Predicted XUV Line Intensities
CHIANTI database - Version 11.0

Calculated with Constant pressure= 1.00e+16 (cm^{-3} K)
50.3 to 149.9 Å
Number of lines: 140
Minimum intensity = 2280.00
Units are: erg cm-2 sr-1 s-1
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 11:04:25 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	λ (Å)	Transition	T_{max}	Int
Fe XVII	50.2600	$2s^2\ 2p^5\ 3p\ ^3D_3$ - $2s^2\ 2p^5\ 4d\ ^3F_4$	6.90	3.79e+03
Fe XVII *	50.3400	$2s^2\ 2p^5\ 3p\ ^3P_1$ - $2s^2\ 2p^5\ 4d\ ^3D_2$	6.90	2.50e+03
Fe XVII *	50.3590	$2s^2\ 2p^5\ 3p\ ^1D_2$ - $2s^2\ 2p^5\ 4d\ ^1F_3$	6.90	2.77e+03
Fe XVI	50.3610	$3s\ ^2S_{1/2}$ - $4p\ ^2P_{3/2}$	6.85	1.17e+04
Mg XI	50.4380	$1s\ 2s\ ^3S_1$ - $1s\ 3p\ ^3P_2$	6.95	2.37e+03
Fe XVI	50.5650	$3s\ ^2S_{1/2}$ - $4p\ ^2P_{1/2}$	6.85	6.16e+03
Fe XVII *	50.6060	$2s\ 2p^6\ 3p\ ^1P_1$ - $2s\ 2p^6\ 4d\ ^1D_2$	6.90	4.97e+03
Ni XVIII	51.0380	$3p\ ^2P_{3/2}$ - $4s\ ^2S_{1/2}$	6.90	3.69e+03
Ni XVIII	52.7200	$3d\ ^2D_{5/2}$ - $4f\ ^2F_{7/2}$	6.90	2.73e+03
Fe XV	52.9110	$3s^2\ ^1S_0$ - $3s\ 4p\ ^1P_1$	6.75	2.57e+03
Fe XVI	54.1260	$3p\ ^2P_{1/2}$ - $4d\ ^2D_{3/2}$	6.80	7.80e+03
Fe XVI	54.7100	$3p\ ^2P_{3/2}$ - $4d\ ^2D_{5/2}$	6.80	1.39e+04
Fe XVII	57.7100	$2s\ 2p^6\ 3p\ ^1P_1$ - $2s\ 2p^6\ 4s\ ^1S_0$	6.90	3.51e+03
Mg X	57.8760	$1s^2\ 2s\ ^2S_{1/2}$ - $1s^2\ 3p\ ^2P_{3/2}$	6.90	8.88e+03
Mg X	57.9200	$1s^2\ 2s\ ^2S_{1/2}$ - $1s^2\ 3p\ ^2P_{1/2}$	6.90	4.49e+03
Fe XV	59.4050	$3s\ 3p\ ^1P_1$ - $3s\ 4d\ ^1D_2$	6.70	3.63e+03
Fe XVI	62.8710	$3p\ ^2P_{1/2}$ - $4s\ ^2S_{1/2}$	6.80	1.11e+04
Mg X	63.1520	$1s^2\ 2p\ ^2P_{1/2}$ - $1s^2\ 3d\ ^2D_{3/2}$	6.85	5.72e+03
Mg X	63.2950	$1s^2\ 2p\ ^2P_{3/2}$ - $1s^2\ 3d\ ^2D_{5/2}$	6.85	9.61e+03
Fe XVI	63.7110	$3p\ ^2P_{3/2}$ - $4s\ ^2S_{1/2}$	6.80	2.30e+04
Ne X	65.4460	$2s\ ^2S_{1/2}$ - $3p\ ^2P_{3/2}$	7.05	2.60e+03
