1s <sup>2</sup> 3p <sup>2</sup> P <sub>1/2</sub>	5.45	1.50e+03
Fe XXII	151.5610	1s <sup>2</sup> 2s 2p <sup>2</sup> <sup>2</sup> D <sub>3/2</sub> - 1s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> D <sub>3/2</sub>	7.10	1.34e+03
Fe XIX	151.6070	1s <sup>2</sup> 2s <sup>2</sup> 2p <sup>4</sup> <sup>1</sup> S <sub>0</sub> - 1s <sup>2</sup> 2s 2p <sup>5</sup> <sup>3</sup> P <sub>1</sub>	7.00	2.53e+03
Fe XXI	151.6720	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 2s 2p <sup>3</sup> <sup>3</sup> D <sub>1</sub>	7.10	4.93e+03
Ni XII	152.1510	3s <sup>2</sup> 3p <sup>5</sup> <sup>2</sup> P <sub>3/2</sub> - 3s <sup>2</sup> 3p <sup>4</sup> 3d <sup>2</sup> D <sub>5/2</sub>	6.30	1.53e+03
Fe XXIII	154.3030	2s 2p <sup>3</sup> P <sub>1</sub> - 2p <sup>2</sup> <sup>3</sup> P <sub>1</sub>	7.15	4.03e+03
Cr XX	156.0180	2s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> D <sub>3/2</sub>	7.05	8.27e+03
Fe XXII	156.0200	1s <sup>2</sup> 2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 1s <sup>2</sup> 2s 2p <sup>2</sup> <sup>2</sup> D <sub>5/2</sub>	7.10	2.35e+04
Ni XIII	157.7290	3s <sup>2</sup> 3p <sup>4</sup> <sup>3</sup> P <sub>2</sub> - 3s <sup>2</sup> 3p <sup>3</sup> <sup>(4)</sup> S 3d <sup>3</sup> D <sub>3</sub>	6.35	1.59e+03
Ca XIII	161.7420	2s <sup>2</sup> 2p <sup>4</sup> <sup>3</sup> P <sub>2</sub> - 2s 2p <sup>5</sup> <sup>3</sup> P <sub>2</sub>	6.60	1.87e+03
Fe XX	162.8150	2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> D <sub>3/2</sub> - 2s 2p <sup>4</sup> <sup>4</sup> P <sub>5/2</sub>	7.05	1.90e+04
Ca XVI	164.1660	2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> P <sub>3/2</sub>	6.80	3.32e+03
Ni XXVI	165.4060	1s <sup>2</sup> 2s <sup>2</sup> S <sub>1/2</sub> - 1s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub>	7.35	5.81e+04
Fe XXIII	166.6860	2s 2p <sup>3</sup> P <sub>2</sub> - 2p <sup>2</sup> <sup>3</sup> P <sub>2</sub>	7.15	3.46e+03
Ca XVI	167.4370	2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> P <sub>1/2</sub>	6.80	2.14e+03
Fe VIII	167.4860	3s <sup>2</sup> 3p <sup>6</sup> 3d <sup>2</sup> D <sub>3/2</sub> - 3s <sup>2</sup> 3p <sup>5</sup> 3d <sup>2</sup> <sup>2</sup> D <sub>3/2</sub>	5.70	4.84e+03
Fe VIII	168.1720	3s <sup>2</sup> 3p <sup>6</sup> 3d <sup>2</sup> D <sub>5/2</sub> - 3s <sup>2</sup> 3p <sup>5</sup> 3d <sup>2</sup> <sup>2</sup> D <sub>5/2</sub>	5.70	7.69e+03
Fe VIII	168.5440	3s <sup>2</sup> 3p <sup>6</sup> 3d <sup>2</sup> D <sub>5/2</sub> - 3s <sup>2</sup> 3p <sup>5</sup> 3d <sup>2</sup> <sup>2</sup> P <sub>3/2</sub>	5.70	4.61e+03
Ca XVI	168.8680	2s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> S <sub>1/2</sub>	6.80	9.60e+03
Fe VIII	168.9290	3s <sup>2</sup> 3p <sup>6</sup> 3d <sup>2</sup> D <sub>3/2</sub> - 3s <sup>2</sup> 3p <sup>5</sup> 3d <sup>2</sup> <sup>2</sup> P <sub>1/2</sub>	5.70	2.42e+03
Ti XIX	169.5800	2s <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 2s 2p <sup>1</sup> P <sub>1</sub>	7.00	5.60e+03
Fe IX	169.9100	3s <sup>2</sup> 3p <sup>5</sup> 3d <sup>3</sup> F <sub>4</sub> - 3s <sup>2</sup> 3p <sup>4</sup> 3d <sup>2</sup> <sup>3</sup> F <sub>4</sub>	5.95	1.40e+03
Fe IX	171.0730	3s <sup>2</sup> 3p <sup>6</sup> <sup>1</sup> S <sub>0</sub> - 3s <sup>2</sup> 3p <sup>5</sup> 3d <sup>1</sup> P <sub>1</sub>	5.95	2.49e+04
Ni XIV	171.3700	3s <sup>2</sup> 3p <sup>3</sup> <sup>4</sup> S <sub>3/2</sub> - 3s <sup>2</sup> 3p <sup>2</sup> <sup>(3)</sup> P 3d <sup>4</sup> P <sub>5/2</sub>	6.40	1.30e+03
Fe XX	171.7250	2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> P <sub>1/2</sub> - 2s 2p <sup>4</sup> <sup>4</sup> P <sub>1/2</sub>	7.05	1.71e+03
O V	172.1690	2s <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 2s 3p <sup>1</sup> P <sub>1</sub>	5.35	2.87e+03
O VI	172.9350	1s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 1s <sup>2</sup> 3d <sup>2</sup> D <sub>3/2</sub>	5.45	2.33e+03
O VI	173.0790	1s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 1s <sup>2</sup> 3d <sup>2</sup> D <sub>5/2</sub>	5.45	4.19e+03
Fe XXIII	173.3180	2s 2p <sup>3</sup> P <sub>1</sub> - 2p <sup>2</sup> <sup>3</sup> P <sub>0</sub>	7.15	1.88e+03
Fe XX	173.4050	2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> D <sub>5/2</sub> - 2s 2p <sup>4</sup> <sup>4</sup> P <sub>5/2</sub>	7.05	7.88e+03
Fe X	174.5310	3s <sup>2</sup> 3p <sup>5</sup> <sup>2</sup> P <sub>3/2</sub> - 3s <sup>2</sup> 3p <sup>4</sup> 3d <sup>2</sup> D <sub>5/2</sub>	6.05	1.05e+04
Fe X	175.2630	3s <sup>2</sup> 3p <sup>5</sup> <sup>2</sup> P <sub>1/2</sub> - 3s <sup>2</sup> 3p <sup>4</sup> 3d <sup>2</sup> D <sub>3/2</sub>	6.05	3.65e+03
Ni XIX	175.9940	2s <sup>2</sup> 2p <sup>5</sup> 3s <sup>1</sup> P <sub>1</sub> - 2s <sup>2</sup> 2p <sup>5</sup> 3p <sup>1</sup> S <sub>0</sub>	7.00	1.70e+03
Ca XV	176.9220	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>1</sub> - 2s 2p <sup>3</sup> <sup>3</sup> P <sub>1</sub>	6.70	1.59e+03
Fe IX	176.9450	3s <sup>2</sup> 3p <sup>5</sup> 3d <sup>3</sup> F <sub>4</sub> - 3s <sup>2</sup> 3p <sup>4</sup> 3d <sup>2</sup> <sup>3</sup> D <sub>3</sub>	5.95	1.37e+03
Fe X	177.2400	3s <sup>2</sup> 3p <sup>5</sup> <sup>2</sup> P <sub>3/2</sub> - 3s <sup>2</sup> 3p <sup>4</sup> 3d <sup>2</sup> P <sub>3/2</sub>	6.05	6.04e+03
Co XXV	178.2210	2s <sup>2</sup> S <sub>1/2</sub> - 2p <sup>2</sup> P <sub>3/2</sub>	7.30	3.43e+03
Fe XI	179.7580	3s <sup>2</sup> 3p <sup>4</sup> <sup>1</sup> D <sub>2</sub> - 3s <sup>2</sup> 3p <sup>3</sup> 3d <sup>1</sup> F <sub>3</sub>	6.10	2.64e+03
Fe XXIII	180.0400	2s 2p <sup>3</sup> P <sub>2</sub> - 2p <sup>2</sup> <sup>3</sup> P <sub>1</sub>	7.15	3.67e+03
Fe XI	180.4010	3s <sup>2</sup> 3p <sup>4</sup> <sup>3</sup> P <sub>2</sub> - 3s <sup>2</sup> 3p <sup>3</sup> 3d <sup>3</sup> D <sub>3</sub>	6.15	1.08e+04
Fe X	180.4410	3s <sup>2</sup> 3p <sup>5</sup> <sup>2</sup> P <sub>1/2</sub> - 3s <sup>2</sup> 3p <sup>4</sup> 3d <sup>2</sup> P <sub>1/2</sub>	6.05	1.46e+03
Fe XI	181.1300	3s <sup>2</sup> 3p <sup>4</sup> <sup>3</sup> P <sub>0</sub> - 3s <sup>2</sup> 3p <sup>3</sup> 3d <sup>3</sup> D <sub>1</sub>	6.15	1.30e+03
Fe XI	182.1670	3s <sup>2</sup> 3p <sup>4</sup> <sup>3</sup> P <sub>1</sub> - 3s <sup>2</sup> 3p <sup>3</sup> 3d <sup>3</sup> D <sub>2</sub>	6.15	3.43e+03
Ca XIV	183.4600	2s <sup>2</sup> 2p <sup>3</sup> <sup>4</sup> S <sub>3/2</sub> - 2s 2p <sup>4</sup> <sup>4</sup> P <sub>1/2</sub>	6.65	1.28e+03
O VI	183.9370	1s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 1s <sup>2</sup> 3s <sup>2</sup> S <sub>1/2</sub>	5.45	1.52e+03
O VI	184.1170	1s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 1s <sup>2</sup> 3s <sup>2</sup> S <sub>1/2</sub>	5.45	3.01e+03
Fe X	184.5370	3s <sup>2</sup> 3p <sup>5</sup> <sup>2</sup> P <sub>3/2</sub> - 3s <sup>2</sup> 3p <sup>4</sup> 3d <sup>2</sup> S <sub>1/2</sub>	6.05	2.59e+03
Fe XI	184.7930	3s <sup>2</sup> 3p <sup>4</sup> <sup>1</sup> D <sub>2</sub> - 3s <sup>2</sup> 3p <sup>3</sup> 3d <sup>1</sup> D <sub>2</sub>	6.15	1.48e+03

Table 1: (continued)

