

Predicted XUV Line Intensities  
CHIANTI database - Version 7.0

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

Number of lines: 159

Minimum intensity = 1.00000

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

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

Calculated: Tue Oct 25 11:51:21 2011

Ionization Fractions file: chianti.ioneq

ionization equilibrium: CHIANTI

produced as part of the CHIANTI atomic data base collaboration

K.P. Dere (GMU) Wed Dec 10 09:16:04 2008

Elemental Abundance file: sun\_photospheric\_grevesse07.abund

abundance: Grevesse N., Asplund, M. & Sauval A.J., 2007, Space Science  
Reviews, 130, 105

comment: These are the latest set of "standard abundances" produced by  
Grevesse  
and colleagues.

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

Peter Young - 19-Dec-2008

Minimum abundance = 3.98107e-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

Table 1: *Line List*

Ion	$\lambda$ (Å)	Transition	$T_{\max}$	Int
Al II	10079.1133	3s 3d $^3D_3$ - 3s 4p $^3P_2$	4.5	1.21e+01
Al II	10080.2158	3s 3d $^3D_2$ - 3s 4p $^3P_2$	4.5	2.16e+00
Al II	10110.2090	3s 3d $^3D_2$ - 3s 4p $^3P_1$	4.5	6.39e+00
Al II	10111.1602	3s 3d $^3D_1$ - 3s 4p $^3P_1$	4.5	2.13e+00
Al II	10125.4688	3s 3d $^3D_1$ - 3s 4p $^3P_0$	4.5	2.86e+00
He II	10125.6396	4p $^2P_{1/2}$ - 5d $^2D_{3/2}$	4.9	7.63e+00
He II	10125.7041	4s $^2S_{1/2}$ - 5p $^2P_{3/2}$	4.9	4.72e+00
He II	10125.9922	4p $^2P_{1/2}$ - 5s $^2S_{1/2}$	4.9	1.03e+01
He II	10126.0879	4s $^2S_{1/2}$ - 5p $^2P_{1/2}$	4.9	2.36e+00
He II	10126.2803	4d $^2D_{3/2}$ - 5f $^2F_{5/2}$	4.9	5.98e+01
He II	10126.2803	4p $^2P_{3/2}$ - 5d $^2D_{5/2}$	4.9	1.37e+01
He II	10126.4082	4p $^2P_{3/2}$ - 5d $^2D_{3/2}$	4.9	1.53e+00
He II	10126.4404	4f $^2F_{5/2}$ - 5g $^2G_{7/2}$	4.9	2.01e+01
He II	10126.4404	4d $^2D_{5/2}$ - 5f $^2F_{7/2}$	4.9	8.52e+01
He II	10126.5049	4d $^2D_{5/2}$ - 5f $^2F_{5/2}$	4.9	4.27e+00
He II	10126.5371	4f $^2F_{7/2}$ - 5g $^2G_{9/2}$	4.9	2.52e+01
He II	10126.6328	4d $^2D_{5/2}$ - 5p $^2P_{3/2}$	4.9	1.09e+00
He II	10126.7607	4p $^2P_{3/2}$ - 5s $^2S_{1/2}$	4.9	2.05e+01
Ar XIII	10143.0352	2s <sup>2</sup> 2p <sup>2</sup> $^3P_0$ - 2s <sup>2</sup> 2p <sup>2</sup> $^3P_1$	6.6	3.35e+01