Ne X	65.6420	$2p\ ^2P_{3/2}$ - $3s\ ^2S_{1/2}$	7.05	4.16e+03
Mg X	65.6730	$1s^2\ 2p\ ^2P_{1/2}$ - $1s^2\ 3s\ ^2S_{1/2}$	6.85	2.38e+03
Mg X	65.8450	$1s^2\ 2p\ ^2P_{3/2}$ - $1s^2\ 3s\ ^2S_{1/2}$	6.85	4.71e+03
Fe XVI	66.2490	$3d\ ^2D_{3/2}$ - $4f\ ^2F_{5/2}$	6.80	1.15e+04
Fe XVI	66.3570	$3d\ ^2D_{5/2}$ - $4f\ ^2F_{7/2}$	6.80	1.65e+04
Fe XVII	68.5100	$2s^2\ 2p^5\ 3d\ ^1P_1$ - $2s^2\ 2p^5\ 4p\ ^1S_0$	6.90	2.63e+03
Fe XV	69.6820	$3s\ 3p\ ^1P_1$ - $3s\ 4s\ ^1S_0$	6.45	8.46e+03
Fe XV	73.4720	$3s\ 3d\ ^1D_2$ - $3s\ 4f\ ^1F_3$	6.70	3.38e+03
Fe XVI	76.4970	$3d\ ^2D_{5/2}$ - $4p\ ^2P_{3/2}$	6.85	2.76e+03
Fe XIX	78.8890	$1s^2\ 2s^2\ 2p^4\ ^3P_2$ - $1s^2\ 2s\ 2p^5\ ^1P_1$	7.00	6.08e+03
Fe XX	80.4890	$2s^2\ 2p^3\ ^4S_{3/2}$ - $2s\ 2p^4\ ^2P_{3/2}$	7.05	2.35e+03
Ni XXI	81.6890	$2s^2\ 2p^4\ ^1D_2$ - $2s\ 2p^5\ ^1P_1$	7.10	2.92e+03
Ni XX	83.1790	$2s^2\ 2p^5\ ^2P_{3/2}$ - $2s\ 2p^6\ ^2S_{1/2}$	7.05	3.59e+04
Fe XX	83.2330	$2s^2\ 2p^3\ ^2D_{3/2}$ - $2s\ 2p^4\ ^2P_{1/2}$	7.05	2.86e+03
Ni XXIII	87.6670	$2s^2\ 2p^2\ ^3P_1$ - $2s\ 2p^3\ ^3S_1$	7.15	3.58e+03
Ne VIII	88.0790	$1s^2\ 2s\ ^2S_{1/2}$ - $1s^2\ 3p\ ^2P_{3/2}$	6.70	3.06e+03
Ni XXI	88.8220	$2s^2\ 2p^4\ ^3P_2$ - $2s\ 2p^5\ ^3P_1$	7.10	9.63e+03
Fe XVII	89.7600	$2s^2\ 2p^5\ 3s\ ^1P_1$ - $2s\ 2p^6\ 3s\ ^1S_0$	6.90	1.40e+04
Fe XVII	90.3870	$2s^2\ 2p^5\ 3d\ ^3F_3$ - $2s\ 2p^6\ 3d\ ^1D_2$	6.90	3.31e+03
Fe XX	90.5940	$2s^2\ 2p^3\ ^2D_{3/2}$ - $2s\ 2p^4\ ^2P_{3/2}$	7.05	7.08e+03
Fe XIX	91.0130	$1s^2\ 2s^2\ 2p^4\ ^1D_2$ - $1s^2\ 2s\ 2p^5\ ^1P_1$	7.00	6.35e+04
Fe XXI	91.2680	$2s^2\ 2p^2\ ^3P_0$ - $2s\ 2p^3\ ^3S_1$	7.10	3.62e+04
Fe XVII	91.5500	$2s^2\ 2p^5\ 3d\ ^1D_2$ - $2s\ 2p^6\ 3d\ ^1D_2$	6.90	2.79e+03
Fe XVII *	91.6470	$2s^2\ 2p^5\ 3d\ ^3F_4$ - $2s\ 2p^6\ 3d\ ^3D_3$	6.90	2.32e+03