Ion	$\lambda$ (Å)	Transition	T <sub>max</sub>	Int
Fe VIII	185.2130	3s <sup>2</sup> 3p <sup>6</sup> 3d <sup>2</sup> D <sub>5/2</sub> - 3s <sup>2</sup> 3p <sup>5</sup> 3d <sup>2</sup> <sup>2</sup> F <sub>7/2</sub>	5.70	6.66e+03
Ni XVI	185.2300	3s <sup>2</sup> 3p <sup>2</sup> P <sub>1/2</sub> - 3s <sup>2</sup> 3d <sup>2</sup> D <sub>3/2</sub>	6.45	2.14e+03
Fe VIII	186.5980	3s <sup>2</sup> 3p <sup>6</sup> 3d <sup>2</sup> D <sub>3/2</sub> - 3s <sup>2</sup> 3p <sup>5</sup> 3d <sup>2</sup> <sup>2</sup> F <sub>5/2</sub>	5.70	4.64e+03
Ca XIV	186.6100	2s <sup>2</sup> 2p <sup>3</sup> <sup>4</sup> S <sub>3/2</sub> - 2s 2p <sup>4</sup> <sup>4</sup> P <sub>3/2</sub>	6.65	2.50e+03
Fe XII	186.8540	3s <sup>2</sup> 3p <sup>3</sup> <sup>2</sup> D <sub>3/2</sub> - 3s <sup>2</sup> 3p <sup>2</sup> 3d <sup>2</sup> F <sub>5/2</sub>	6.20	2.27e+03
Fe XII	186.8870	3s <sup>2</sup> 3p <sup>3</sup> <sup>2</sup> D <sub>5/2</sub> - 3s <sup>2</sup> 3p <sup>2</sup> 3d <sup>2</sup> F <sub>7/2</sub>	6.20	4.41e+03
Fe XXI	187.9290	2s <sup>2</sup> 2p <sup>2</sup> <sup>1</sup> D <sub>2</sub> - 2s 2p <sup>3</sup> <sup>3</sup> D <sub>1</sub>	7.10	9.94e+03
Ar XIV	187.9620	2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> P <sub>3/2</sub>	6.60	1.34e+03
Fe XI	188.2160	3s <sup>2</sup> 3p <sup>4</sup> <sup>3</sup> P <sub>2</sub> - 3s <sup>2</sup> 3p <sup>3</sup> 3d <sup>3</sup> P <sub>2</sub>	6.15	5.67e+03
Fe XI	188.2990	3s <sup>2</sup> 3p <sup>4</sup> <sup>3</sup> P <sub>2</sub> - 3s <sup>2</sup> 3p <sup>3</sup> 3d <sup>1</sup> P <sub>1</sub>	6.15	3.31e+03
Fe IX	188.4930	3s <sup>2</sup> 3p <sup>5</sup> 3d <sup>3</sup> F <sub>4</sub> - 3s <sup>2</sup> 3p <sup>4</sup> 3d <sup>2</sup> <sup>3</sup> G <sub>5</sub>	5.95	1.62e+03
S XI	191.2660	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 2s 2p <sup>3</sup> <sup>3</sup> S <sub>1</sub>	6.35	1.71e+03
Fe XXIV	192.0280	1s <sup>2</sup> 2s <sup>2</sup> S <sub>1/2</sub> - 1s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub>	7.20	1.24e+06
Fe XII	192.3940	3s <sup>2</sup> 3p <sup>3</sup> <sup>4</sup> S <sub>3/2</sub> - 3s <sup>2</sup> 3p <sup>2</sup> 3d <sup>4</sup> P <sub>1/2</sub>	6.20	3.05e+03
O V	192.7970	2s 2p <sup>3</sup> P <sub>1</sub> - 2s 3d <sup>3</sup> D <sub>2</sub>	5.35	1.92e+03
Ca XVII	192.8530	2s <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 2s 2p <sup>1</sup> P <sub>1</sub>	6.85	6.20e+04
O V	192.9040	2s 2p <sup>3</sup> P <sub>2</sub> - 2s 3d <sup>3</sup> D <sub>3</sub>	5.35	4.76e+03
Fe XII	193.5090	3s <sup>2</sup> 3p <sup>3</sup> <sup>4</sup> S <sub>3/2</sub> - 3s <sup>2</sup> 3p <sup>2</sup> 3d <sup>4</sup> P <sub>3/2</sub>	6.20	6.41e+03
Ca XIV	193.8660	2s <sup>2</sup> 2p <sup>3</sup> <sup>4</sup> S <sub>3/2</sub> - 2s 2p <sup>4</sup> <sup>4</sup> P <sub>5/2</sub>	6.65	3.65e+03
Ar XIV	194.4010	2s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> S <sub>1/2</sub>	6.60	2.50e+03
Fe VIII	194.6610	3s <sup>2</sup> 3p <sup>6</sup> 3d <sup>2</sup> D <sub>5/2</sub> - 3s <sup>2</sup> 3p <sup>6</sup> 4p <sup>2</sup> P <sub>3/2</sub>	5.70	1.53e+03
Fe XII	195.1190	3s <sup>2</sup> 3p <sup>3</sup> <sup>4</sup> S <sub>3/2</sub> - 3s <sup>2</sup> 3p <sup>2</sup> 3d <sup>4</sup> P <sub>5/2</sub>	6.20	9.52e+03
O IV	196.0060	2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 2s <sup>2</sup> 4d <sup>2</sup> D <sub>5/2</sub>	5.20	1.55e+03
Fe XIII	196.5250	3s <sup>2</sup> 3p <sup>2</sup> <sup>1</sup> D <sub>2</sub> - 3s <sup>2</sup> 3p 3d <sup>1</sup> F <sub>3</sub>	6.25	2.26e+03
Fe XII	196.6400	3s <sup>2</sup> 3p <sup>3</sup> <sup>2</sup> D <sub>5/2</sub> - 3s <sup>2</sup> 3p <sup>2</sup> 3d <sup>2</sup> D <sub>5/2</sub>	6.20	1.49e+03
Fe XIII	200.0210	3s <sup>2</sup> 3p <sup>2</sup> <sup>3</sup> P <sub>1</sub> - 3s <sup>2</sup> 3p 3d <sup>3</sup> D <sub>2</sub>	6.25	2.58e+03
Ca XV	200.9770	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>0</sub> - 2s 2p <sup>3</sup> <sup>3</sup> D <sub>1</sub>	6.70	5.02e+03
Fe XX	201.0450	2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> P <sub>3/2</sub> - 2s 2p <sup>4</sup> <sup>4</sup> P <sub>3/2</sub>	7.05	2.28e+03
Fe XIII	201.1260	3s <sup>2</sup> 3p <sup>2</sup> <sup>3</sup> P <sub>1</sub> - 3s <sup>2</sup> 3p 3d <sup>3</sup> D <sub>1</sub>	6.25	2.91e+03
Fe XIII	202.0440	3s <sup>2</sup> 3p <sup>2</sup> <sup>3</sup> P <sub>0</sub> - 3s <sup>2</sup> 3p 3d <sup>3</sup> P <sub>1</sub>	6.30	4.33e+03
Fe XVIII	203.5210	2s <sup>2</sup> 2p <sup>4</sup> ( <sup>3</sup> P) 3s <sup>2</sup> P <sub>3/2</sub> - 2s <sup>2</sup> 2p <sup>4</sup> ( <sup>1</sup> D) 3p <sup>2</sup> P <sub>3/2</sub>	6.95	2.97e+03
Fe XIII	203.7950	3s <sup>2</sup> 3p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 3s <sup>2</sup> 3p 3d <sup>3</sup> D <sub>2</sub>	6.25	3.39e+03
Fe XIII	203.8260	3s <sup>2</sup> 3p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 3s <sup>2</sup> 3p 3d <sup>3</sup> D <sub>3</sub>	6.25	9.27e+03
Fe XVII	204.6680	2s <sup>2</sup> 2p <sup>5</sup> 3s <sup>1</sup> P <sub>1</sub> - 2s <sup>2</sup> 2p <sup>5</sup> 3p <sup>1</sup> S <sub>0</sub>	6.90	1.37e+04
K XVI	206.2710	2s <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 2s 2p <sup>1</sup> P <sub>1</sub>	6.80	2.31e+03
Mn XXIII	206.9300	2s <sup>2</sup> S <sub>1/2</sub> - 2p <sup>2</sup> P <sub>3/2</sub>	7.15	1.22e+04
Ca XV	208.3290	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>1</sub> - 2s 2p <sup>3</sup> <sup>3</sup> D <sub>1</sub>	6.70	1.43e+03
Ca XVI	208.5850	2s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> D <sub>3/2</sub>	6.80	8.32e+03
Fe XIII	209.6190	3s <sup>2</sup> 3p <sup>2</sup> <sup>3</sup> P <sub>1</sub> - 3s <sup>2</sup> 3p 3d <sup>3</sup> P <sub>2</sub>	6.25	1.75e+03
Fe XIV	211.3170	3s <sup>2</sup> 3p <sup>2</sup> P <sub>1/2</sub> - 3s <sup>2</sup> 3d <sup>2</sup> D <sub>3/2</sub>	6.35	1.59e+04
Fe XIII	213.7680	3s <sup>2</sup> 3p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 3s <sup>2</sup> 3p 3d <sup>3</sup> P <sub>2</sub>	6.25	1.71e+03
O V	215.1030	2s 2p <sup>3</sup> P <sub>1</sub> - 2s 3s <sup>3</sup> S <sub>1</sub>	5.35	2.17e+03
S XII	215.1670	2s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> P <sub>1/2</sub>	6.40	1.51e+03
O V	215.2450	2s 2p <sup>3</sup> P <sub>2</sub> - 2s 3s <sup>3</sup> S <sub>1</sub>	5.35	3.62e+03
Ni XVII	215.9070	3s 3p <sup>1</sup> P <sub>1</sub> - 3s 3d <sup>1</sup> D <sub>2</sub>	6.75	1.53e+03
Fe IX	217.1010	3s <sup>2</sup> 3p <sup>6</sup> <sup>1</sup> S <sub>0</sub> - 3s <sup>2</sup> 3p <sup>5</sup> 3d <sup>3</sup> D <sub>1</sub>	5.90	2.20e+03
Fe XXII	217.3020	1s <sup>2</sup> 2s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 1s <sup>2</sup> 2s 2p <sup>2</sup> <sup>4</sup> P <sub>3/2</sub>	7.10	3.43e+03
S XII	218.2000	2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> P <sub>3/2</sub>	6.40	3.26e+03
Fe XIV	219.1300	3s <sup>2</sup> 3p <sup>2</sup> P <sub>3/2</sub> - 3s <sup>2</sup> 3d <sup>2</sup> D <sub>5/2</sub>	6.30	9.39e+03

Table 1: (continued)