S XIII	10300.8018	2s 2p $^3P_1$ - 2s 2p $^3P_2$	6.5	2.03e+01
Cl XII	10650.7646	2s <sup>2</sup> 2p <sup>2</sup> $^3P_1$ - 2s <sup>2</sup> 2p <sup>2</sup> $^3P_2$	6.4	1.71e+00
Fe XIII	10749.1250	3s <sup>2</sup> 3p <sup>2</sup> $^3P_0$ - 3s <sup>2</sup> 3p <sup>2</sup> $^3P_1$	6.3	5.55e+01
Fe XIII	10800.7891	3s <sup>2</sup> 3p <sup>2</sup> $^3P_1$ - 3s <sup>2</sup> 3p <sup>2</sup> $^3P_2$	6.3	5.51e+01
He I	10832.0576	1s 2s $^3S_1$ - 1s 2p $^3P_0$	4.5	2.49e+04
He I	10833.2168	1s 2s $^3S_1$ - 1s 2p $^3P_1$	4.5	7.45e+04
He I	10833.3066	1s 2s $^3S_1$ - 1s 2p $^3P_2$	4.5	1.25e+05
Mg II	10917.2256	2p <sup>6</sup> 3d $^2D_{5/2}$ - 2p <sup>6</sup> 4p $^2P_{3/2}$	4.5	4.74e+00
Mg II	10954.7773	2p <sup>6</sup> 3d $^2D_{3/2}$ - 2p <sup>6</sup> 4p $^2P_{1/2}$	4.5	2.65e+00
Si II	11718.0811	3s <sup>2</sup> 5p $^2P_{1/2}$ - 3s <sup>2</sup> 5d $^2D_{3/2}$	4.5	3.06e+00
Si II	11751.6152	3s <sup>2</sup> 5p $^2P_{3/2}$ - 3s <sup>2</sup> 5d $^2D_{5/2}$	4.5	5.46e+00
He I	11972.3564	1s 3p $^3P_2$ - 1s 5d $^3D_3$	4.5	4.38e+01
He I	11972.3564	1s 3p $^3P_2$ - 1s 5d $^3D_2$	4.5	7.65e+00
He I	11972.3740	1s 3p $^3P_1$ - 1s 5d $^3D_1$	4.5	8.18e+00
He I	11972.3877	1s 3p $^3P_1$ - 1s 5d $^3D_2$	4.5	2.30e+01
He I	11972.7617	1s 3p $^3P_0$ - 1s 5d $^3D_1$	4.5	1.09e+01
S IX	12523.4814	2s <sup>2</sup> 2p <sup>4</sup> $^3P_2$ - 2s <sup>2</sup> 2p <sup>4</sup> $^3P_1$	6.2	9.34e+00
He I	12530.7686	1s 3s $^3S_1$ - 1s 4p $^3P_0$	4.5	8.15e+00
He I	12530.9424	1s 3s $^3S_1$ - 1s 4p $^3P_1$	4.5	2.44e+01
He I	12530.9561	1s 3s $^3S_1$ - 1s 4p $^3P_2$	4.5	4.06e+01
He I	12788.4395	1s 3d $^3D_2$ - 1s 5f $^3F_2$	4.5	8.11e+00
He I	12788.4443	1s 3d $^3D_3$ - 1s 5f $^3F_4$	4.5	9.36e+01
He I	12788.4492	1s 3d $^3D_3$ - 1s 5f $^3F_3$	4.5	8.11e+00
He I	12788.4512	1s 3d $^3D_2$ - 1s 5f $^3F_3$	4.5	6.47e+01
He I	12788.5107	1s 3d $^3D_1$ - 1s 5f $^3F_2$	4.5	4.37e+01
He I	12794.0234	1s 3d $^1D_2$ - 1s 5f $^1F_3$	4.5	2.45e+01
H I	12821.4482	3p $^2P_{1/2}$ - 5d $^2D_{3/2}$	4.5	1.37e+02
H I	12821.4736	3s $^2S_{1/2}$ - 5p $^2P_{3/2}$	4.5	7.03e+01
H I	12821.4863	3p $^2P_{1/2}$ - 5s $^2S_{1/2}$	4.5	1.14e+02
H I	12821.5127	3s $^2S_{1/2}$ - 5p $^2P_{1/2}$	4.5	3.51e+01