Ni XXIII	91.8650	$2s^2\ 2p^2\ ^3P_2$ - $2s\ 2p^3\ ^3S_1$	7.15	8.99e+03
Fe XVII	92.2710	$2s^2\ 2p^5\ 3d\ ^3D_3$ - $2s\ 2p^6\ 3d\ ^1D_2$	6.90	4.71e+03
Fe XX	93.7810	$2s^2\ 2p^3\ ^2D_{5/2}$ - $2s\ 2p^4\ ^2P_{3/2}$	7.05	4.70e+04
Fe XVIII	93.9320	$2s^2\ 2p^5\ ^2P_{3/2}$ - $2s\ 2p^6\ ^2S_{1/2}$	6.95	3.97e+05

Table 1: (continued)

Ion	λ (Å)	Transition	T_{max}	Int
Ni XX	94.4950	$2s^2\ 2p^5\ ^2P_{1/2}$ - $2s\ 2p^6\ ^2S_{1/2}$	7.05	1.07e+04
Fe XX	94.6430	$2s^2\ 2p^3\ ^2D_{3/2}$ - $2s\ 2p^4\ ^2S_{1/2}$	7.05	1.02e+04
Ni XXI	95.8630	$2s^2\ 2p^4\ ^3P_2$ - $2s\ 2p^5\ ^3P_2$	7.10	2.79e+04
Ni XXI	96.8030	$2s^2\ 2p^4\ ^3P_0$ - $2s\ 2p^5\ ^3P_1$	7.10	4.03e+03
Fe XXI	97.8640	$2s^2\ 2p^2\ ^3P_1$ - $2s\ 2p^3\ ^3S_1$	7.10	9.09e+04
Fe XX	98.0730	$2s\ 2p^4\ ^2D_{3/2}$ - $2p^5\ ^2P_{1/2}$	7.05	3.11e+03
Fe XVII	98.2490	$2s^2\ 2p^5\ 3s\ ^3P_1$ - $2s\ 2p^6\ 3s\ ^1S_0$	6.90	8.01e+03
Ne VIII	98.2590	$1s^2\ 2p\ ^2P_{3/2}$ - $1s^2\ 3d\ ^2D_{5/2}$	6.70	3.54e+03
Fe XX	98.3550	$2s^2\ 2p^3\ ^2P_{3/2}$ - $2s\ 2p^4\ ^2P_{1/2}$	7.05	8.17e+03
Fe XXI	98.3930	$2s^2\ 2p^2\ ^1D_2$ - $2s\ 2p^3\ ^1P_1$	7.10	8.70e+03
Ni XXI	100.2450	$2s^2\ 2p^4\ ^3P_1$ - $2s\ 2p^5\ ^3P_1$	7.10	2.92e+03
Fe XVII	100.6400	$2s^2\ 2p^5\ 3d\ ^1F_3$ - $2s\ 2p^6\ 3d\ ^1D_2$	6.90	3.65e+03
Fe XXII	100.7740	$1s^2\ 2s^2\ 2p\ ^2P_{1/2}$ - $1s^2\ 2s\ 2p^2\ ^2P_{3/2}$	7.10	2.32e+04
Fe XIX	101.5500	$1s^2\ 2s^2\ 2p^4\ ^3P_2$ - $1s^2\ 2s\ 2p^5\ ^3P_1$	7.00	1.69e+05
Fe XX	101.8190	$2s^2\ 2p^3\ ^2P_{1/2}$ - $2s\ 2p^4\ ^2P_{3/2}$	7.05	3.94e+03
Ni XXIV	102.1150	$2s^2\ 2p\ ^2P_{3/2}$ - $2s\ 2p^2\ ^2P_{3/2}$	7.20	6.07e+03
Fe XXII	102.2130	$1s^2\ 2s^2\ 2p\ ^2P_{1/2}$ - $1s^2\ 2s\ 2p^2\ ^2S_{1/2}$	7.10	3.12e+03
Fe XXI	102.2170	$2s^2\ 2p^2\ ^3P_2$ - $2s\ 2p^3\ ^3S_1$	7.10	2.07e+05
O VIII	102.3550	$2s\ ^2S_{1/2}$ - $3p\ ^2P_{3/2}$	7.05	3.74e+03
O VIII	102.3920	$2p\ ^2P_{1/2}$ - $3s\ ^2S_{1/2}$	7.05	2.43e+03