Ion	$\lambda$ (Å)	Transition	T <sub>max</sub>	Int
Fe XII	219.4370	3s <sup>2</sup> 3p <sup>3</sup> <sup>2</sup> D <sub>5/2</sub> - 3s 3p <sup>4</sup> <sup>2</sup> P <sub>3/2</sub>	6.20	1.32e+03
Fe XIV	220.0840	3s <sup>2</sup> 3p <sup>2</sup> P <sub>3/2</sub> - 3s <sup>2</sup> 3d <sup>2</sup> D <sub>3/2</sub>	6.35	3.40e+03
O V	220.3530	2s 2p <sup>1</sup> P <sub>1</sub> - 2s 3d <sup>1</sup> D <sub>2</sub>	5.35	3.21e+03
Ni XVIII	220.4280	3p <sup>2</sup> P <sub>1/2</sub> - 3d <sup>2</sup> D <sub>3/2</sub>	6.90	2.60e+03
Zn XIX	220.5680	3s <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 3s 3p <sup>1</sup> P <sub>1</sub>	6.80	1.43e+03
Ar XV	221.1500	2s <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 2s 2p <sup>1</sup> P <sub>1</sub>	6.75	2.72e+04
Fe XXIII	221.3420	2s 2p <sup>1</sup> P <sub>1</sub> - 2p <sup>2</sup> <sup>1</sup> D <sub>2</sub>	7.15	2.52e+03
S XII	221.4250	2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> P <sub>1/2</sub>	6.40	1.79e+03
Fe XIII	221.8280	3s <sup>2</sup> 3p <sup>2</sup> <sup>1</sup> D <sub>2</sub> - 3s <sup>2</sup> 3p 3d <sup>1</sup> D <sub>2</sub>	6.25	2.16e+03
Cr XXII	223.0180	1s <sup>2</sup> 2s <sup>2</sup> S <sub>1/2</sub> - 1s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub>	7.10	2.03e+04
S IX	224.7260	2s <sup>2</sup> 2p <sup>4</sup> <sup>3</sup> P <sub>2</sub> - 2s 2p <sup>5</sup> <sup>3</sup> P <sub>2</sub>	6.10	1.28e+03
Si IX	227.0000	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 2s 2p <sup>3</sup> <sup>3</sup> S <sub>1</sub>	6.05	1.88e+03
S XII	227.4900	2s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> S <sub>1/2</sub>	6.40	2.17e+03
Fe XIII	228.1600	3s <sup>2</sup> 3p <sup>2</sup> <sup>1</sup> D <sub>2</sub> - 3s <sup>2</sup> 3p 3d <sup>3</sup> P <sub>2</sub>	6.25	1.40e+03
Ni XIX	231.1070	2s <sup>2</sup> 2p <sup>5</sup> 3s <sup>3</sup> P <sub>1</sub> - 2s <sup>2</sup> 2p <sup>5</sup> 3p <sup>1</sup> S <sub>0</sub>	7.00	1.32e+03
Ni XVIII	233.7570	3p <sup>2</sup> P <sub>3/2</sub> - 3d <sup>2</sup> D <sub>5/2</sub>	6.90	4.30e+03
Fe XV	233.8660	3s 3p <sup>3</sup> P <sub>2</sub> - 3s 3d <sup>3</sup> D <sub>3</sub>	6.40	2.62e+03
Ni XXVI	234.1520	1s <sup>2</sup> 2s <sup>2</sup> S <sub>1/2</sub> - 1s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub>	7.35	2.20e+04
Fe XVIII	237.2480	2s <sup>2</sup> 2p <sup>4</sup> ( <sup>3</sup> P) 3s <sup>4</sup> P <sub>3/2</sub> - 2s <sup>2</sup> 2p <sup>4</sup> ( <sup>1</sup> D) 3p <sup>2</sup> P <sub>3/2</sub>	6.95	1.54e+03
He II	237.3310	1s <sup>2</sup> S <sub>1/2</sub> - 5p <sup>2</sup> P <sub>3/2</sub>	4.90	6.89e+03
He II	237.3310	1s <sup>2</sup> S <sub>1/2</sub> - 5p <sup>2</sup> P <sub>1/2</sub>	4.90	3.44e+03
O IV	238.3600	2s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 2s <sup>2</sup> 3d <sup>2</sup> D <sub>3/2</sub>	5.15	6.34e+03
O IV	238.5700	2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 2s <sup>2</sup> 3d <sup>2</sup> D <sub>5/2</sub>	5.15	1.15e+04
Ni XXV	238.8610	2s <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 2s 2p <sup>3</sup> P <sub>1</sub>	7.25	4.32e+03
Fe XXI	242.0490	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>1</sub> - 2s 2p <sup>3</sup> <sup>5</sup> S <sub>2</sub>	7.10	1.07e+04
He II	243.0270	1s <sup>2</sup> S <sub>1/2</sub> - 4p <sup>2</sup> P <sub>3/2</sub>	4.90	1.80e+04
He II	243.0270	1s <sup>2</sup> S <sub>1/2</sub> - 4p <sup>2</sup> P <sub>1/2</sub>	4.90	8.98e+03
Ar XIV	243.7510	2s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> D <sub>3/2</sub>	6.60	2.66e+03
Fe XV	243.7940	3s 3p <sup>1</sup> P <sub>1</sub> - 3s 3d <sup>1</sup> D <sub>2</sub>	6.40	8.84e+03
Co XXV	244.2330	2s <sup>2</sup> S <sub>1/2</sub> - 2p <sup>2</sup> P <sub>1/2</sub>	7.30	1.33e+03
Fe IX	244.9090	3s <sup>2</sup> 3p <sup>6</sup> <sup>1</sup> S <sub>0</sub> - 3s <sup>2</sup> 3p <sup>5</sup> 3d <sup>3</sup> P <sub>1</sub>	5.90	2.93e+03
Si VI	246.0020	2s <sup>2</sup> 2p <sup>5</sup> <sup>2</sup> P <sub>3/2</sub> - 2s 2p <sup>6</sup> <sup>2</sup> S <sub>1/2</sub>	5.60	1.56e+03
Fe XIII	246.2090	3s <sup>2</sup> 3p <sup>2</sup> <sup>3</sup> P <sub>1</sub> - 3s 3p <sup>3</sup> <sup>3</sup> S <sub>1</sub>	6.25	2.12e+03
S XI	246.8950	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 2s 2p <sup>3</sup> <sup>3</sup> P <sub>2</sub>	6.35	1.34e+03
Fe XXI	246.9500	2s <sup>2</sup> 2p <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 2s 2p <sup>3</sup> <sup>3</sup> D <sub>1</sub>	7.10	1.72e+03
Fe XXII	247.1880	1s <sup>2</sup> 2s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 1s <sup>2</sup> 2s 2p <sup>2</sup> <sup>4</sup> P <sub>1/2</sub>	7.10	2.45e+04
O V	248.4600	2s 2p <sup>1</sup> P <sub>1</sub> - 2s 3s <sup>1</sup> S <sub>0</sub>	5.35	4.59e+03
Ni XVII	249.1890	3s <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 3s 3p <sup>1</sup> P <sub>1</sub>	6.75	2.30e+04
Fe XVI	251.0630	3p <sup>2</sup> P <sub>1/2</sub> - 3d <sup>2</sup> D <sub>3/2</sub>	6.80	1.79e+04
Fe XIII	251.9520	3s <sup>2</sup> 3p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 3s 3p <sup>3</sup> <sup>3</sup> S <sub>1</sub>	6.25	3.97e+03
Fe XIV	252.1990	3s <sup>2</sup> 3p <sup>2</sup> P <sub>1/2</sub> - 3s 3p <sup>2</sup> <sup>2</sup> P <sub>3/2</sub>	6.30	2.71e+03
Fe XXII	253.1680	1s <sup>2</sup> 2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 1s <sup>2</sup> 2s 2p <sup>2</sup> <sup>4</sup> P <sub>5/2</sub>	7.10	1.15e+04
Fe XVII	254.5360	2s <sup>2</sup> 2p <sup>5</sup> 3p <sup>3</sup> S <sub>1</sub> - 2s <sup>2</sup> 2p <sup>5</sup> 3d <sup>3</sup> P <sub>2</sub>	6.90	2.26e+03
Fe XVII	254.8850	2s <sup>2</sup> 2p <sup>5</sup> 3s <sup>3</sup> P <sub>1</sub> - 2s <sup>2</sup> 2p <sup>5</sup> 3p <sup>1</sup> S <sub>0</sub>	6.90	1.18e+04
Fe XXIV	255.1130	1s <sup>2</sup> 2s <sup>2</sup> S <sub>1/2</sub> - 1s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub>	7.20	4.96e+05
He II	256.3180	1s <sup>2</sup> S <sub>1/2</sub> - 3p <sup>2</sup> P <sub>1/2</sub>	4.90	4.60e+04
He II	256.3180	1s <sup>2</sup> S <sub>1/2</sub> - 3p <sup>2</sup> P <sub>3/2</sub>	4.90	9.21e+04
Zn XX	256.3710	3s <sup>2</sup> S <sub>1/2</sub> - 3p <sup>2</sup> P <sub>3/2</sub>	6.95	2.37e+03
Si X	256.3770	2s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> P <sub>1/2</sub>	6.20	1.62e+03

Table 1: (continued)

Ion	$\lambda$ (Å)	Transition	T <sub>max</sub>	Int
S XIII	256.6850	2s <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 2s 2p <sup>1</sup> P <sub>1</sub>	6.45	3.97e+04
Fe XIV	257.3940	3s <sup>2</sup> 3p <sup>2</sup> P <sub>1/2</sub> - 3s 3p <sup>2</sup> <sup>2</sup> P <sub>1/2</sub>	6.35	3.57e+03
Si X	258.3740	2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> P <sub>3/2</sub>	6.15	4.59e+03
Ti XX	259.2720	1s <sup>2</sup> 2s <sup>2</sup> S <sub>1/2</sub> - 1s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub>	7.05	4.31e+03
S X	259.4960	2s <sup>2</sup> 2p <sup>3</sup> <sup>4</sup> S <sub>3/2</sub> - 2s 2p <sup>4</sup> <sup>4</sup> P <sub>3/2</sub>	6.25	1.33e+03
Fe XVII	259.5910	2s <sup>2</sup> 2p <sup>5</sup> 3p <sup>3</sup> D <sub>2</sub> - 2s <sup>2</sup> 2p <sup>5</sup> 3d <sup>1</sup> D <sub>2</sub>	6.90	1.34e+03
Si X	261.0560	2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> P <sub>1/2</sub>	6.20	1.33e+03
Fe XVI	262.9760	3p <sup>2</sup> P <sub>3/2</sub> - 3d <sup>2</sup> D <sub>5/2</sub>	6.80	3.02e+04
Fe XXIII	263.7650	2s <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 2s 2p <sup>3</sup> P <sub>1</sub>	7.15	8.88e+04
S X	264.2300	2s <sup>2</sup> 2p <sup>3</sup> <sup>4</sup> S <sub>3/2</sub> - 2s 2p <sup>4</sup> <sup>4</sup> P <sub>5/2</sub>	6.25	1.93e+03
Fe XIV	264.7880	3s <sup>2</sup> 3p <sup>2</sup> P <sub>3/2</sub> - 3s 3p <sup>2</sup> <sup>2</sup> P <sub>3/2</sub>	6.30	1.12e+04
Fe XVI	265.0000	3p <sup>2</sup> P <sub>3/2</sub> - 3d <sup>2</sup> D <sub>3/2</sub>	6.80	2.93e+03
Fe XVII	266.4170	2s <sup>2</sup> 2p <sup>5</sup> 3p <sup>3</sup> D <sub>1</sub> - 2s <sup>2</sup> 2p <sup>5</sup> 3d <sup>3</sup> F <sub>2</sub>	6.90	2.32e+03
Mn XXIII	266.9130	2s <sup>2</sup> S <sub>1/2</sub> - 2p <sup>2</sup> P <sub>1/2</sub>	7.15	4.96e+03
Fe XVII	269.4200	2s <sup>2</sup> 2p <sup>5</sup> 3p <sup>3</sup> D <sub>2</sub> - 2s <sup>2</sup> 2p <sup>5</sup> 3d <sup>3</sup> F <sub>3</sub>	6.90	4.92e+03
Mg VI	270.3900	2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> D <sub>5/2</sub> - 2s 2p <sup>4</sup> <sup>2</sup> P <sub>3/2</sub>	5.60	1.52e+03
Fe XIV	270.5200	3s <sup>2</sup> 3p <sup>2</sup> P <sub>3/2</sub> - 3s 3p <sup>2</sup> <sup>2</sup> P <sub>1/2</sub>	6.35	5.00e+03
Fe XXI	270.5460	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 2s 2p <sup>3</sup> <sup>5</sup> S <sub>2</sub>	7.10	9.02e+03
O IV	271.9900	2s 2p <sup>2</sup> <sup>4</sup> P <sub>3/2</sub> - 2s 2p 3s <sup>4</sup> P <sub>5/2</sub>	5.15	1.37e+03
O IV	272.1270	2s 2p <sup>2</sup> <sup>4</sup> P <sub>5/2</sub> - 2s 2p 3s <sup>4</sup> P <sub>5/2</sub>	5.15	3.21e+03
O IV	272.3100	2s 2p <sup>2</sup> <sup>4</sup> P <sub>5/2</sub> - 2s 2p 3s <sup>4</sup> P <sub>3/2</sub>	5.15	1.28e+03
Fe XIV	274.2030	3s <sup>2</sup> 3p <sup>2</sup> P <sub>1/2</sub> - 3s 3p <sup>2</sup> <sup>2</sup> S <sub>1/2</sub>	6.35	8.35e+03
Si VII	275.3680	2s <sup>2</sup> 2p <sup>4</sup> <sup>3</sup> P <sub>2</sub> - 2s 2p <sup>5</sup> <sup>3</sup> P <sub>2</sub>	5.75	1.97e+03
Fe XVII	275.5500	2s <sup>2</sup> 2p <sup>5</sup> 3p <sup>1</sup> P <sub>1</sub> - 2s <sup>2</sup> 2p <sup>5</sup> 3d <sup>1</sup> D <sub>2</sub>	6.90	2.11e+03
Mg V	276.5790	2s <sup>2</sup> 2p <sup>4</sup> <sup>1</sup> D <sub>2</sub> - 2s 2p <sup>5</sup> <sup>1</sup> P <sub>1</sub>	5.40	1.82e+03
Mg VII	278.3940	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 2s 2p <sup>3</sup> <sup>3</sup> S <sub>1</sub>	5.75	1.61e+03
O IV	279.6310	2s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 2s <sup>2</sup> 3s <sup>2</sup> S <sub>1/2</sub>	5.10	4.02e+03
Cr XXII	279.7390	1s <sup>2</sup> 2s <sup>2</sup> S <sub>1/2</sub> - 1s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub>	7.10	8.48e+03
O IV	279.9330	2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 2s <sup>2</sup> 3s <sup>2</sup> S <sub>1/2</sub>	5.10	8.06e+03
Fe XVII	280.1600	2s <sup>2</sup> 2p <sup>5</sup> 3p <sup>1</sup> D <sub>2</sub> - 2s <sup>2</sup> 2p <sup>5</sup> 3d <sup>1</sup> F <sub>3</sub>	6.90	4.35e+03
Fe XVII	280.1980	2s <sup>2</sup> 2p <sup>5</sup> 3p <sup>3</sup> P <sub>2</sub> - 2s <sup>2</sup> 2p <sup>5</sup> 3d <sup>3</sup> D <sub>3</sub>	6.90	3.86e+03
Fe XVII	281.1200	2s <sup>2</sup> 2p <sup>5</sup> 3p <sup>3</sup> P <sub>1</sub> - 2s <sup>2</sup> 2p <sup>5</sup> 3d <sup>3</sup> D <sub>2</sub>	6.90	2.31e+03
N IV	283.5740	2s 2p <sup>3</sup> P <sub>2</sub> - 2s 3d <sup>3</sup> D <sub>3</sub>	5.10	1.59e+03
Fe XVII	283.9450	2s <sup>2</sup> 2p <sup>5</sup> 3p <sup>3</sup> D <sub>3</sub> - 2s <sup>2</sup> 2p <sup>5</sup> 3d <sup>3</sup> F <sub>4</sub>	6.90	5.38e+03
Fe XV	284.1630	3s <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 3s 3p <sup>1</sup> P <sub>1</sub>	6.40	1.38e+05
S XII	288.4340	2s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> D <sub>3/2</sub>	6.40	3.17e+03
S XI	291.5780	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 2s 2p <sup>3</sup> <sup>3</sup> D <sub>3</sub>	6.35	1.33e+03
Ni XVIII	291.9840	3s <sup>2</sup> S <sub>1/2</sub> - 3p <sup>2</sup> P <sub>3/2</sub>	6.90	4.96e+04
Fe XXII	292.4630	1s <sup>2</sup> 2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 1s <sup>2</sup> 2s 2p <sup>2</sup> <sup>4</sup> P <sub>3/2</sub>	7.10	1.16e+04
Fe XVIII *	295.1930	2s <sup>2</sup> 2p <sup>4</sup> ( <sup>3</sup> P) 3p <sup>2</sup> D <sub>5/2</sub> - 2s <sup>2</sup> 2p <sup>4</sup> ( <sup>3</sup> P) 3d <sup>2</sup> F <sub>7/2</sub>	6.95	2.66e+03
Fe XVIII	295.6830	2s <sup>2</sup> 2p <sup>4</sup> ( <sup>1</sup> D) 3s <sup>2</sup> D <sub>5/2</sub> - 2s <sup>2</sup> 2p <sup>4</sup> ( <sup>1</sup> D) 3p <sup>2</sup> P <sub>3/2</sub>	6.95	2.02e+03
Fe XVII	295.9810	2s <sup>2</sup> 2p <sup>5</sup> 3s <sup>1</sup> P <sub>1</sub> - 2s <sup>2</sup> 2p <sup>5</sup> 3p <sup>3</sup> P <sub>0</sub>	6.90	2.15e+03
Si IX	296.1170	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 2s 2p <sup>3</sup> <sup>3</sup> P <sub>2</sub>	6.05	1.71e+03
Fe XVIII *	296.3980	2s <sup>2</sup> 2p <sup>4</sup> ( <sup>3</sup> P) 3p <sup>4</sup> P <sub>5/2</sub> - 2s <sup>2</sup> 2p <sup>4</sup> ( <sup>3</sup> P) 3d <sup>4</sup> D <sub>7/2</sub>	6.95	1.78e+03
S XII	299.5180	2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> D <sub>5/2</sub>	6.40	1.34e+03
Ca XVIII	302.1900	1s <sup>2</sup> 2s <sup>2</sup> S <sub>1/2</sub> - 1s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub>	7.05	7.07e+04
Fe XVIII *	303.1070	2s <sup>2</sup> 2p <sup>4</sup> ( <sup>3</sup> P) 3p <sup>4</sup> D <sub>7/2</sub> - 2s <sup>2</sup> 2p <sup>4</sup> ( <sup>3</sup> P) 3d <sup>4</sup> F <sub>9/2</sub>	6.95	3.14e+03
Si XI	303.3250	2s <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 2s 2p <sup>1</sup> P <sub>1</sub>	6.25	2.59e+04
He II	303.7850	1s <sup>2</sup> S <sub>1/2</sub> - 2p <sup>2</sup> P <sub>3/2</sub>	4.90	6.27e+05