Table 1: (continued)

Ion	$\lambda$ (Å)	Transition	$T_{\max}$	Int
H I	12821.6152	3d $^2D_{3/2}$ - 5f $^2F_{5/2}$	4.5	3.23e+02
H I	12821.6152	3p $^2P_{3/2}$ - 5d $^2D_{5/2}$	4.5	2.46e+02
H I	12821.6279	3p $^2P_{3/2}$ - 5d $^2D_{3/2}$	4.5	2.74e+01
H I	12821.6670	3d $^2D_{3/2}$ - 5p $^2P_{1/2}$	4.5	3.21e+00
H I	12821.6670	3p $^2P_{3/2}$ - 5s $^2S_{1/2}$	4.5	2.28e+02
H I	12821.6797	3d $^2D_{5/2}$ - 5f $^2F_{5/2}$	4.5	2.31e+01
H I	12821.6797	3d $^2D_{5/2}$ - 5f $^2F_{7/2}$	4.5	4.60e+02
H I	12821.6924	3d $^2D_{5/2}$ - 5p $^2P_{3/2}$	4.5	5.79e+00
He I	12849.4814	1s 3p $^3P_2$ - 1s 5s $^3S_1$	4.5	4.29e+01
He I	12849.5166	1s 3p $^3P_1$ - 1s 5s $^3S_1$	4.5	2.58e+01
He I	12849.9639	1s 3p $^3P_0$ - 1s 5s $^3S_1$	4.5	8.60e+00
He I	12972.0010	1s 3p $^1P_1$ - 1s 5d $^1D_2$	4.5	1.53e+01
He I	12988.4287	1s 3d $^3D_1$ - 1s 5p $^3P_0$	4.5	1.87e+00
He I	12988.4492	1s 3d $^3D_2$ - 1s 5p $^3P_1$	4.5	4.20e+00
He I	12988.4541	1s 3d $^3D_3$ - 1s 5p $^3P_2$	4.5	7.86e+00
He I	12988.4551	1s 3d $^3D_2$ - 1s 5p $^3P_2$	4.5	1.40e+00
He I	12988.5234	1s 3d $^3D_1$ - 1s 5p $^3P_1$	4.5	1.40e+00
Ca XIV	13147.8760	2s <sup>2</sup> 2p <sup>3</sup> $^2D_{3/2}$ - 2s <sup>2</sup> 2p <sup>3</sup> $^2D_{5/2}$	6.7	1.09e+00
He I	13415.3779	1s 3p $^1P_1$ - 1s 5s $^1S_0$	4.5	1.79e+01
Si II	13700.1113	3s <sup>2</sup> 5p $^2P_{3/2}$ - 3s <sup>2</sup> 6s $^2S_{1/2}$	4.5	1.49e+00
Cl XII	13837.0830	2s <sup>2</sup> 2p <sup>2</sup> $^3P_0$ - 2s <sup>2</sup> 2p <sup>2</sup> $^3P_1$	6.4	1.47e+00
S XI	13927.6025	2s <sup>2</sup> 2p <sup>2</sup> $^3P_1$ - 2s <sup>2</sup> 2p <sup>2</sup> $^3P_2$	6.3	2.32e+01
Si X	14304.7451	2s <sup>2</sup> 2p $^2P_{1/2}$ - 2s <sup>2</sup> 2p $^2P_{3/2}$	6.2	1.84e+01
He I	15087.7988	1s 3s $^1S_0$ - 1s 4p $^1P_1$	4.5	1.45e+00
Si II	16911.4414	3s <sup>2</sup> 5s $^2S_{1/2}$ - 3s <sup>2</sup> 5p $^2P_{3/2}$	4.5	6.23e+00
Si II	16981.8242	3s <sup>2</sup> 5s $^2S_{1/2}$ - 3s <sup>2</sup> 5p $^2P_{1/2}$	4.5	3.09e+00
He I	17007.0098	1s 3p $^3P_2$ - 1s 4d $^3D_1$	4.5	1.26e+00
He I	17007.0645	1s 3p $^3P_2$ - 1s 4d $^3D_2$	4.5	1.77e+01
He I	17007.0684	1s 3p $^3P_2$ - 1s 4d $^3D_3$	4.5	1.01e+02
He I	17007.0742	1s 3p $^3P_1$ - 1s 4d $^3D_1$	4.5	1.88e+01
He I	17007.1289	1s 3p $^3P_1$ - 1s 4d $^3D_2$	4.5	5.30e+01
He I	17007.8574	1s 3p $^3P_0$ - 1s 4d $^3D_1$	4.5	2.50e+01
He I	18690.4316	1s 3d $^3D_2$ - 1s 4f $^3F_2$	4.5	2.47e+01
He I	18690.4609	1s 3d $^3D_3$ - 1s 4f $^3F_4$	4.5	2.86e+02
He I	18690.4844	1s 3d $^3D_3$ - 1s 4f $^3F_3$	4.5	3.29e+00
He I	18690.4883	1s 3d $^3D_2$ - 1s 4f $^3F_3$	4.5	2.63e+01
He I	18690.5859	1s 3d $^3D_1$ - 1s 4f $^3F_2$	4.5	1.33e+02
He I	18702.3516	1s 3d $^1D_2$ - 1s 4f $^1F_3$	4.5	6.18e+01
H I	18755.8223	3p $^2P_{1/2}$ - 4d $^2D_{3/2}$	4.5	2.28e+02
H I	18755.8770	3s $^2S_{1/2}$ - 4p $^2P_{3/2}$	4.5	1.06e+02
H I	18755.9883	3p $^2P_{1/2}$ - 4s $^2S_{1/2}$	4.5	2.09e+02
H I	18756.0430	3s $^2S_{1/2}$ - 4p $^2P_{1/2}$	4.5	5.30e+01
H I	18756.1523	3p $^2P_{3/2}$ - 4d $^2D_{5/2}$	4.5	3.47e+02
H I	18756.1523	3d $^2D_{3/2}$ - 4f $^2F_{5/2}$	4.5	1.34e+03
H I	18756.2070	3d $^2D_{3/2}$ - 4p $^2P_{3/2}$	4.5	1.21e+00
H I	18756.2070	3p $^2P_{3/2}$ - 4d $^2D_{3/2}$	4.5	4.56e+01
H I	18756.2617	3d $^2D_{5/2}$ - 4f $^2F_{7/2}$	4.5	1.08e+03
H I	18756.2891	3d $^2D_{5/2}$ - 4f $^2F_{5/2}$	4.5	9.52e+01
H I	18756.3438	3d $^2D_{5/2}$ - 4p $^2P_{3/2}$	4.5	1.09e+01

