**Predicted XUV Line Intensities**
**CHIANTI database - Version 11.0**

**Calculated with Constant pressure= 1.00e+16 ($cm^{-3}$ K)**
******** to ****** Å**
**Number of lines: 171**
**Minimum intensity = 1.00000**
**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 11:06:05 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 = 8.70964e-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 | $T_{max}$ | Int |
|---|---|---|---|---|
| Al II | 10079.1211 | 3s 3d $^3D_3$ - 3s 4p $^3P_2$ | 4.50 | 7.52e+00 |
| Al II | 10080.2393 | 3s 3d $^3D_2$ - 3s 4p $^3P_2$ | 4.50 | 1.34e+00 |
| Al II | 10110.2012 | 3s 3d $^3D_2$ - 3s 4p $^3P_1$ | 4.50 | 3.95e+00 |
| Al II | 10111.1211 | 3s 3d $^3D_1$ - 3s 4p $^3P_1$ | 4.50 | 1.32e+00 |
| Al II | 10125.4541 | 3s 3d $^3D_1$ - 3s 4p $^3P_0$ | 4.50 | 1.76e+00 |
| He II | 10125.9814 | 4s $^2S_{1/2}$ - 5p $^2P_{3/2}$ | 4.90 | 3.47e+00 |
| He II | 10126.0723 | 4s $^2S_{1/2}$ - 5p $^2P_{1/2}$ | 4.90 | 1.73e+00 |
| He II | 10126.2500 | 4p $^2P_{3/2}$ - 5d $^2D_{5/2}$ | 4.90 | 1.24e+01 |
| He II | 10126.2500 | 4d $^2D_{3/2}$ - 5f $^2F_{5/2}$ | 4.90 | 5.65e+01 |
| He II | 10126.3779 | 4p $^2P_{3/2}$ - 5d $^2D_{3/2}$ | 4.90 | 1.38e+00 |
| He II | 10126.3789 | 4p $^2P_{1/2}$ - 5d $^2D_{3/2}$ | 4.90 | 6.89e+00 |
| He II | 10126.4355 | 4f $^2F_{5/2}$ - 5g $^2G_{7/2}$ | 4.90 | 1.92e+01 |
| He II | 10126.4365 | 4d $^2D_{5/2}$ - 5f $^2F_{7/2}$ | 4.90 | 8.06e+01 |
| He II | 10126.5000 | 4d $^2D_{5/2}$ - 5f $^2F_{5/2}$ | 4.90 | 4.04e+00 |
| He II | 10126.5234 | 4f $^2F_{7/2}$ - 5g $^2G_{9/2}$ | 4.90 | 2.40e+01 |
| He II | 10126.7314 | 4p $^2P_{3/2}$ - 5s $^2S_{1/2}$ | 4.90 | 1.81e+01 |
| He II | 10126.7627 | 4p $^2P_{1/2}$ - 5s $^2S_{1/2}$ | 4.90 | 9.05e+00 |
| Ar XIII | 10148.7812 | $2s^2$ $2p^2$ $^3P_0$ - $2s^2$ $2p^2$ $^3P_1$ | 6.55 | 6.50e+01 |
| S XIII | 10300.7832 | 2s 2p $^3P_1$ - 2s 2p $^3P_2$ | 6.45 | 2.75e+01 |
| Cl XII | 10650.7617 | $2s^2$ $2p^2$ $^3P_1$ - $2s^2$ $2p^2$ $^3P_2$ | 6.45 | 1.36e+00 |