O VIII	102.4900	$2p\ ^2P_{3/2}$ - $3d\ ^2D_{5/2}$	7.05	2.65e+03
O VIII	102.5500	$2p\ ^2P_{3/2}$ - $3s\ ^2S_{1/2}$	7.05	4.90e+03
Ni XXIII	103.2460	$2s^2\ 2p^2\ ^3P_1$ - $2s\ 2p^3\ ^3P_1$	7.15	7.27e+03
Ni XXII	103.3090	$2s^2\ 2p^3\ ^4S_{3/2}$ - $2s\ 2p^4\ ^4P_{1/2}$	7.10	1.17e+04
Fe XVIII	103.9480	$2s^2\ 2p^5\ ^2P_{1/2}$ - $2s\ 2p^6\ ^2S_{1/2}$	6.95	1.31e+05
Ni XXIV	104.6250	$2s^2\ 2p\ ^2P_{1/2}$ - $2s\ 2p^2\ ^2P_{1/2}$	7.20	3.80e+04
Ni XXII	106.0450	$2s^2\ 2p^3\ ^4S_{3/2}$ - $2s\ 2p^4\ ^4P_{3/2}$	7.10	2.27e+04
Fe XIX	106.1050	$1s^2\ 2s^2\ 2p^4\ ^1S_0$ - $1s^2\ 2s\ 2p^5\ ^1P_1$	7.00	3.98e+03
Fe XIX	106.3170	$1s^2\ 2s^2\ 2p^4\ ^3P_1$ - $1s^2\ 2s\ 2p^5\ ^3P_0$	7.00	9.30e+03
Fe XX	106.9610	$2s^2\ 2p^3\ ^2P_{1/2}$ - $2s\ 2p^4\ ^2S_{1/2}$	7.05	7.47e+03
Fe XXI	108.1170	$2s^2\ 2p^2\ ^3P_0$ - $2s\ 2p^3\ ^3P_1$	7.10	4.79e+04
Fe XIX	108.3550	$1s^2\ 2s^2\ 2p^4\ ^3P_2$ - $1s^2\ 2s\ 2p^5\ ^3P_2$	7.00	4.62e+05
Fe XX	108.8030	$2s^2\ 2p^3\ ^2P_{3/2}$ - $2s\ 2p^4\ ^2P_{3/2}$	7.05	3.93e+03
Ni XXI	109.3060	$2s^2\ 2p^4\ ^3P_1$ - $2s\ 2p^5\ ^3P_2$	7.10	6.18e+03
Fe XX	109.6460	$2s\ 2p^4\ ^2D_{3/2}$ - $2p^5\ ^2P_{3/2}$	7.05	2.53e+03
Fe XIX	109.9520	$1s^2\ 2s^2\ 2p^4\ ^3P_0$ - $1s^2\ 2s\ 2p^5\ ^3P_1$	7.00	7.92e+04
Fe XX	110.6270	$2s^2\ 2p^3\ ^2D_{3/2}$ - $2s\ 2p^4\ ^2D_{3/2}$	7.05	3.37e+04
Co XXIII	110.7100	$2s^2\ 2p\ ^2P_{1/2}$ - $2s\ 2p^2\ ^2P_{1/2}$	7.15	2.30e+03
Fe XX	111.5790	$2s\ 2p^4\ ^2D_{5/2}$ - $2p^5\ ^2P_{3/2}$	7.05	6.12e+03
Fe XIX	111.6950	$1s^2\ 2s^2\ 2p^4\ ^3P_1$ - $1s^2\ 2s\ 2p^5\ ^3P_1$	7.00	6.08e+04
Ni XXIII	111.8440	$2s^2\ 2p^2\ ^3P_0$ - $2s\ 2p^3\ ^3D_1$	7.15	5.30e+04
Fe XXI	113.2910	$2s^2\ 2p^2\ ^1D_2$ - $2s\ 2p^3\ ^1D_2$	7.05	9.62e+03
Fe XX	113.3490	$2s^2\ 2p^3\ ^2D_{5/2}$ - $2s\ 2p^4\ ^2D_{5/2}$	7.05	2.32e+04