Table 1: (continued)

Ion	$\lambda$ (Å)	Transition	T <sub>max</sub>	Int
He II	303.7860	1s $^2S_{1/2}$ - 2s $^2S_{1/2}$	4.90	2.68e+04
He II	303.7860	1s $^2S_{1/2}$ - 2p $^2P_{1/2}$	4.90	3.14e+05
Fe XV	304.8940	3s 3p $^3P_2$ - 3p <sup>2</sup> $^3P_2$	6.40	1.30e+03
Fe XVIII *	305.0580	2s <sup>2</sup> 2p <sup>4</sup> ( $^3P$ ) 3p $^4D_{5/2}$ - 2s <sup>2</sup> 2p <sup>4</sup> ( $^3P$ ) 3d $^4F_{7/2}$	6.95	1.76e+03
O III	305.6560	2s <sup>2</sup> 2p <sup>2</sup> $^3P_1$ - 2s <sup>2</sup> 2p 3d $^3D_2$	4.95	1.53e+03
O III	305.7670	2s <sup>2</sup> 2p <sup>2</sup> $^3P_2$ - 2s <sup>2</sup> 2p 3d $^3D_3$	4.95	2.73e+03
O IV	306.6210	2s 2p <sup>2</sup> $^2D_{5/2}$ - 2s 2p 3s $^2P_{3/2}$	5.15	2.08e+03
Ti XX	309.0720	1s <sup>2</sup> 2s $^2S_{1/2}$ - 1s <sup>2</sup> 2p $^2P_{1/2}$	7.05	1.88e+03
Fe XVIII *	309.1890	2s <sup>2</sup> 2p <sup>4</sup> ( $^1D$ ) 3p $^2F_{7/2}$ - 2s <sup>2</sup> 2p <sup>4</sup> ( $^1D$ ) 3d $^2G_{9/2}$	6.95	1.77e+03
Fe XX	309.2940	2s <sup>2</sup> 2p <sup>3</sup> $^4S_{3/2}$ - 2s <sup>2</sup> 2p <sup>3</sup> $^2P_{3/2}$	7.05	7.87e+03
C IV	312.4200	1s <sup>2</sup> 2s $^2S_{1/2}$ - 1s <sup>2</sup> 3p $^2P_{3/2}$	5.00	3.08e+03
C IV	312.4510	1s <sup>2</sup> 2s $^2S_{1/2}$ - 1s <sup>2</sup> 3p $^2P_{1/2}$	5.00	1.54e+03
Co XVII	312.5580	3s $^2S_{1/2}$ - 3p $^2P_{3/2}$	6.85	1.73e+03
Mg VIII	313.7430	2s <sup>2</sup> 2p $^2P_{1/2}$ - 2s 2p <sup>2</sup> $^2P_{1/2}$	5.90	1.36e+03
Mg VIII	315.0150	2s <sup>2</sup> 2p $^2P_{3/2}$ - 2s 2p <sup>2</sup> $^2P_{3/2}$	5.90	3.75e+03
Si VIII	316.2060	2s <sup>2</sup> 2p <sup>3</sup> $^4S_{3/2}$ - 2s 2p <sup>4</sup> $^4P_{3/2}$	5.95	1.71e+03
Mg VII	319.0360	2s <sup>2</sup> 2p <sup>2</sup> $^1D_2$ - 2s 2p <sup>3</sup> $^1D_2$	5.75	2.36e+03
Si VIII	319.8260	2s <sup>2</sup> 2p <sup>3</sup> $^4S_{3/2}$ - 2s 2p <sup>4</sup> $^4P_{5/2}$	5.95	2.56e+03
Ni XVIII	320.5580	3s $^2S_{1/2}$ - 3p $^2P_{1/2}$	6.90	2.30e+04
Fe XIII	320.8000	3s <sup>2</sup> 3p <sup>2</sup> $^3P_2$ - 3s 3p <sup>3</sup> $^3P_2$	6.25	1.80e+03
O III	320.9780	2s <sup>2</sup> 2p <sup>2</sup> $^1D_2$ - 2s <sup>2</sup> 2p 3d $^1F_3$	4.95	2.12e+03
Mg IV	320.9940	2s <sup>2</sup> 2p <sup>5</sup> $^2P_{3/2}$ - 2s 2p <sup>6</sup> $^2S_{1/2}$	5.20	2.05e+03
N IV	322.7180	2s 2p $^3P_2$ - 2s 3s $^3S_1$	5.10	1.69e+03
Fe XVII	323.4880	2s <sup>2</sup> 2p <sup>5</sup> 3s $^3P_2$ - 2s <sup>2</sup> 2p <sup>5</sup> 3p $^3P_2$	6.90	5.00e+03
K XVII	326.7760	2s $^2S_{1/2}$ - 2p $^2P_{3/2}$	7.05	3.28e+03
Fe XVIII *	326.8840	2s <sup>2</sup> 2p <sup>4</sup> ( $^3P$ ) 3s $^2P_{3/2}$ - 2s <sup>2</sup> 2p <sup>4</sup> ( $^3P$ ) 3p $^4D_{3/2}$	6.95	1.58e+03
Fe XV	327.0330	3s 3p $^3P_2$ - 3p <sup>2</sup> $^1D_2$	6.40	1.48e+03
O III	328.4480	2s <sup>2</sup> 2p <sup>2</sup> $^1D_2$ - 2s <sup>2</sup> 2p 3d $^1D_2$	4.95	1.60e+03
Fe XIV	334.1780	3s <sup>2</sup> 3p $^2P_{1/2}$ - 3s 3p <sup>2</sup> $^2D_{3/2}$	6.35	6.06e+03
Fe XVI	335.4090	3s $^2S_{1/2}$ - 3p $^2P_{3/2}$	6.80	3.35e+05
Fe XXI	335.6920	2s <sup>2</sup> 2p <sup>2</sup> $^3P_1$ - 2s <sup>2</sup> 2p <sup>2</sup> $^1S_0$	7.10	1.30e+04
Fe XVIII *	339.6960	2s <sup>2</sup> 2p <sup>4</sup> ( $^1D$ ) 3s $^2D_{5/2}$ - 2s <sup>2</sup> 2p <sup>4</sup> ( $^1D$ ) 3p $^2D_{5/2}$	6.95	1.27e+03
Fe XVII	340.1220	2s <sup>2</sup> 2p <sup>5</sup> 3s $^3P_0$ - 2s <sup>2</sup> 2p <sup>5</sup> 3p $^3P_1$	6.90	2.29e+03
Fe XVII	340.4950	2s <sup>2</sup> 2p <sup>5</sup> 3s $^1P_1$ - 2s <sup>2</sup> 2p <sup>5</sup> 3p $^3P_2$	6.90	3.39e+03
Fe XIX *	341.7440	1s <sup>2</sup> 2s <sup>2</sup> 2p <sup>3</sup> 3p $^5P_3$ - 1s <sup>2</sup> 2s <sup>2</sup> 2p <sup>3</sup> 3d $^5D_4$	7.00	1.93e+03
Ca XVIII	344.7600	1s <sup>2</sup> 2s $^2S_{1/2}$ - 1s <sup>2</sup> 2p $^2P_{1/2}$	7.05	3.18e+04
Si X	347.4020	2s <sup>2</sup> 2p $^2P_{1/2}$ - 2s 2p <sup>2</sup> $^2D_{3/2}$	6.20	1.88e+03
Fe XVII	347.8160	2s <sup>2</sup> 2p <sup>5</sup> 3s $^3P_1$ - 2s <sup>2</sup> 2p <sup>5</sup> 3p $^1D_2$	6.90	6.65e+03
Mg VI	349.1630	2s <sup>2</sup> 2p <sup>3</sup> $^2D_{5/2}$ - 2s 2p <sup>4</sup> $^2D_{5/2}$	5.60	1.67e+03
Fe XXII	349.3030	1s <sup>2</sup> 2s <sup>2</sup> 2p $^2P_{3/2}$ - 1s <sup>2</sup> 2s 2p <sup>2</sup> $^4P_{1/2}$	7.10	2.81e+03
Si IX	349.8730	2s <sup>2</sup> 2p <sup>2</sup> $^3P_2$ - 2s 2p <sup>3</sup> $^3D_3$	6.05	1.93e+03
Fe XVII	350.4780	2s <sup>2</sup> 2p <sup>5</sup> 3s $^3P_2$ - 2s <sup>2</sup> 2p <sup>5</sup> 3p $^3D_3$	6.90	1.18e+04
Fe XVII	351.5330	2s <sup>2</sup> 2p <sup>5</sup> 3s $^3P_1$ - 2s <sup>2</sup> 2p <sup>5</sup> 3p $^3P_1$	6.90	1.27e+03
Fe XI	352.6700	3s <sup>2</sup> 3p <sup>4</sup> $^3P_2$ - 3s 3p <sup>5</sup> $^3P_2$	6.15	1.59e+03
Mg V	353.0920	2s <sup>2</sup> 2p <sup>4</sup> $^3P_2$ - 2s 2p <sup>5</sup> $^3P_2$	5.40	2.66e+03
Fe XIV	353.8360	3s <sup>2</sup> 3p $^2P_{3/2}$ - 3s 3p <sup>2</sup> $^2D_{5/2}$	6.30	3.72e+03
Ar XVI	353.8530	1s <sup>2</sup> 2s $^2S_{1/2}$ - 1s <sup>2</sup> 2p $^2P_{3/2}$	7.05	5.13e+04
Si X	356.0370	2s <sup>2</sup> 2p $^2P_{3/2}$ - 2s 2p <sup>2</sup> $^2D_{5/2}$	6.15	2.67e+03
Ne IV	357.8320	2s <sup>2</sup> 2p <sup>3</sup> $^2D_{3/2}$ - 2s 2p <sup>4</sup> $^2P_{1/2}$	5.15	4.09e+03