| C I | 10694.1768 | 2p 3s $^3P_2$ - 2p 3p $^3D_3$ | 4.50 | 1.05e+00 |
| Fe XIII | 10749.1055 | $3s^2$ $3p^2$ $^3P_0$ - $3s^2$ $3p^2$ $^3P_1$ | 6.30 | 5.93e+01 |
| Fe XIII | 10800.7686 | $3s^2$ $3p^2$ $^3P_1$ - $3s^2$ $3p^2$ $^3P_2$ | 6.30 | 5.91e+01 |
| He I | 10832.0576 | 1s 2s $^3S_1$ - 1s 2p $^3P_0$ | 4.50 | 1.99e+04 |
| He I | 10833.2168 | 1s 2s $^3S_1$ - 1s 2p $^3P_1$ | 4.50 | 5.92e+04 |
| He I | 10833.3066 | 1s 2s $^3S_1$ - 1s 2p $^3P_2$ | 4.50 | 9.93e+04 |
| Mg II | 10917.2734 | 3d $^2D_{5/2}$ - 4p $^2P_{3/2}$ | 4.50 | 2.69e+00 |
| Mg II | 10954.8252 | 3d $^2D_{3/2}$ - 4p $^2P_{1/2}$ | 4.50 | 1.49e+00 |
| Al II | 11251.5049 | 3s 4d $^1D_2$ - 3s 5f $^1F_3$ | 4.50 | 1.04e+00 |
| Si III | 11339.6680 | 3s 5s $^3S_1$ - 3s 5p $^3P_1$ | 4.70 | 1.78e+00 |
| Si III | 11346.6162 | 3s 5s $^3S_1$ - 3s 5p $^3P_2$ | 4.70 | 2.94e+00 |
| O II | 11659.0879 | $2s^2$ $2p^2$ 4p $^4D_{5/2}$ - $2s^2$ $2p^2$ 4d $^4F_{7/2}$ | 4.65 | 2.03e+00 |
| O II | 11666.1611 | $2s^2$ $2p^2$ 4p $^4D_{3/2}$ - $2s^2$ $2p^2$ 4d $^4F_{5/2}$ | 4.65 | 1.34e+00 |
| O II | 11676.6504 | $2s^2$ $2p^2$ 4p $^4P_{5/2}$ - $2s^2$ $2p^2$ 4d $^4D_{7/2}$ | 4.65 | 1.37e+00 |
| O II | 11681.1514 | $2s^2$ $2p^2$ 4p $^4D_{7/2}$ - $2s^2$ $2p^2$ 4d $^4F_{9/2}$ | 4.65 | 3.08e+00 |
| C II s * | 11757.9189 | 2s 2p 4s $^4P_{1/2}$ - 2s 2p 4p $^4P_{3/2}$ | 4.60 | 1.08e+00 |
| C II s * | 11760.4248 | 2s 2p 4s $^4P_{3/2}$ - 2s 2p 4p $^4P_{5/2}$ | 4.60 | 1.16e+00 |
| C II s * | 11806.3750 | 2s 2p 4s $^4P_{3/2}$ - 2s 2p 4p $^4P_{1/2}$ | 4.60 | 1.08e+00 |
| C II s * | 11812.1064 | 2s 2p 4s $^4P_{5/2}$ - 2s 2p 4p $^4P_{5/2}$ | 4.60 | 2.71e+00 |
| C II s * | 11840.6250 | 2s 2p 4s $^4P_{5/2}$ - 2s 2p 4p $^4P_{3/2}$ | 4.60 | 1.18e+00 |
| He I | 11972.3340 | 1s 3p $^3P_2$ - 1s 5d $^3D_3$ | 4.50 | 3.52e+01 |
| He I | 11972.3340 | 1s 3p $^3P_2$ - 1s 5d $^3D_2$ | 4.50 | 6.14e+00 |
| He I | 11972.3516 | 1s 3p $^3P_1$ - 1s 5d $^3D_1$ | 4.50 | 6.58e+00 |