Cr XIX	114.0110	$2s^2\ 2p^2\ ^3P_2$ - $2s\ 2p^3\ ^3S_1$	7.00	2.43e+03
Fe XXII	114.4090	$1s^2\ 2s^2\ 2p\ ^2P_{3/2}$ - $1s^2\ 2s\ 2p^2\ ^2P_{3/2}$	7.10	1.56e+05
Mn XVIII	115.3650	$2s^2\ 2p^4\ ^3P_2$ - $2s\ 2p^5\ ^3P_2$	6.95	2.97e+03
Fe XIX	115.3960	$1s^2\ 2s\ 2p^5\ ^1P_1$ - $1s^2\ 2p^6\ ^1S_0$	7.00	5.80e+03
Fe XXII	116.2680	$1s^2\ 2s^2\ 2p\ ^2P_{3/2}$ - $1s^2\ 2s\ 2p^2\ ^2S_{1/2}$	7.10	3.68e+04
Fe XXII	117.1440	$1s^2\ 2s^2\ 2p\ ^2P_{1/2}$ - $1s^2\ 2s\ 2p^2\ ^2P_{1/2}$	7.10	8.22e+05

Table 1: (continued)

Ion	λ (Å)	Transition	T_{max}	Int
Fe XXI	117.4990	$2s^2\ 2p^2\ ^3P_1$ - $2s\ 2p^3\ ^3P_1$	7.10	1.63e+05
Ni XXII	117.9170	$2s^2\ 2p^3\ ^4S_{3/2}$ - $2s\ 2p^4\ ^4P_{5/2}$	7.10	2.62e+04
Ni XXV	117.9390	$2s^2\ ^1S_0$ - $2s\ 2p\ ^1P_1$	7.25	1.01e+05
Ni XXIV	118.5540	$2s^2\ 2p\ ^2P_{1/2}$ - $2s\ 2p^2\ ^2D_{3/2}$	7.20	3.47e+04
Fe XX	118.6800	$2s^2\ 2p^3\ ^4S_{3/2}$ - $2s\ 2p^4\ ^4P_{1/2}$	7.05	2.14e+05
Fe XXI	118.6970	$2s^2\ 2p^2\ ^3P_1$ - $2s\ 2p^3\ ^3P_0$	7.10	3.03e+03
Co XXII	119.9270	$2s^2\ 2p^2\ ^3P_0$ - $2s\ 2p^3\ ^3D_1$	7.10	2.92e+03
Fe XIX	119.9830	$1s^2\ 2s^2\ 2p^4\ ^3P_1$ - $1s^2\ 2s\ 2p^5\ ^3P_2$	7.00	1.13e+05
Fe XXII	120.0020	$1s^2\ 2s\ 2p^2\ ^2D_{3/2}$ - $1s^2\ 2p^3\ ^2P_{1/2}$	7.10	2.63e+03
Fe XXI	121.2130	$2s^2\ 2p^2\ ^3P_2$ - $2s\ 2p^3\ ^3P_2$	7.10	1.85e+04
Fe XX	121.8450	$2s^2\ 2p^3\ ^4S_{3/2}$ - $2s\ 2p^4\ ^4P_{3/2}$	7.05	4.11e+05
Cr XVII	122.9720	$2s^2\ 2p^4\ ^3P_2$ - $2s\ 2p^5\ ^3P_2$	6.90	3.21e+03
Fe XXI	123.8310	$2s^2\ 2p^2\ ^3P_2$ - $2s\ 2p^3\ ^3P_1$	7.10	2.69e+04
Mn XXI	124.0800	$2s^2\ 2p\ ^2P_{1/2}$ - $2s\ 2p^2\ ^2P_{1/2}$	7.05	7.05e+03
Co XXIV	125.1500	$2s^2\ ^1S_0$ - $2s\ 2p\ ^1P_1$	7.20	6.10e+03
Fe XXI	128.7520	$2s^2\ 2p^2\ ^3P_0$ - $2s\ 2p^3\ ^3D_1$	7.10	9.28e+05
Mn XIX	130.5780	$2s^2\ 2p^3\ ^4S_{3/2}$ - $2s\ 2p^4\ ^4P_{3/2}$	7.00	3.06e+03