Table 1: (continued)

Ion	$\lambda$ (Å)	Transition	T <sub>max</sub>	Int
Ne V	357.9470	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>0</sub> - 2s 2p <sup>3</sup> <sup>3</sup> S <sub>1</sub>	5.35	1.56e+03
Fe XVII	358.2470	2s <sup>2</sup> 2p <sup>5</sup> 3s <sup>1</sup> P <sub>1</sub> - 2s <sup>2</sup> 2p <sup>5</sup> 3p <sup>1</sup> P <sub>1</sub>	6.90	4.04e+03
Ne V	358.4740	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>1</sub> - 2s 2p <sup>3</sup> <sup>3</sup> S <sub>1</sub>	5.35	4.67e+03
Ne IV	358.6940	2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> D <sub>5/2</sub> - 2s 2p <sup>4</sup> <sup>2</sup> P <sub>3/2</sub>	5.15	7.58e+03
O III	359.0170	2s 2p <sup>3</sup> <sup>5</sup> S <sub>2</sub> - 2s 2p <sup>2</sup> 3s <sup>5</sup> P <sub>3</sub>	4.95	1.27e+03
Ne V	359.3740	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 2s 2p <sup>3</sup> <sup>3</sup> S <sub>1</sub>	5.35	7.80e+03
Fe XIII	359.6440	3s <sup>2</sup> 3p <sup>2</sup> <sup>3</sup> P <sub>1</sub> - 3s 3p <sup>3</sup> <sup>3</sup> D <sub>2</sub>	6.25	1.79e+03
Fe XVI	360.7580	3s <sup>2</sup> S <sub>1/2</sub> - 3p <sup>2</sup> P <sub>1/2</sub>	6.80	1.58e+05
Mn XV	360.9870	3s <sup>2</sup> S <sub>1/2</sub> - 3p <sup>2</sup> P <sub>3/2</sub>	6.75	1.83e+03
Fe XII	364.4670	3s <sup>2</sup> 3p <sup>3</sup> <sup>4</sup> S <sub>3/2</sub> - 3s 3p <sup>4</sup> <sup>4</sup> P <sub>5/2</sub>	6.20	2.03e+03
Ne V	365.5930	2s <sup>2</sup> 2p <sup>2</sup> <sup>1</sup> D <sub>2</sub> - 2s 2p <sup>3</sup> <sup>1</sup> P <sub>1</sub>	5.35	7.26e+03
K XVII	365.6310	2s <sup>2</sup> S <sub>1/2</sub> - 2p <sup>2</sup> P <sub>1/2</sub>	7.05	1.49e+03
Ni XVII	366.7920	3s <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 3s 3p <sup>3</sup> P <sub>1</sub>	6.70	1.51e+03
Fe XVIII	367.2420	2s <sup>2</sup> 2p <sup>4</sup> ( <sup>3</sup> P) 3s <sup>4</sup> P <sub>5/2</sub> - 2s <sup>2</sup> 2p <sup>4</sup> ( <sup>3</sup> P) 3p <sup>4</sup> D <sub>7/2</sub>	6.95	5.56e+03
Fe XVII	367.2870	2s <sup>2</sup> 2p <sup>5</sup> 3s <sup>3</sup> P <sub>2</sub> - 2s <sup>2</sup> 2p <sup>5</sup> 3p <sup>3</sup> D <sub>2</sub>	6.90	4.21e+03
Mg VII	367.6810	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 2s 2p <sup>3</sup> <sup>3</sup> P <sub>2</sub>	5.75	1.66e+03
Mg IX	368.0710	2s <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 2s 2p <sup>1</sup> P <sub>1</sub>	6.00	1.18e+04
Fe XIII	368.1640	3s <sup>2</sup> 3p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 3s 3p <sup>3</sup> <sup>3</sup> D <sub>3</sub>	6.25	2.15e+03
Fe XVIII *	370.4510	2s <sup>2</sup> 2p <sup>4</sup> ( <sup>3</sup> P) 3s <sup>4</sup> P <sub>3/2</sub> - 2s <sup>2</sup> 2p <sup>4</sup> ( <sup>3</sup> P) 3p <sup>4</sup> D <sub>5/2</sub>	6.95	2.27e+03
Ca XVII	371.0460	2s <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 2s 2p <sup>3</sup> P <sub>1</sub>	6.85	1.94e+03
Fe XVII	373.4300	2s <sup>2</sup> 2p <sup>5</sup> 3s <sup>3</sup> P <sub>0</sub> - 2s <sup>2</sup> 2p <sup>5</sup> 3p <sup>3</sup> D <sub>1</sub>	6.90	1.53e+03
O III	373.8030	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>1</sub> - 2s <sup>2</sup> 2p 3s <sup>3</sup> P <sub>2</sub>	4.90	2.58e+03
O III	374.0040	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>0</sub> - 2s <sup>2</sup> 2p 3s <sup>3</sup> P <sub>1</sub>	4.90	2.07e+03
O III	374.0730	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 2s <sup>2</sup> 2p 3s <sup>3</sup> P <sub>2</sub>	4.90	7.75e+03
O III	374.1620	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>1</sub> - 2s <sup>2</sup> 2p 3s <sup>3</sup> P <sub>1</sub>	4.90	1.55e+03
Fe XVIII *	374.2990	2s <sup>2</sup> 2p <sup>4</sup> ( <sup>1</sup> D) 3s <sup>2</sup> D <sub>5/2</sub> - 2s <sup>2</sup> 2p <sup>4</sup> ( <sup>1</sup> D) 3p <sup>2</sup> F <sub>7/2</sub>	6.95	2.77e+03
O III	374.3280	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>1</sub> - 2s <sup>2</sup> 2p 3s <sup>3</sup> P <sub>0</sub>	4.90	2.00e+03
O III	374.4320	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 2s <sup>2</sup> 2p 3s <sup>3</sup> P <sub>1</sub>	4.90	2.59e+03
N III	374.4340	2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 2s <sup>2</sup> 3d <sup>2</sup> D <sub>5/2</sub>	4.85	1.29e+03
Ne III	379.3080	2s <sup>2</sup> 2p <sup>4</sup> <sup>1</sup> D <sub>2</sub> - 2s 2p <sup>5</sup> <sup>1</sup> P <sub>1</sub>	4.95	3.91e+03
O IV	379.7780	2s 2p <sup>2</sup> <sup>2</sup> D <sub>5/2</sub> - 2s <sup>2</sup> 3p <sup>2</sup> P <sub>3/2</sub>	5.15	4.21e+03
O IV	379.9230	2s 2p <sup>2</sup> <sup>2</sup> D <sub>3/2</sub> - 2s <sup>2</sup> 3p <sup>2</sup> P <sub>1/2</sub>	5.15	2.33e+03
Cl XV	383.9410	2s <sup>2</sup> S <sub>1/2</sub> - 2p <sup>2</sup> P <sub>3/2</sub>	7.05	3.07e+03
C IV	384.0310	1s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 1s <sup>2</sup> 3d <sup>2</sup> D <sub>3/2</sub>	5.00	2.30e+03
C IV	384.1740	1s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 1s <sup>2</sup> 3d <sup>2</sup> D <sub>5/2</sub>	5.00	4.14e+03
Fe XX	384.2090	2s <sup>2</sup> 2p <sup>3</sup> <sup>4</sup> S <sub>3/2</sub> - 2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> P <sub>1/2</sub>	7.05	1.23e+04
C III	386.2030	2s <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 2s 3p <sup>1</sup> P <sub>1</sub>	4.80	3.86e+03
Fe XVII	387.2310	2s <sup>2</sup> 2p <sup>5</sup> 3s <sup>3</sup> P <sub>1</sub> - 2s <sup>2</sup> 2p <sup>5</sup> 3p <sup>3</sup> D <sub>1</sub>	6.90	1.96e+03
Fe XIX *	387.3120	1s <sup>2</sup> 2s <sub>2</sub> 2p <sup>3</sup> 3s <sup>5</sup> S <sub>2</sub> - 1s <sup>2</sup> 2s <sup>2</sup> 2p <sup>3</sup> 3p <sup>5</sup> P <sub>3</sub>	7.00	2.58e+03
Ne IV	388.2250	2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> P <sub>3/2</sub> - 2s 2p <sup>4</sup> <sup>2</sup> P <sub>3/2</sub>	5.15	1.39e+03
Ar XVI	389.0660	1s <sup>2</sup> 2s <sup>2</sup> S <sub>1/2</sub> - 1s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub>	7.05	2.37e+04
Fe XVII	389.3670	2s <sup>2</sup> 2p <sup>5</sup> 3s <sup>1</sup> P <sub>1</sub> - 2s <sup>2</sup> 2p <sup>5</sup> 3p <sup>3</sup> D <sub>2</sub>	6.90	3.99e+03
Cr XIV	389.8640	3s <sup>2</sup> S <sub>1/2</sub> - 3p <sup>2</sup> P <sub>3/2</sub>	6.70	1.42e+03
O III	395.5570	2s <sup>2</sup> 2p <sup>2</sup> <sup>1</sup> D <sub>2</sub> - 2s <sup>2</sup> 2p 3s <sup>1</sup> P <sub>1</sub>	4.90	3.31e+03
Ne VI	399.8410	2s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> P <sub>3/2</sub>	5.55	4.20e+03
Mg VI	400.6620	2s <sup>2</sup> 2p <sup>3</sup> <sup>4</sup> S <sub>3/2</sub> - 2s 2p <sup>4</sup> <sup>4</sup> P <sub>3/2</sub>	5.55	1.50e+03
Ne VI	401.1460	2s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> P <sub>1/2</sub>	5.55	8.00e+03
Ne VI	401.9410	2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> P <sub>3/2</sub>	5.55	2.10e+04
Ne VI	403.2600	2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> P <sub>1/2</sub>	5.55	4.45e+03