| He I | 11972.3662 | 1s 3p $^3P_1$ - 1s 5d $^3D_2$ | 4.50 | 1.84e+01 |
| He I | 11972.7402 | 1s 3p $^3P_0$ - 1s 5d $^3D_1$ | 4.50 | 8.79e+00 |
| C III | 11984.5156 | 2s 4s $^3S_1$ - 2s 4p $^3P_2$ | 4.85 | 1.38e+00 |
| S IX | 12523.0000 | $2s^2$ $2p^4$ $^3P_2$ - $2s^2$ $2p^4$ $^3P_1$ | 6.10 | 9.15e+00 |
| He I | 12530.7461 | 1s 3s $^3S_1$ - 1s 4p $^3P_0$ | 4.50 | 6.48e+00 |
| He I | 12530.9180 | 1s 3s $^3S_1$ - 1s 4p $^3P_1$ | 4.50 | 1.95e+01 |

Table 1: (continued)

| Ion | $\lambda$ (Å) | Transition | $T_{max}$ | Int |
|---|---|---|---|---|
| He I | 12530.9326 | 1s 3s $^3S_1$ - 1s 4p $^3P_2$ | 4.50 | 3.24e+01 |
| He I | 12788.4160 | 1s 3d $^3D_2$ - 1s 5f $^3F_2$ | 4.50 | 6.50e+00 |
| He I | 12788.4199 | 1s 3d $^3D_3$ - 1s 5f $^3F_4$ | 4.50 | 7.49e+01 |
| He I | 12788.4248 | 1s 3d $^3D_3$ - 1s 5f $^3F_3$ | 4.50 | 6.49e+00 |
| He I | 12788.4268 | 1s 3d $^3D_2$ - 1s 5f $^3F_3$ | 4.50 | 5.18e+01 |
| He I | 12788.4873 | 1s 3d $^3D_1$ - 1s 5f $^3F_2$ | 4.50 | 3.50e+01 |
| He I | 12794.0000 | 1s 3d $^1D_2$ - 1s 5f $^1F_3$ | 4.50 | 1.94e+01 |
| H I | 12821.4316 | 3p $^2P_{1/2}$ - 5d $^2D_{3/2}$ | 4.50 | 1.38e+02 |
| H I | 12821.4502 | 3s $^2S_{1/2}$ - 5p $^2P_{3/2}$ | 4.50 | 6.97e+01 |
| H I | 12821.4658 | 3p $^2P_{1/2}$ - 5s $^2S_{1/2}$ | 4.50 | 1.15e+02 |
| H I | 12821.4883 | 3s $^2S_{1/2}$ - 5p $^2P_{1/2}$ | 4.50 | 3.48e+01 |
| H I | 12821.5957 | 3d $^2D_{3/2}$ - 5f $^2F_{5/2}$ | 4.50 | 3.24e+02 |
| H I | 12821.5957 | 3p $^2P_{3/2}$ - 5d $^2D_{5/2}$ | 4.50 | 2.47e+02 |
| H I | 12821.6094 | 3p $^2P_{3/2}$ - 5d $^2D_{3/2}$ | 4.50 | 2.75e+01 |
| H I | 12821.6436 | 3p $^2P_{3/2}$ - 5s $^2S_{1/2}$ | 4.50 | 2.30e+02 |
| H I | 12821.6475 | 3d $^2D_{3/2}$ - 5p $^2P_{1/2}$ | 4.50 | 3.18e+00 |
| H I | 12821.6494 | 3d $^2D_{5/2}$ - 5f $^2F_{7/2}$ | 4.50 | 4.62e+02 |
| H I | 12821.6553 | 3d $^2D_{5/2}$ - 5f $^2F_{5/2}$ | 4.50 | 2.32e+01 |
| H I | 12821.6680 | 3d $^2D_{5/2}$ - 5p $^2P_{3/2}$ | 4.50 | 5.74e+00 |
| He I | 12849.4570 | 1s 3p $^3P_2$ - 1s 5s $^3S_1$ | 4.50 | 3.42e+01 |