Cr XX	131.5320	$2s^2\ 2p\ ^2P_{1/2}$ - $2s\ 2p^2\ ^2P_{1/2}$	7.05	1.01e+04
Fe XIX	132.6190	$1s^2\ 2s^2\ 2p^4\ ^1D_2$ - $1s^2\ 2s\ 2p^5\ ^3P_2$	7.00	2.15e+04
Fe XX	132.8400	$2s^2\ 2p^3\ ^4S_{3/2}$ - $2s\ 2p^4\ ^4P_{5/2}$	7.05	5.27e+05
Fe XXIII	132.9060	$2s^2\ ^1S_0$ - $2s\ 2p\ ^1P_1$	7.15	2.23e+06
Fe XXII	135.8120	$1s^2\ 2s^2\ 2p\ ^2P_{1/2}$ - $1s^2\ 2s\ 2p^2\ ^2D_{3/2}$	7.10	6.97e+05
Fe XX	136.0520	$2s^2\ 2p^3\ ^2P_{3/2}$ - $2s\ 2p^4\ ^2D_{5/2}$	7.05	3.60e+03
Fe XXIII	136.5310	$2s\ 2p\ ^3P_2$ - $2p^2\ ^1D_2$	7.15	4.64e+03
Mn XX	138.3680	$2s^2\ 2p^2\ ^3P_0$ - $2s\ 2p^3\ ^3D_1$	7.05	7.07e+03
Cr XVIII	139.9680	$2s^2\ 2p^3\ ^4S_{3/2}$ - $2s\ 2p^4\ ^4P_{3/2}$	6.95	3.76e+03
Fe XX	140.4210	$2s\ 2p^4\ ^2P_{3/2}$ - $2p^5\ ^2P_{3/2}$	7.05	3.40e+03
Mn XIX	141.0310	$2s^2\ 2p^3\ ^4S_{3/2}$ - $2s\ 2p^4\ ^4P_{5/2}$	7.00	4.15e+03
Mn XXII	141.0890	$2s^2\ ^1S_0$ - $2s\ 2p\ ^1P_1$	7.10	2.12e+04
Fe XX	142.0430	$2s^2\ 2p^3\ ^2D_{3/2}$ - $2s\ 2p^4\ ^4P_{1/2}$	7.05	2.49e+03
Fe XXI	142.1430	$2s^2\ 2p^2\ ^3P_1$ - $2s\ 2p^3\ ^3D_2$	7.10	2.39e+04
Fe XXI	142.2810	$2s^2\ 2p^2\ ^3P_1$ - $2s\ 2p^3\ ^3D_1$	7.10	5.85e+04
Ca XV	144.3090	$2s^2\ 2p^2\ ^3P_2$ - $2s\ 2p^3\ ^3S_1$	6.70	2.28e+03
Fe XXIII	144.3890	$2s\ 2p\ ^3P_1$ - $2p^2\ ^3P_2$	7.15	2.90e+03
Mn XXI	145.4460	$2s^2\ 2p\ ^2P_{1/2}$ - $2s\ 2p^2\ ^2D_{3/2}$	7.05	5.92e+03
Fe XXI	145.7330	$2s^2\ 2p^2\ ^3P_2$ - $2s\ 2p^3\ ^3D_3$	7.10	9.43e+03
Fe XXIII	147.2540	$2s\ 2p\ ^3P_0$ - $2p^2\ ^3P_1$	7.15	6.67e+03
Ni XI	148.3770	$3s^2\ 3p^6\ ^1S_0$ - $3s^2\ 3p^5\ 3d\ ^1P_1$	6.20	2.90e+03
Cr XIX	148.6810	$2s^2\ 2p^2\ ^3P_0$ - $2s\ 2p^3\ ^3D_1$	7.00	8.67e+03
Fe XXIII	149.2110	$2s\ 2p\ ^1P_1$ - $2p^2\ ^1S_0$	7.15	6.58e+03
Cr XVIII	149.8280	$2s^2\ 2p^3\ ^4S_{3/2}$ - $2s\ 2p^4\ ^4P_{5/2}$	6.95	5.27e+03
Cr XXI	149.9070	$2s^2\ ^1S_0$ - $2s\ 2p\ ^1P_1$	7.05	3.31e+04