Table 1: (continued)

Ion	$\lambda$ (Å)	Transition	T <sub>max</sub>	Int
Mg VI	403.3070	2s <sup>2</sup> 2p <sup>3</sup> <sup>4</sup> S <sub>3/2</sub> - 2s 2p <sup>4</sup> <sup>4</sup> P <sub>5/2</sub>	5.55	2.22e+03
Fe XVIII	405.1040	2s <sup>2</sup> 2p <sup>4</sup> ( <sup>3</sup> P) 3s <sup>2</sup> P <sub>3/2</sub> - 2s <sup>2</sup> 2p <sup>4</sup> ( <sup>3</sup> P) 3p <sup>2</sup> D <sub>5/2</sub>	6.95	2.90e+03
Fe XVII	409.7050	2s <sup>2</sup> 2p <sup>5</sup> 3s <sup>3</sup> P <sub>2</sub> - 2s <sup>2</sup> 2p <sup>5</sup> 3p <sup>3</sup> S <sub>1</sub>	6.90	5.18e+03
Cl XV	415.5260	2s <sup>2</sup> S <sub>1/2</sub> - 2p <sup>2</sup> P <sub>1/2</sub>	7.05	1.44e+03
Fe XVIII	415.6280	2s <sup>2</sup> 2p <sup>4</sup> ( <sup>3</sup> P) 3s <sup>4</sup> P <sub>5/2</sub> - 2s <sup>2</sup> 2p <sup>4</sup> ( <sup>3</sup> P) 3p <sup>4</sup> P <sub>5/2</sub>	6.95	3.98e+03
Ne V	416.2120	2s <sup>2</sup> 2p <sup>2</sup> <sup>1</sup> D <sub>2</sub> - 2s 2p <sup>3</sup> <sup>1</sup> D <sub>2</sub>	5.35	1.45e+04
Ne V	416.8340	2s <sup>2</sup> 2p <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 2s 2p <sup>3</sup> <sup>1</sup> P <sub>1</sub>	5.35	1.45e+03
Fe XV	417.2580	3s <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 3s 3p <sup>3</sup> P <sub>1</sub>	6.40	6.17e+03
S XIV	417.6600	1s <sup>2</sup> 2s <sup>2</sup> S <sub>1/2</sub> - 1s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub>	7.05	1.36e+05
C IV	419.5250	1s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 1s <sup>2</sup> 3s <sup>2</sup> S <sub>1/2</sub>	5.00	2.21e+03
C IV	419.7140	1s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 1s <sup>2</sup> 3s <sup>2</sup> S <sub>1/2</sub>	5.00	4.40e+03
Ne IV	421.5980	2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> P <sub>1/2</sub> - 2s 2p <sup>4</sup> <sup>2</sup> S <sub>1/2</sub>	5.15	1.27e+03
Ne IV	421.6090	2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> P <sub>3/2</sub> - 2s 2p <sup>4</sup> <sup>2</sup> S <sub>1/2</sub>	5.15	2.42e+03
Fe XIX	424.2700	1s <sup>2</sup> 2s <sup>2</sup> 2p <sup>4</sup> <sup>3</sup> P <sub>1</sub> - 1s <sup>2</sup> 2s <sup>2</sup> 2p <sup>4</sup> <sup>1</sup> S <sub>0</sub>	7.00	6.82e+03
Mg VIII	430.4540	2s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> D <sub>3/2</sub>	5.90	1.40e+03
Ne VI	433.1790	2s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> S <sub>1/2</sub>	5.55	3.55e+03
Mg VII	434.9270	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 2s 2p <sup>3</sup> <sup>3</sup> D <sub>3</sub>	5.75	2.07e+03
O III	434.9800	2s <sup>2</sup> 2p <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 2s <sup>2</sup> 2p 3s <sup>1</sup> P <sub>1</sub>	4.90	1.79e+03
Ne VI	435.6460	2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> S <sub>1/2</sub>	5.55	5.67e+03
Mg VIII	436.7330	2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> D <sub>5/2</sub>	5.90	2.43e+03
S XIV	445.7000	1s <sup>2</sup> 2s <sup>2</sup> S <sub>1/2</sub> - 1s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub>	7.05	6.47e+04
N III	452.2270	2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 2s <sup>2</sup> 3s <sup>2</sup> S <sub>1/2</sub>	4.85	1.50e+03
P XIII	455.7260	2s <sup>2</sup> S <sub>1/2</sub> - 2p <sup>2</sup> P <sub>3/2</sub>	7.00	1.66e+03
C III	459.4670	2s 2p <sup>3</sup> P <sub>0</sub> - 2s 3d <sup>3</sup> D <sub>1</sub>	4.85	2.05e+03
C III	459.5140	2s 2p <sup>3</sup> P <sub>1</sub> - 2s 3d <sup>3</sup> D <sub>2</sub>	4.85	4.60e+03
C III	459.5170	2s 2p <sup>3</sup> P <sub>1</sub> - 2s 3d <sup>3</sup> D <sub>1</sub>	4.85	1.53e+03
C III	459.6270	2s 2p <sup>3</sup> P <sub>2</sub> - 2s 3d <sup>3</sup> D <sub>3</sub>	4.85	8.62e+03
C III	459.6330	2s 2p <sup>3</sup> P <sub>2</sub> - 2s 3d <sup>3</sup> D <sub>2</sub>	4.85	1.53e+03
Ne VII	465.2210	2s <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 2s 2p <sup>1</sup> P <sub>1</sub>	5.70	4.97e+04
Ca IX	466.2400	3s <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 3s 3p <sup>1</sup> P <sub>1</sub>	5.80	1.33e+03
Ne IV	469.8250	2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> D <sub>5/2</sub> - 2s 2p <sup>4</sup> <sup>2</sup> D <sub>5/2</sub>	5.15	1.22e+04
Ne IV	469.8750	2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> D <sub>3/2</sub> - 2s 2p <sup>4</sup> <sup>2</sup> D <sub>3/2</sub>	5.15	7.97e+03
Ni XXI	471.1430	2s <sup>2</sup> 2p <sup>4</sup> <sup>3</sup> P <sub>2</sub> - 2s <sup>2</sup> 2p <sup>4</sup> <sup>1</sup> D <sub>2</sub>	7.10	2.92e+03
Ni XXII	477.6780	2s <sup>2</sup> 2p <sup>3</sup> <sup>4</sup> S <sub>3/2</sub> - 2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> D <sub>5/2</sub>	7.10	1.56e+03
Ne V	480.4150	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>0</sub> - 2s 2p <sup>3</sup> <sup>3</sup> P <sub>1</sub>	5.35	2.76e+03
Ne V	481.2930	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>1</sub> - 2s 2p <sup>3</sup> <sup>3</sup> P <sub>0</sub>	5.35	2.79e+03
Ne V	481.3660	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>1</sub> - 2s 2p <sup>3</sup> <sup>3</sup> P <sub>1</sub>	5.35	2.21e+03
Ne V	481.3710	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>1</sub> - 2s 2p <sup>3</sup> <sup>3</sup> P <sub>2</sub>	5.35	3.35e+03
Ne V	482.9900	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 2s 2p <sup>3</sup> <sup>3</sup> P <sub>1</sub>	5.35	3.39e+03
Ne V	482.9940	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 2s 2p <sup>3</sup> <sup>3</sup> P <sub>2</sub>	5.35	1.07e+04
Ne III	488.0930	2s <sup>2</sup> 2p <sup>4</sup> <sup>3</sup> P <sub>2</sub> - 2s 2p <sup>5</sup> <sup>3</sup> P <sub>1</sub>	4.95	4.59e+03
Ne III	488.8510	2s <sup>2</sup> 2p <sup>4</sup> <sup>3</sup> P <sub>1</sub> - 2s 2p <sup>5</sup> <sup>3</sup> P <sub>0</sub>	4.95	3.62e+03
Ne III	489.4950	2s <sup>2</sup> 2p <sup>4</sup> <sup>3</sup> P <sub>2</sub> - 2s 2p <sup>5</sup> <sup>3</sup> P <sub>2</sub>	4.95	1.41e+04
Ne III	489.6290	2s <sup>2</sup> 2p <sup>4</sup> <sup>3</sup> P <sub>1</sub> - 2s 2p <sup>5</sup> <sup>3</sup> P <sub>1</sub>	4.95	2.72e+03
Ne III	490.2960	2s <sup>2</sup> 2p <sup>4</sup> <sup>3</sup> P <sub>0</sub> - 2s 2p <sup>5</sup> <sup>3</sup> P <sub>1</sub>	4.95	3.60e+03
Ne III	491.0410	2s <sup>2</sup> 2p <sup>4</sup> <sup>3</sup> P <sub>1</sub> - 2s 2p <sup>5</sup> <sup>3</sup> P <sub>2</sub>	4.95	4.63e+03
Si XII	499.4060	1s <sup>2</sup> 2s <sup>2</sup> S <sub>1/2</sub> - 1s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub>	6.95	1.22e+05
O III	507.3880	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>0</sub> - 2s 2p <sup>3</sup> <sup>3</sup> S <sub>1</sub>	4.85	7.27e+03
O III	507.6800	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>1</sub> - 2s 2p <sup>3</sup> <sup>3</sup> S <sub>1</sub>	4.85	2.18e+04

Table 1: (continued)