| He I | 12849.4932 | 1s 3p $^3P_1$ - 1s 5s $^3S_1$ | 4.50 | 2.06e+01 |
| He I | 12849.9414 | 1s 3p $^3P_0$ - 1s 5s $^3S_1$ | 4.50 | 6.86e+00 |
| He I | 12971.9766 | 1s 3p $^1P_1$ - 1s 5d $^1D_2$ | 4.50 | 1.22e+01 |
| He I | 12988.4053 | 1s 3d $^3D_1$ - 1s 5p $^3P_0$ | 4.50 | 1.50e+00 |
| He I | 12988.4248 | 1s 3d $^3D_2$ - 1s 5p $^3P_1$ | 4.50 | 3.36e+00 |
| He I | 12988.4297 | 1s 3d $^3D_3$ - 1s 5p $^3P_2$ | 4.50 | 6.29e+00 |
| He I | 12988.4316 | 1s 3d $^3D_2$ - 1s 5p $^3P_2$ | 4.50 | 1.12e+00 |
| He I | 12988.4990 | 1s 3d $^3D_1$ - 1s 5p $^3P_1$ | 4.50 | 1.12e+00 |
| O II | 13039.0000 | $2s^2$ $2p^2$ 4s $^2P_{3/2}$ - $2s^2$ $2p^2$ 4p $^2D_{5/2}$ | 4.65 | 1.77e+00 |
| Ca XIV | 13147.8613 | $2s^2$ $2p^3$ $^2D_{3/2}$ - $2s^2$ $2p^3$ $^2D_{5/2}$ | 6.65 | 2.00e+00 |
| He I | 13415.3525 | 1s 3p $^1P_1$ - 1s 5s $^1S_0$ | 4.50 | 1.42e+01 |
| Cl XII | 13812.1553 | $2s^2$ $2p^2$ $^3P_0$ - $2s^2$ $2p^2$ $^3P_1$ | 6.45 | 1.08e+00 |
| S XI | 13927.3828 | $2s^2$ $2p^2$ $^3P_1$ - $2s^2$ $2p^2$ $^3P_2$ | 6.35 | 2.23e+01 |
| O II | 14015.0244 | $2s^2$ $2p^2$ 4s $^4P_{5/2}$ - $2s^2$ $2p^2$ 4p $^4D_{7/2}$ | 4.65 | 1.67e+00 |
| Al II | 14082.1270 | 3s 5p $^3P_2$ - 3s 5d $^3D_3$ | 4.50 | 1.86e+00 |
| Si X | 14304.7188 | $2s^2$ 2p $^2P_{1/2}$ - $2s^2$ 2p $^2P_{3/2}$ | 6.20 | 1.58e+01 |
| He I | 15087.7725 | 1s 3s $^1S_0$ - 1s 4p $^1P_1$ | 4.50 | 1.17e+00 |
| He I | 17006.9785 | 1s 3p $^3P_2$ - 1s 4d $^3D_1$ | 4.50 | 1.01e+00 |
| He I | 17007.0332 | 1s 3p $^3P_2$ - 1s 4d $^3D_2$ | 4.50 | 1.42e+01 |
| He I | 17007.0371 | 1s 3p $^3P_2$ - 1s 4d $^3D_3$ | 4.50 | 8.12e+01 |
| He I | 17007.0430 | 1s 3p $^3P_1$ - 1s 4d $^3D_1$ | 4.50 | 1.51e+01 |
| He I | 17007.0977 | 1s 3p $^3P_1$ - 1s 4d $^3D_2$ | 4.50 | 4.25e+01 |
| He I | 17007.8262 | 1s 3p $^3P_0$ - 1s 4d $^3D_1$ | 4.50 | 2.01e+01 |
| Al II | 17765.7754 | 3s 5s $^3S_1$ - 3s 5p $^3P_2$ | 4.50 | 4.41e+00 |
| Al II | 17806.5859 | 3s 5s $^3S_1$ - 3s 5p $^3P_1$ | 4.50 | 2.60e+00 |