Table 1: (continued)

Ion	$\lambda$ (Å)	Transition	$T_{\max}$	Int
H I	18756.3730	$3p^2P_{3/2} - 4s^2S_{1/2}$	4.5	4.17e+02
H I	18756.3730	$3d^2D_{3/2} - 4p^2P_{1/2}$	4.5	6.03e+00
He I	19094.6055	$1s 3p^1P_1 - 1s 4d^1D_2$	4.5	4.77e+01
S XI	19201.2637	$2s^2 2p^2^3P_0 - 2s^2 2p^2^3P_1$	6.3	8.43e+00
Si XI	19349.8809	$2s 2p^3P_1 - 2s 2p^3P_2$	6.3	2.53e+00
He I	19548.2109	$1s 3d^3D_1 - 1s 4p^3P_0$	4.5	5.13e+00
He I	19548.4629	$1s 3d^3D_2 - 1s 4p^3P_1$	4.5	1.15e+01
He I	19548.4941	$1s 3d^3D_3 - 1s 4p^3P_2$	4.5	2.15e+01
He I	19548.4980	$1s 3d^3D_2 - 1s 4p^3P_2$	4.5	3.83e+00
He I	19548.6328	$1s 3d^3D_1 - 1s 4p^3P_1$	4.5	3.83e+00
Si VI	19630.0801	$2s^2 2p^5^2P_{3/2} - 2s^2 2p^5^2P_{1/2}$	5.7	1.70e+00
He I	20586.9375	$1s 2s^1S_0 - 1s 2p^1P_1$	4.5	8.61e+00
He I	21125.8223	$1s 3p^3P_2 - 1s 4s^3S_1$	4.5	2.36e+01
He I	21125.9219	$1s 3p^3P_1 - 1s 4s^3S_1$	4.5	1.41e+01
He I	21127.1309	$1s 3p^3P_0 - 1s 4s^3S_1$	4.5	4.71e+00
He I	21137.8359	$1s 3p^1P_1 - 1s 4s^1S_0$	4.5	4.07e+01
Ca XIII	22650.0977	$2s^2 2p^4^3P_1 - 2s^2 2p^4^3P_0$	6.6	1.69e+00
Si IX	25846.5195	$2s^2 2p^2^3P_1 - 2s^2 2p^2^3P_2$	6.1	1.28e+00
He I	28550.2891	$1s 4s^3S_1 - 1s 5p^3P_1$	4.5	1.19e+00
He I	28550.3203	$1s 4s^3S_1 - 1s 5p^3P_2$	4.5	1.99e+00
He I	37035.5820	$1s 4p^3P_2 - 1s 5d^3D_3$	4.5	5.32e+00
He I	37035.7070	$1s 4p^3P_1 - 1s 5d^3D_2$	4.5	2.79e+00
He I	37037.0781	$1s 4p^3P_0 - 1s 5d^3D_1$	4.5	1.33e+00
He I	40377.2930	$1s 4d^3D_2 - 1s 5f^3F_2$	4.5	1.45e+00
He I	40377.3438	$1s 4d^3D_3 - 1s 5f^3F_4$	4.5	1.67e+01
He I	40377.3906	$1s 4d^3D_3 - 1s 5f^3F_3$	4.5	1.45e+00
He I	40377.4102	$1s 4d^3D_2 - 1s 5f^3F_3$	4.5	1.15e+01
He I	40377.6055	$1s 4d^3D_1 - 1s 5f^3F_2$	4.5	7.77e+00
He I	40409.4219	$1s 4d^1D_2 - 1s 5f^1F_3$	4.5	4.36e+00
He I	40490.1484	$1s 4f^3F_3 - 1s 5g^3G_4$	4.5	7.39e+00
He I	40490.2148	$1s 4f^3F_4 - 1s 5g^3G_5$	4.5	9.64e+00
He I	40490.3125	$1s 4f^3F_2 - 1s 5g^3G_3$	4.5	5.45e+00
He I	40490.4297	$1s 4f^1F_3 - 1s 5g^1G_4$	4.5	3.13e+00
H I	40521.9219	$4p^2P_{1/2} - 5d^2D_{3/2}$	4.5	1.90e+01
H I	40521.9219	$4s^2S_{1/2} - 5p^2P_{3/2}$	4.5	1.00e+01
H I	40522.3047	$4s^2S_{1/2} - 5p^2P_{1/2}$	4.5	4.99e+00
H I	40522.3047	$4p^2P_{1/2} - 5s^2S_{1/2}$	4.5	2.57e+01
H I	40522.5625	$4d^2D_{3/2} - 5f^2F_{5/2}$	4.5	5.80e+01
H I	40522.5625	$4p^2P_{3/2} - 5d^2D_{5/2}$	4.5	3.43e+01
H I	40522.6914	$4p^2P_{3/2} - 5d^2D_{3/2}$	4.5	3.80e+00
H I	40522.8164	$4f^2F_{7/2} - 5g^2G_{9/2}$	4.5	7.49e+01
H I	40522.8164	$4d^2D_{5/2} - 5f^2F_{7/2}$	4.5	8.28e+01
H I	40522.8164	$4f^2F_{5/2} - 5g^2G_{7/2}$	4.5	5.58e+01
H I	40522.8164	$4d^2D_{5/2} - 5f^2F_{5/2}$	4.5	4.14e+00
H I	40522.9453	$4f^2F_{7/2} - 5d^2D_{5/2}$	4.5	1.11e+00
H I	40522.9453	$4d^2D_{5/2} - 5p^2P_{3/2}$	4.5	2.31e+00
H I	40522.9453	$4f^2F_{7/2} - 5g^2G_{7/2}$	4.5	3.99e+00
H I	40523.0742	$4p^2P_{3/2} - 5s^2S_{1/2}$	4.5	5.14e+01
H I	40523.0742	$4d^2D_{3/2} - 5p^2P_{1/2}$	4.5	1.27e+00