Ion	$\lambda$ (Å)	Transition	T <sub>max</sub>	Int
O III	508.1780	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 2s 2p <sup>3</sup> <sup>3</sup> S <sub>1</sub>	4.85	3.63e+04
He I	515.6170	1s <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 1s 5p <sup>1</sup> P <sub>1</sub>	4.50	1.48e+03
Si XII	520.6650	1s <sup>2</sup> 2s <sup>2</sup> S <sub>1/2</sub> - 1s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub>	6.95	5.87e+04
Ne IV	521.8150	2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> P <sub>3/2</sub> - 2s 2p <sup>4</sup> <sup>2</sup> D <sub>5/2</sub>	5.15	1.59e+03
He I	522.2130	1s <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 1s 4p <sup>1</sup> P <sub>1</sub>	4.50	6.06e+03
O III	525.7940	2s <sup>2</sup> 2p <sup>2</sup> <sup>1</sup> D <sub>2</sub> - 2s 2p <sup>3</sup> <sup>1</sup> P <sub>1</sub>	4.90	3.69e+04
He I	537.0300	1s <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 1s 3p <sup>1</sup> P <sub>1</sub>	4.50	1.59e+04
C III	538.0800	2s 2p <sup>3</sup> P <sub>0</sub> - 2s 3s <sup>3</sup> S <sub>1</sub>	4.80	2.90e+03
C III	538.1490	2s 2p <sup>3</sup> P <sub>1</sub> - 2s 3s <sup>3</sup> S <sub>1</sub>	4.80	8.69e+03
O II	538.2630	2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> D <sub>5/2</sub> - 2s 2p <sup>4</sup> <sup>2</sup> P <sub>3/2</sub>	4.65	2.22e+03
C III	538.3120	2s 2p <sup>3</sup> P <sub>2</sub> - 2s 3s <sup>3</sup> S <sub>1</sub>	4.80	1.45e+04
O II	539.0860	2s <sup>2</sup> 2p <sup>3</sup> <sup>4</sup> S <sub>3/2</sub> - 2s <sup>2</sup> 2p <sup>2</sup> 3s <sup>4</sup> P <sub>5/2</sub>	4.60	7.70e+03
O II	539.5470	2s <sup>2</sup> 2p <sup>3</sup> <sup>4</sup> S <sub>3/2</sub> - 2s <sup>2</sup> 2p <sup>2</sup> 3s <sup>4</sup> P <sub>3/2</sub>	4.60	5.27e+03
O II	539.8540	2s <sup>2</sup> 2p <sup>3</sup> <sup>4</sup> S <sub>3/2</sub> - 2s <sup>2</sup> 2p <sup>2</sup> 3s <sup>4</sup> P <sub>1/2</sub>	4.60	2.64e+03
Ne IV	541.1260	2s <sup>2</sup> 2p <sup>3</sup> <sup>4</sup> S <sub>3/2</sub> - 2s 2p <sup>4</sup> <sup>4</sup> P <sub>1/2</sub>	5.10	6.72e+03
Fe XX	541.3360	2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> D <sub>3/2</sub> - 2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> P <sub>3/2</sub>	7.05	6.56e+03
Ne IV	542.0760	2s <sup>2</sup> 2p <sup>3</sup> <sup>4</sup> S <sub>3/2</sub> - 2s 2p <sup>4</sup> <sup>4</sup> P <sub>3/2</sub>	5.10	1.34e+04
Ne IV	543.8860	2s <sup>2</sup> 2p <sup>3</sup> <sup>4</sup> S <sub>3/2</sub> - 2s 2p <sup>4</sup> <sup>4</sup> P <sub>5/2</sub>	5.10	2.02e+04
Al XI	550.0310	1s <sup>2</sup> 2s <sup>2</sup> S <sub>1/2</sub> - 1s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub>	6.90	5.20e+03
O IV	553.3290	2s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> P <sub>3/2</sub>	5.10	5.29e+04
S IV	554.0270	3s <sup>2</sup> 3p <sup>2</sup> P <sub>3/2</sub> - 3s <sup>2</sup> 4s <sup>2</sup> S <sub>1/2</sub>	4.90	1.38e+03
O IV	554.0760	2s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> P <sub>1/2</sub>	5.05	1.04e+05
O IV	554.5140	2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> P <sub>3/2</sub>	5.10	2.64e+05
O II	555.0590	2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> D <sub>5/2</sub> - 2s <sup>2</sup> 2p <sup>2</sup> 3s <sup>2</sup> D <sub>5/2</sub>	4.65	1.58e+03
O IV	555.2640	2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> P <sub>1/2</sub>	5.05	5.38e+04
Ne VI	558.6030	2s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> D <sub>3/2</sub>	5.55	9.27e+03
Ne VII	561.7300	2s 2p <sup>3</sup> P <sub>2</sub> - 2p <sup>2</sup> <sup>3</sup> P <sub>2</sub>	5.70	2.26e+03
Ne VI	562.7110	2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> D <sub>3/2</sub>	5.55	1.66e+03
Ne VI	562.8050	2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> D <sub>5/2</sub>	5.55	1.65e+04
Fe XX	567.8660	2s <sup>2</sup> 2p <sup>3</sup> <sup>4</sup> S <sub>3/2</sub> - 2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> D <sub>5/2</sub>	7.05	3.45e+04
Al XI	568.1200	1s <sup>2</sup> 2s <sup>2</sup> S <sub>1/2</sub> - 1s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub>	6.90	2.53e+03
Ne V	568.4240	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>0</sub> - 2s 2p <sup>3</sup> <sup>3</sup> D <sub>1</sub>	5.35	3.78e+03
Ne V	569.7560	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>1</sub> - 2s 2p <sup>3</sup> <sup>3</sup> D <sub>1</sub>	5.35	2.64e+03
Ne V	569.8280	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>1</sub> - 2s 2p <sup>3</sup> <sup>3</sup> D <sub>2</sub>	5.35	8.53e+03
Ne V	572.1050	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 2s 2p <sup>3</sup> <sup>3</sup> D <sub>2</sub>	5.35	2.47e+03
Ne V	572.3350	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 2s 2p <sup>3</sup> <sup>3</sup> D <sub>3</sub>	5.35	1.55e+04
C III	574.2810	2s 2p <sup>1</sup> P <sub>1</sub> - 2s 3d <sup>1</sup> D <sub>2</sub>	4.85	2.02e+03
He I	584.3340	1s <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 1s 2p <sup>1</sup> P <sub>1</sub>	4.50	2.18e+05
Ar VII	585.7480	3s <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 3s 3p <sup>1</sup> P <sub>1</sub>	5.55	2.97e+03
Fe XXI	585.7660	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>1</sub> - 2s <sup>2</sup> 2p <sup>2</sup> <sup>1</sup> D <sub>2</sub>	7.05	9.23e+03
Fe XIX	592.2350	1s <sup>2</sup> 2s <sup>2</sup> 2p <sup>4</sup> <sup>3</sup> P <sub>2</sub> - 1s <sup>2</sup> 2s <sup>2</sup> 2p <sup>4</sup> <sup>1</sup> D <sub>2</sub>	7.00	4.44e+04
O III	597.8140	2s <sup>2</sup> 2p <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 2s 2p <sup>3</sup> <sup>1</sup> P <sub>1</sub>	4.90	5.21e+03
O III	599.5900	2s <sup>2</sup> 2p <sup>2</sup> <sup>1</sup> D <sub>2</sub> - 2s 2p <sup>3</sup> <sup>1</sup> D <sub>2</sub>	4.85	8.38e+04
O IV	608.3970	2s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> S <sub>1/2</sub>	5.05	4.79e+04
Mg X	609.7930	1s <sup>2</sup> 2s <sup>2</sup> S <sub>1/2</sub> - 1s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub>	6.85	3.21e+04
O IV	609.8300	2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> S <sub>1/2</sub>	5.05	8.88e+04
Ni XXIV	609.9050	2s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub>	7.20	4.54e+03
O II	616.3040	2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> D <sub>5/2</sub> - 2s <sup>2</sup> 2p <sup>2</sup> 3s <sup>2</sup> P <sub>3/2</sub>	4.60	6.27e+03
O IV	616.9520	2s 2p <sup>2</sup> <sup>2</sup> D <sub>5/2</sub> - 2p <sup>3</sup> <sup>2</sup> P <sub>3/2</sub>	5.10	1.86e+03

Table 1: (continued)

Ion	$\lambda$ (Å)	Transition	T <sub>max</sub>	Int
O II	617.0630	2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> D <sub>3/2</sub> - 2s <sup>2</sup> 2p <sup>2</sup> 3s <sup>2</sup> P <sub>1/2</sub>	4.60	3.53e+03
O IV	624.6190	2s 2p <sup>2</sup> <sup>4</sup> P <sub>1/2</sub> - 2p <sup>3</sup> <sup>4</sup> S <sub>3/2</sub>	5.05	5.18e+03
Mg X	624.9410	1s <sup>2</sup> 2s <sup>2</sup> S <sub>1/2</sub> - 1s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub>	6.85	1.58e+04
O IV	625.1290	2s 2p <sup>2</sup> <sup>4</sup> P <sub>3/2</sub> - 2p <sup>3</sup> <sup>4</sup> S <sub>3/2</sub>	5.05	1.03e+04
O IV	625.8530	2s 2p <sup>2</sup> <sup>4</sup> P <sub>5/2</sub> - 2p <sup>3</sup> <sup>4</sup> S <sub>3/2</sub>	5.05	1.54e+04
O V	629.7320	2s <sup>2</sup> <sup>1</sup> S <sub>0</sub> - 2s 2p <sup>1</sup> P <sub>1</sub>	5.25	5.66e+05
Ni XXII	634.9530	2s <sup>2</sup> 2p <sup>3</sup> <sup>4</sup> S <sub>3/2</sub> - 2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> D <sub>3/2</sub>	7.10	2.02e+03
O II	644.1540	2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> P <sub>3/2</sub> - 2s 2p <sup>4</sup> <sup>2</sup> S <sub>1/2</sub>	4.65	2.35e+03
S IV	657.3190	3s <sup>2</sup> 3p <sup>2</sup> P <sub>1/2</sub> - 3s <sup>2</sup> 3d <sup>2</sup> D <sub>3/2</sub>	4.90	9.73e+03
S IV	661.3960	3s <sup>2</sup> 3p <sup>2</sup> P <sub>3/2</sub> - 3s <sup>2</sup> 3d <sup>2</sup> D <sub>5/2</sub>	4.90	1.76e+04
S IV	661.4550	3s <sup>2</sup> 3p <sup>2</sup> P <sub>3/2</sub> - 3s <sup>2</sup> 3d <sup>2</sup> D <sub>3/2</sub>	4.90	2.00e+03
S V	663.1260	3s 3p <sup>3</sup> P <sub>2</sub> - 3s 3d <sup>3</sup> D <sub>3</sub>	5.10	3.97e+03
S III	678.4540	3s <sup>2</sup> 3p <sup>2</sup> <sup>3</sup> P <sub>1</sub> - 3s <sup>2</sup> 3p 3d <sup>3</sup> D <sub>2</sub>	4.70	2.71e+03
Fe XX	679.2600	2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> D <sub>5/2</sub> - 2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> P <sub>3/2</sub>	7.05	1.37e+03
S III	680.6760	3s <sup>2</sup> 3p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 3s <sup>2</sup> 3p 3d <sup>3</sup> D <sub>3</sub>	4.70	4.88e+03
S III	680.9240	3s <sup>2</sup> 3p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 3s <sup>2</sup> 3p 3d <sup>3</sup> D <sub>2</sub>	4.70	1.30e+03
S III	680.9730	3s <sup>2</sup> 3p <sup>2</sup> <sup>3</sup> P <sub>1</sub> - 3s <sup>2</sup> 3p 4s <sup>3</sup> P <sub>2</sub>	4.65	2.58e+03
S III	683.5890	3s <sup>2</sup> 3p <sup>2</sup> <sup>1</sup> D <sub>2</sub> - 3s <sup>2</sup> 3p 3d <sup>1</sup> F <sub>3</sub>	4.70	2.80e+03
N III	684.9980	2s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> P <sub>3/2</sub>	4.80	8.02e+03
N III	685.5150	2s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> P <sub>1/2</sub>	4.80	1.59e+04
N III	685.8170	2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> P <sub>3/2</sub>	4.80	4.01e+04
N III	686.3360	2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 2s 2p <sup>2</sup> <sup>2</sup> P <sub>1/2</sub>	4.80	8.09e+03
C II	687.0530	2s <sup>2</sup> 2p <sup>2</sup> P <sub>1/2</sub> - 2s <sup>2</sup> 3d <sup>2</sup> D <sub>3/2</sub>	4.55	1.82e+03
C II	687.3450	2s <sup>2</sup> 2p <sup>2</sup> P <sub>3/2</sub> - 2s <sup>2</sup> 3d <sup>2</sup> D <sub>5/2</sub>	4.55	4.62e+03
C III	690.5200	2s 2p <sup>1</sup> P <sub>1</sub> - 2s 3s <sup>1</sup> S <sub>0</sub>	4.80	3.76e+03
Ni XX	694.6100	2s <sup>2</sup> 2p <sup>5</sup> <sup>2</sup> P <sub>3/2</sub> - 2s <sup>2</sup> 2p <sup>5</sup> <sup>2</sup> P <sub>1/2</sub>	7.05	4.56e+03
S V	696.6230	3s 3p <sup>1</sup> P <sub>1</sub> - 3s 3d <sup>1</sup> D <sub>2</sub>	5.15	2.02e+03
O III	702.3370	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>0</sub> - 2s 2p <sup>3</sup> <sup>3</sup> P <sub>1</sub>	4.85	2.94e+04
S III	702.7780	3s <sup>2</sup> 3p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 3s <sup>2</sup> 3p 3d <sup>3</sup> P <sub>2</sub>	4.65	2.59e+03
O III	702.8380	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>1</sub> - 2s 2p <sup>3</sup> <sup>3</sup> P <sub>0</sub>	4.85	2.94e+04
O III	702.8960	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>1</sub> - 2s 2p <sup>3</sup> <sup>3</sup> P <sub>1</sub>	4.85	2.26e+04
O III	702.9000	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>1</sub> - 2s 2p <sup>3</sup> <sup>3</sup> P <sub>2</sub>	4.85	3.62e+04
O III	703.8510	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 2s 2p <sup>3</sup> <sup>3</sup> P <sub>1</sub>	4.85	3.65e+04
O III	703.8550	2s <sup>2</sup> 2p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 2s 2p <sup>3</sup> <sup>3</sup> P <sub>2</sub>	4.85	1.11e+05
S III	710.9600	3s <sup>2</sup> 3p <sup>2</sup> <sup>1</sup> D <sub>2</sub> - 3s 3p <sup>3</sup> <sup>1</sup> D <sub>2</sub>	4.70	3.82e+03
O II	718.5060	2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> D <sub>5/2</sub> - 2s 2p <sup>4</sup> <sup>2</sup> D <sub>5/2</sub>	4.60	1.77e+04
O II	718.5670	2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> D <sub>3/2</sub> - 2s 2p <sup>4</sup> <sup>2</sup> D <sub>3/2</sub>	4.60	1.14e+04
Fe XX	721.5580	2s <sup>2</sup> 2p <sup>3</sup> <sup>4</sup> S <sub>3/2</sub> - 2s <sup>2</sup> 2p <sup>3</sup> <sup>2</sup> D <sub>3/2</sub>	7.05	5.20e+04
S III	725.8580	3s <sup>2</sup> 3p <sup>2</sup> <sup>3</sup> P <sub>1</sub> - 3s 3p <sup>3</sup> <sup>3</sup> S <sub>1</sub>	4.65	1.75e+03
S III	728.6860	3s <sup>2</sup> 3p <sup>2</sup> <sup>3</sup> P <sub>2</sub> - 3s 3p <sup>3</sup> <sup>3</sup> S <sub>1</sub>	4.65	2.58e+03
S III	729.5250	3s <sup>2</sup> 3p <sup>2</sup> <sup>1</sup> D <sub>2</sub> - 3s <sup>2</sup> 3p 4s <sup>1</sup> P <sub>1</sub>	4.70	1.47e+03
S IV	744.9040	3s <sup>2</sup> 3p <sup>2</sup> P <sub>1/2</sub> - 3s 3p <sup>2</sup> <sup>2</sup> P <sub>3/2</sub>	4.90	3.82e+03
N II	746.9840	2s <sup>2</sup> 2p <sup>2</sup> <sup>1</sup> D <sub>2</sub> - 2s <sup>2</sup> 2p 3s <sup>1</sup> P <sub>1</sub>	4.55	1.29e+03
S IV	748.3930	3s <sup>2</sup> 3p <sup>2</sup> P <sub>1/2</sub> - 3s 3p <sup>2</sup> <sup>2</sup> P <sub>1/2</sub>	4.90	7.00e+03
S IV	750.2210	3s <sup>2</sup> 3p <sup>2</sup> P <sub>3/2</sub> - 3s 3p <sup>2</sup> <sup>2</sup> P <sub>3/2</sub>	4.90	1.80e+04
S IV	753.7600	3s <sup>2</sup> 3p <sup>2</sup> P <sub>3/2</sub> - 3s 3p <sup>2</sup> <sup>2</sup> P <sub>1/2</sub>	4.90	3.89e+03
O V	758.6770	2s 2p <sup>3</sup> P <sub>1</sub> - 2p <sup>2</sup> <sup>3</sup> P <sub>2</sub>	5.25	1.80e+04
O V	759.4420	2s 2p <sup>3</sup> P <sub>0</sub> - 2p <sup>2</sup> <sup>3</sup> P <sub>1</sub>	5.25	1.42e+04
O V	760.2270	2s 2p <sup>3</sup> P <sub>1</sub> - 2p <sup>2</sup> <sup>3</sup> P <sub>1</sub>	5.25	1.06e+04