| He I | 18690.3965 | 1s 3d $^3D_2$ - 1s 4f $^3F_2$ | 4.50 | 1.97e+01 |
| He I | 18690.4258 | 1s 3d $^3D_3$ - 1s 4f $^3F_4$ | 4.50 | 2.28e+02 |
| He I | 18690.4492 | 1s 3d $^3D_3$ - 1s 4f $^3F_3$ | 4.50 | 2.62e+00 |
| He I | 18690.4531 | 1s 3d $^3D_2$ - 1s 4f $^3F_3$ | 4.50 | 2.10e+01 |

Table 1: (continued)

| Ion | $\lambda$ (Å) | Transition | $T_{max}$ | Int |
|---|---|---|---|---|
| He I | 18690.5508 | 1s 3d $^3D_1$ - 1s 4f $^3F_2$ | 4.50 | 1.06e+02 |
| He I | 18702.3164 | 1s 3d $^1D_2$ - 1s 4f $^1F_3$ | 4.50 | 4.89e+01 |
| H I | 18755.8047 | 3p $^2P_{1/2}$ - 4d $^2D_{3/2}$ | 4.50 | 2.29e+02 |
| H I | 18755.8418 | 3s $^2S_{1/2}$ - 4p $^2P_{3/2}$ | 4.50 | 1.05e+02 |
| H I | 18755.9473 | 3p $^2P_{1/2}$ - 4s $^2S_{1/2}$ | 4.50 | 2.10e+02 |
| H I | 18756.0020 | 3s $^2S_{1/2}$ - 4p $^2P_{1/2}$ | 4.50 | 5.22e+01 |
| H I | 18756.1309 | 3d $^2D_{3/2}$ - 4f $^2F_{5/2}$ | 4.50 | 7.52e+02 |
| H I | 18756.1309 | 3p $^2P_{3/2}$ - 4d $^2D_{5/2}$ | 4.50 | 4.13e+02 |
| H I | 18756.1836 | 3p $^2P_{3/2}$ - 4d $^2D_{3/2}$ | 4.50 | 4.57e+01 |
| H I | 18756.1836 | 3d $^2D_{3/2}$ - 4p $^2P_{3/2}$ | 4.50 | 1.19e+00 |
| H I | 18756.2285 | 3d $^2D_{5/2}$ - 4f $^2F_{7/2}$ | 4.50 | 1.08e+03 |
| H I | 18756.2578 | 3d $^2D_{5/2}$ - 4f $^2F_{5/2}$ | 4.50 | 5.36e+01 |
| H I | 18756.3105 | 3d $^2D_{5/2}$ - 4p $^2P_{3/2}$ | 4.50 | 1.07e+01 |
| H I | 18756.3281 | 3p $^2P_{3/2}$ - 4s $^2S_{1/2}$ | 4.50 | 4.19e+02 |
| H I | 18756.3418 | 3d $^2D_{3/2}$ - 4p $^2P_{1/2}$ | 4.50 | 5.94e+00 |
| He I | 19094.5703 | 1s 3p $^1P_1$ - 1s 4d $^1D_2$ | 4.50 | 3.79e+01 |
| S XI | 19201.2285 | $2s^2$ $2p^2$ $^3P_0$ - $2s^2$ $2p^2$ $^3P_1$ | 6.35 | 8.27e+00 |
| Si XI | 19364.8320 | 2s 2p $^3P_1$ - 2s 2p $^3P_2$ | 6.25 | 3.46e+00 |
| He I | 19548.1758 | 1s 3d $^3D_1$ - 1s 4p $^3P_0$ | 4.50 | 4.08e+00 |
| He I | 19548.4277 | 1s 3d $^3D_2$ - 1s 4p $^3P_1$ | 4.50 | 9.21e+00 |
| He I | 19548.4570 | 1s 3d $^3D_3$ - 1s 4p $^3P_2$ | 4.50 | 1.71e+01 |