Table 1: (continued)

Ion	$\lambda$ (Å)	Transition	$T_{\max}$	Int
He I	41227.3789	1s 4p $^1P_1$ - 1s 5d $^1D_2$	4.5	2.23e+00
He I	42440.7578	1s 4d $^3D_2$ - 1s 5p $^3P_1$	4.5	1.57e+00
He I	42440.8125	1s 4d $^3D_3$ - 1s 5p $^3P_2$	4.5	2.93e+00
He I	42954.1875	1s 3s $^3S_1$ - 1s 3p $^3P_0$	4.5	1.26e+01
He I	42959.1875	1s 3s $^3S_1$ - 1s 3p $^3P_1$	4.5	3.76e+01
He I	42959.5938	1s 3s $^3S_1$ - 1s 3p $^3P_2$	4.5	6.26e+01
He I	46066.0938	1s 4p $^1P_1$ - 1s 5s $^1S_0$	4.5	3.87e+00
He I	46949.5234	1s 4p $^3P_2$ - 1s 5s $^3S_1$	4.5	8.82e+00
He I	46949.7227	1s 4p $^3P_1$ - 1s 5s $^3S_1$	4.5	5.30e+00
He I	46952.1445	1s 4p $^3P_0$ - 1s 5s $^3S_1$	4.5	1.76e+00
He I	108821.7031	1s 4s $^3S_1$ - 1s 4p $^3P_1$	4.5	1.05e+00
He I	108822.7734	1s 4s $^3S_1$ - 1s 4p $^3P_2$	4.5	1.75e+00