Table 1: (continued)

Ion	$\lambda$ (Å)	Transition	T <sub>max</sub>	Int
O V	760.4460	2s 2p $^3P_2$ - 2p $^2$ $^3P_2$	5.25	5.35e+04
O V	761.1280	2s 2p $^3P_1$ - 2p $^2$ $^3P_0$	5.25	8.30e+03
O V	762.0040	2s 2p $^3P_2$ - 2p $^2$ $^3P_1$	5.25	1.75e+04
N III	763.3340	2s $^2$ 2p $^2P_{1/2}$ - 2s 2p $^2$ $^2S_{1/2}$	4.75	9.11e+03
N III	764.3510	2s $^2$ 2p $^2P_{3/2}$ - 2s 2p $^2$ $^2S_{1/2}$	4.75	1.76e+04
N IV	765.1520	2s $^2$ $^1S_0$ - 2s 2p $^1P_1$	5.00	1.65e+05
Ne VIII	770.4280	1s $^2$ 2s $^2S_{1/2}$ - 1s $^2$ 2p $^2P_{3/2}$	5.75	2.62e+04
N III	771.5450	2s 2p $^2$ $^4P_{1/2}$ - 2p $^3$ $^4S_{3/2}$	4.80	1.51e+03
N III	771.9010	2s 2p $^2$ $^4P_{3/2}$ - 2p $^3$ $^4S_{3/2}$	4.80	3.02e+03
N III	772.3840	2s 2p $^2$ $^4P_{5/2}$ - 2p $^3$ $^4S_{3/2}$	4.80	4.51e+03
O V	774.5180	2s 2p $^1P_1$ - 2p $^2$ $^1S_0$	5.30	2.36e+03
N II	775.9650	2s $^2$ 2p $^2$ $^1D_2$ - 2s 2p $^3$ $^1D_2$	4.55	2.60e+03
Ni XXI	779.4840	2s $^2$ 2p $^4$ $^3P_2$ - 2s $^2$ 2p $^4$ $^3P_1$	7.10	2.06e+03
O IV	779.8200	2s 2p $^2$ $^2D_{3/2}$ - 2p $^3$ $^2D_{3/2}$	5.10	2.57e+03
O IV	779.9120	2s 2p $^2$ $^2D_{5/2}$ - 2p $^3$ $^2D_{5/2}$	5.10	4.07e+03
Ne VIII	780.3850	1s $^2$ 2s $^2S_{1/2}$ - 1s $^2$ 2p $^2P_{1/2}$	5.75	1.30e+04
Fe XXI	786.1600	2s $^2$ 2p $^2$ $^3P_2$ - 2s $^2$ 2p $^2$ $^1D_2$	7.05	6.23e+03
S V	786.4680	3s $^2$ $^1S_0$ - 3s 3p $^1P_1$	5.10	9.06e+04
O IV	787.7100	2s $^2$ 2p $^2P_{1/2}$ - 2s 2p $^2$ $^2D_{3/2}$	5.05	1.93e+05
O IV	790.1140	2s $^2$ 2p $^2P_{3/2}$ - 2s 2p $^2$ $^2D_{3/2}$	5.05	3.70e+04
O IV	790.2010	2s $^2$ 2p $^2P_{3/2}$ - 2s 2p $^2$ $^2D_{5/2}$	5.05	3.47e+05
O II	796.6820	2s $^2$ 2p $^3$ $^2P_{3/2}$ - 2s 2p $^4$ $^2D_{5/2}$	4.60	1.70e+03
S III	796.6850	3s $^2$ 3p $^2$ $^1D_2$ - 3s 3p $^3$ $^1P_1$	4.65	3.63e+03
C II	806.5670	2s 2p $^2$ $^4P_{5/2}$ - 2s 2p 3s $^4P_{5/2}$	4.55	1.97e+03
C II	806.8230	2s 2p $^2$ $^4P_{3/2}$ - 2s 2p 3s $^4P_{1/2}$	4.55	1.77e+03
S IV	809.6560	3s $^2$ 3p $^2P_{1/2}$ - 3s 3p $^2$ $^2S_{1/2}$	4.90	2.99e+03
Fe III	813.3770	3s $^2$ 3p $^6$ 3d $^6$ $^5D_4$ - 3s $^2$ 3p $^6$ 3d $^5$ 4p $^5D_4$	4.55	1.29e+03
S IV	815.9410	3s $^2$ 3p $^2P_{3/2}$ - 3s 3p $^2$ $^2S_{1/2}$	4.90	4.21e+03
S III	820.8820	3s $^2$ 3p $^2$ $^3P_1$ - 3s $^2$ 3p 3d $^3F_2$	4.65	1.66e+03
S III	822.5640	3s $^2$ 3p $^2$ $^3P_2$ - 3s $^2$ 3p 3d $^3F_3$	4.65	3.48e+03
O II	832.7580	2s $^2$ 2p $^3$ $^4S_{3/2}$ - 2s 2p $^4$ $^4P_{1/2}$	4.60	2.60e+04
O III	832.9290	2s $^2$ 2p $^2$ $^3P_0$ - 2s 2p $^3$ $^3D_1$	4.80	5.52e+04
O II	833.3310	2s $^2$ 2p $^3$ $^4S_{3/2}$ - 2s 2p $^4$ $^4P_{3/2}$	4.60	5.21e+04
O III	833.7150	2s $^2$ 2p $^2$ $^3P_1$ - 2s 2p $^3$ $^3D_1$	4.80	4.02e+04
O III	833.7490	2s $^2$ 2p $^2$ $^3P_1$ - 2s 2p $^3$ $^3D_2$	4.80	1.24e+05
O II	834.4650	2s $^2$ 2p $^3$ $^4S_{3/2}$ - 2s 2p $^4$ $^4P_{5/2}$	4.60	7.82e+04
O III	835.0590	2s $^2$ 2p $^2$ $^3P_2$ - 2s 2p $^3$ $^3D_1$	4.80	2.53e+03
O III	835.0930	2s $^2$ 2p $^2$ $^3P_2$ - 2s 2p $^3$ $^3D_2$	4.80	3.91e+04
O III	835.2890	2s $^2$ 2p $^2$ $^3P_2$ - 2s 2p $^3$ $^3D_3$	4.80	2.28e+05
S IV	837.4400	3s 3p $^2$ $^2D_{3/2}$ - 3s $^2$ 4p $^2P_{1/2}$	4.90	1.46e+03
Fe XXII	845.5520	1s $^2$ 2s $^2$ 2p $^2P_{1/2}$ - 1s $^2$ 2s $^2$ 2p $^2P_{3/2}$	7.10	8.67e+04
Fe III	845.6910	3s $^2$ 3p $^6$ 3d $^6$ $^5D_4$ - 3s $^2$ 3p $^6$ 3d $^5$ 4p $^5P_3$	4.55	1.38e+03
S V	854.7680	3s 3p $^3P_2$ - 3p $^2$ $^3P_2$	5.10	2.64e+03
C II	858.0920	2s $^2$ 2p $^2P_{1/2}$ - 2s $^2$ 3s $^2S_{1/2}$	4.50	2.02e+04
C II	858.5590	2s $^2$ 2p $^2P_{3/2}$ - 2s $^2$ 3s $^2S_{1/2}$	4.50	3.97e+04
Fe III	859.7230	3s $^2$ 3p $^6$ 3d $^6$ $^5D_4$ - 3s $^2$ 3p $^6$ 3d $^5$ 4p $^5F_5$	4.50	2.43e+03
Fe III	861.8370	3s $^2$ 3p $^6$ 3d $^6$ $^5D_3$ - 3s $^2$ 3p $^6$ 3d $^5$ 4p $^5F_4$	4.50	1.51e+03
Ne VII	895.1910	2s $^2$ $^1S_0$ - 2s 2p $^3P_1$	5.65	3.00e+03
S III	900.2490	3s $^2$ 3p $^2$ $^1D_2$ - 3s $^2$ 3p 3d $^3F_3$	4.65	1.68e+03

Table 1: (continued)

Ion	$\lambda$ (Å)	Transition	$T_{\max}$	Int
S III	902.5690	$3s^2 \ 3p^2 \ ^1D_2 - 3s^2 \ 3p \ 3d \ ^3F_2$	4.65	1.48e+03
C II	903.6230	$2s^2 \ 2p \ ^2P_{1/2} - 2s \ 2p^2 \ ^2P_{3/2}$	4.50	5.21e+03
C II	903.9620	$2s^2 \ 2p \ ^2P_{1/2} - 2s \ 2p^2 \ ^2P_{1/2}$	4.50	7.88e+03
C II	904.1410	$2s^2 \ 2p \ ^2P_{3/2} - 2s \ 2p^2 \ ^2P_{3/2}$	4.50	2.60e+04
C II	904.4800	$2s^2 \ 2p \ ^2P_{3/2} - 2s \ 2p^2 \ ^2P_{1/2}$	4.50	3.97e+03
Ni XXIII	910.8630	$2s^2 \ 2p^2 \ ^3P_0 - 2s^2 \ 2p^2 \ ^3P_1$	7.15	6.45e+03