| He I | 19548.4629 | 1s 3d $^3D_2$ - 1s 4p $^3P_2$ | 4.50 | 3.06e+00 |
| He I | 19548.5957 | 1s 3d $^3D_1$ - 1s 4p $^3P_1$ | 4.50 | 3.06e+00 |
| Si VI | 19630.0449 | $2s^2$ $2p^5$ $^2P_{3/2}$ - $2s^2$ $2p^5$ $^2P_{1/2}$ | 5.60 | 1.56e+00 |
| He I | 20586.9004 | 1s 2s $^1S_0$ - 1s 2p $^1P_1$ | 4.50 | 6.80e+00 |
| He I | 21125.7852 | 1s 3p $^3P_2$ - 1s 4s $^3S_1$ | 4.50 | 1.87e+01 |
| He I | 21125.8828 | 1s 3p $^3P_1$ - 1s 4s $^3S_1$ | 4.50 | 1.12e+01 |
| He I | 21127.0918 | 1s 3p $^3P_0$ - 1s 4s $^3S_1$ | 4.50 | 3.75e+00 |
| He I | 21137.7969 | 1s 3p $^1P_1$ - 1s 4s $^1S_0$ | 4.50 | 3.22e+01 |
| Ca XIII | 22609.0898 | $2s^2$ $2p^4$ $^3P_1$ - $2s^2$ $2p^4$ $^3P_0$ | 6.60 | 1.91e+00 |
| Al II | 23594.9219 | 3s 4d $^3D_3$ - 3s 5p $^3P_2$ | 4.50 | 1.25e+00 |
| Si IX | 25846.4727 | $2s^2$ $2p^2$ $^3P_1$ - $2s^2$ $2p^2$ $^3P_2$ | 6.10 | 1.26e+00 |
| He I | 28550.2695 | 1s 4s $^3S_1$ - 1s 5p $^3P_2$ | 4.50 | 1.59e+00 |
| He I | 37035.5156 | 1s 4p $^3P_2$ - 1s 5d $^3D_3$ | 4.50 | 4.27e+00 |
| He I | 37035.6367 | 1s 4p $^3P_1$ - 1s 5d $^3D_2$ | 4.50 | 2.24e+00 |
| He I | 37037.0117 | 1s 4p $^3P_0$ - 1s 5d $^3D_1$ | 4.50 | 1.07e+00 |
| He I | 40377.2188 | 1s 4d $^3D_2$ - 1s 5f $^3F_2$ | 4.50 | 1.16e+00 |
| He I | 40377.2695 | 1s 4d $^3D_3$ - 1s 5f $^3F_4$ | 4.50 | 1.34e+01 |
| He I | 40377.3164 | 1s 4d $^3D_3$ - 1s 5f $^3F_3$ | 4.50 | 1.16e+00 |
| He I | 40377.3359 | 1s 4d $^3D_2$ - 1s 5f $^3F_3$ | 4.50 | 9.23e+00 |
| He I | 40377.5312 | 1s 4d $^3D_1$ - 1s 5f $^3F_2$ | 4.50 | 6.22e+00 |
| He I | 40409.3477 | 1s 4d $^1D_2$ - 1s 5f $^1F_3$ | 4.50 | 3.45e+00 |
| He I | 40490.0742 | 1s 4f $^3F_3$ - 1s 5g $^3G_4$ | 4.50 | 5.88e+00 |
| He I | 40490.1406 | 1s 4f $^3F_4$ - 1s 5g $^3G_5$ | 4.50 | 7.66e+00 |
| He I | 40490.2383 | 1s 4f $^3F_2$ - 1s 5g $^3G_3$ | 4.50 | 4.34e+00 |
| He I | 40490.3555 | 1s 4f $^1F_3$ - 1s 5g $^1G_4$ | 4.50 | 2.47e+00 |
| H I | 40521.8711 | 4p $^2P_{1/2}$ - 5d $^2D_{3/2}$ | 4.50 | 1.91e+01 |
| H I | 40521.9375 | 4s $^2S_{1/2}$ - 5p $^2P_{3/2}$ | 4.50 | 9.91e+00 |
| H I | 40522.2188 | 4p $^2P_{1/2}$ - 5s $^2S_{1/2}$ | 4.50 | 2.60e+01 |

Table 1: (continued)

| Ion | $\lambda$ (Å) | Transition | $T_{max}$ | Int |
|---|---|---|---|---|
| H I | 40522.3164 | 4s $^2S_{1/2}$ - 5p $^2P_{1/2}$ | 4.50 | 4.95e+00 |
| H I | 40522.4805 | 4p $^2P_{3/2}$ - 5d $^2D_{5/2}$ | 4.50 | 3.44e+01 |
| H I | 40522.4805 | 4d $^2D_{3/2}$ - 5f $^2F_{5/2}$ | 4.50 | 5.83e+01 |
| H I | 40522.6133 | 4p $^2P_{3/2}$ - 5d $^2D_{3/2}$ | 4.50 | 3.82e+00 |
| H I | 40522.6602 | 4f $^2F_{5/2}$ - 5g $^2G_{7/2}$ | 4.50 | 5.66e+01 |
| H I | 40522.6602 | 4d $^2D_{5/2}$ - 5f $^2F_{7/2}$ | 4.50 | 8.31e+01 |
| H I | 40522.7266 | 4d $^2D_{5/2}$ - 5f $^2F_{5/2}$ | 4.50 | 4.16e+00 |
| H I | 40522.7617 | 4f $^2F_{7/2}$ - 5g $^2G_{9/2}$ | 4.50 | 7.60e+01 |
| H I | 40522.7930 | 4f $^2F_{7/2}$ - 5g $^2G_{7/2}$ | 4.50 | 4.05e+00 |
| H I | 40522.8594 | 4d $^2D_{5/2}$ - 5p $^2P_{3/2}$ | 4.50 | 2.29e+00 |
| H I | 40522.8594 | 4f $^2F_{7/2}$ - 5d $^2D_{5/2}$ | 4.50 | 1.11e+00 |
| H I | 40522.9570 | 4p $^2P_{3/2}$ - 5s $^2S_{1/2}$ | 4.50 | 5.20e+01 |
| H I | 40522.9883 | 4d $^2D_{3/2}$ - 5p $^2P_{1/2}$ | 4.50 | 1.26e+00 |
| He I | 41227.3047 | 1s 4p $^1P_1$ - 1s 5d $^1D_2$ | 4.50 | 1.78e+00 |
| He I | 42440.6797 | 1s 4d $^3D_2$ - 1s 5p $^3P_1$ | 4.50 | 1.25e+00 |
| He I | 42440.7344 | 1s 4d $^3D_3$ - 1s 5p $^3P_2$ | 4.50 | 2.34e+00 |
| He I | 42954.1094 | 1s 3s $^3S_1$ - 1s 3p $^3P_0$ | 4.50 | 1.00e+01 |
| He I | 42959.1094 | 1s 3s $^3S_1$ - 1s 3p $^3P_1$ | 4.50 | 3.01e+01 |
| He I | 42959.5156 | 1s 3s $^3S_1$ - 1s 3p $^3P_2$ | 4.50 | 4.99e+01 |
| He I | 46066.0078 | 1s 4p $^1P_1$ - 1s 5s $^1S_0$ | 4.50 | 3.07e+00 |
| He I | 46949.4375 | 1s 4p $^3P_2$ - 1s 5s $^3S_1$ | 4.50 | 7.04e+00 |
| He I | 46949.6367 | 1s 4p $^3P_1$ - 1s 5s $^3S_1$ | 4.50 | 4.23e+00 |
| He I | 46952.0586 | 1s 4p $^3P_0$ - 1s 5s $^3S_1$ | 4.50 | 1.41e+00 |
| He I | 108822.5703 | 1s 4s $^3S_1$ - 1s 4p $^3P_2$ | 4.50 | 1.39e+00 |